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**The Influence of a Parent Intervention Program on the  
Patterns of Sleep and Consumption of Media of Their  
Adolescent Children in the Era of Modernization in  
Israeli Arab Society**

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*This work is dedicated*

*To my dear husband **Iyad***

*And to my daughters*

***Haneen, Amal, and Janan***

*Who were for me a source of inspiration*

*Throughout the entire journey*

*Until this work was completed*

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## **Introduction – Updated for April 2023**

The primary goal of the study is to examine sleep and media use patterns in the setting of secular Jewish society and Arab civilization, which is regarded as a conservative society that is modernizing.

A "two stage" study has been used to investigate these goals. In order to analyze the cultural environment and make comparisons between the Jewish and Arab teenage populations in Israel, the first stage—the survey—is regarded as a preliminary one. It was conducted on both Jewish and Arab adolescents. Obtaining knowledge and insights into the researched phenomena was the goal at this point. Since then, surveys with closed-ended questions for both populations have been the mainstay of the quantitative research approach used to gather the data.

The second part of the research was then conducted with the goal of examining how experimental intervention affected changes in behavior, sleep patterns, and media use. In this stage, workshops were arranged for the parents of Arab teenagers (experimental group) in comparison to parents who did not receive any intervention (control group), and valid findings were sought in regard to the study objectives. A significant knowledge gap may be identified by looking at the impact of the intervention and assessing the benefits and efficiency of the program based on the conceptual model in which the parents are change agents.

I completed my work at the end of 2019. Since the notification process lasted from 2020 to 2023, I'm submitting it to the evaluation.

Prior to the COVID-19 pandemic, which substantially altered the use of electronic devices, is described in my research. As a result, the research on the pandemic and post-pandemic era can use my research as a point of reference.

## **Introduction**

The ***project field*** of the present research study is in the field of the social sciences: sociology of culture, sociology of health and disease, sociology of family, and childhood and adolescence studies. The main research objective is to compare patterns of sleep and electronic media use in a cultural context in secular Jewish society and in Arab society, which is characterized as a conservative society that is undergoing processes of modernization. In addition, since in the traditional Arab population there are prominent differences in the education of boys versus girls, in contrast to modern Jewish society, in which the differences are less prominent, another objective is to examine whether the gender is a variable that moderates the relationship between culture and patterns of sleep and media use.

The period of adolescence is a period of transition between childhood and adulthood, in which biological, intellectual, mental, and economic changes occur in the adolescent (Hockenberry & Wilson, 2015). In addition, the period is characterized also by autonomy, independence, separation from the influence of the parents, and closeness to the peer group (Meisles, 2001). During adolescence there are dramatic changes in the patterns of waking and sleeping, which include the decrease in the sleep duration and the preference to sleep later and get up later (Crowley, Acebo, & Carskadon, 2007). Inadequate sleep and sleepiness during the day were found related to deficiencies in the different measures of performance during the day and in the mood (Shochat, Cohen-Zion, & Tzischinsky, 2014; Tzischinsky & Shochat, 2011). In addition, there are gender differences in the sleep patterns. Thus, it was found that girls sleep more than do boys of the same age, a difference that derives apparently from the early sexual development in girls (Lagerberg, Petit, Smard, Vitoro, Tremblay, 2010; Olds, Blunden, Petkov, & Forchino, 2010).

Although the psychological and physiological sleep mechanisms have not changed essentially for generations, the circumstances for the development of sleep disorders and inadequate sleep are definitely influenced by sociological, cultural, and technological factors that shape the lifestyle. Technological developments cause the

considerable exposure to electronic devices, such as television, computers, and mobile phones. Considerable evidence shows that these factors influence the person's functioning and health, including the influence on the quality of the sleep, the duration of the sleep, and the cyclicity and timing of the sleep. Research studies from recent years confirm the argument that among youths the use of electronic devices is especially frequent and this has direct implications on these measures of sleep (Cain & Gradisar, 2010; Shochat, 2012).

The accelerated technological progress in the past 25 years has changed the lifestyles of young people in many ways. In the 1980s, personal computers began to penetrate into the private market, but the Internet was accessible only for the need of science, and multichannel television was not found in every home. Mobile phones were considered futuristic products. Today media is accessible and available for all, and children and adolescents spend a considerable part of their lives with it (Garmy, Nyberg, & Jakobsson, 2012; Kappos, 2007; Zimmerman, 2008). Media, in its new forms, which include social interactions and sending messages via the Internet, constitute today an important element in the lives of many youths and for some of them it has become the main leisure time activity (Olson, Kutner, Warner, Almerigi, Baer, & Nicholi, 2007; Shaul, 2018).

The question therefore is as follows. What is the cost that children pay for the increased consumption of media? Two survey articles that engaged in the influence of the uncontrolled exposure to electronic media among children surveyed research studies from the fields of psychology and medicine and found that the negative influences of electronic media pertain to many areas, including violent behavior; early sexual activity; mental problems including anxiety, depression and addictions; cognitive problems including language development and reading disorders, creativity issues, and attention and concentration disorders; and health problems including lack of physical activity; excess weight gain, deficient nutrition, and sleeping disorders (Kappos, 2007; Zimmerman, 2008).

The American Academy of Pediatrics (AAP) published in the year 2001 a list of recommendations for the community of pediatricians and additional experts in the field of health regarding suitable exposure to television. These recommendations included instruction and increase of awareness among parents and educators about the harms of television, increase of the parental supervision regarding the scope of the exposure of their children, and work with schools and academic institutions so as to see that the contents would be suited to children (American Academy of Pediatrics, Committee on Public Education, 2001). However, a review conducted among 365 pediatricians in the United States found that only 31% of the pediatricians were aware of the AAP recommendations (Gentile et al., 2004).

In light of the many influences of electronic media on health and quality of life, the following question is asked. How many hours a day does electronic media take from the free time of children and adolescents? An international survey from 2001-2002, which included 35 countries from Europe, the United States, and Israel and in which more than 65,000 participants aged eleven, thirteen, and fifteen participated, found that about 26% of the participants watched television more than four hours a day in the middle of the week and 45% watched more than four hours on the weekends. Similar data were found regarding computer use (Todd & Currie, 2004). In this survey, the Israeli adolescents were ranked among the first places for duration of watching television and the duration of computer use during the study week. 46% of the adolescents in Israel watched television more than four hours a day and about 30% used the computer more than three hours a day (Todd & Currie, 2004). Similar data were found in a continuation survey for the years 2005-2006, in which the Israeli adolescents were the heaviest television and computer users, in comparison to the other countries, and were ranked 'heavy television and computer users' (Currie et al., 2008). In the year 2008 a survey was held about the hours of watching of children and adolescents by the TIP children's website. It was found that 27% of the Israeli spend five to six hours a day facing the television screen (Ben Naftali, 2009). A survey conducted in Canada with about 9000 students from grades seven to twelve found that about 10% of the children stayed about seven hours during the day facing the computer and watching the television (Connell & Bhardwaj, 2010).

Although these data display a trend of a sharp increase, to the best of my knowledge there are no recommendations today for the population of adolescents for the normal or normative duration of exposure to electronic media. It can be hypothesized that the lack of a base of empirical evidence does not allow professionals to determine any type of recommendations, and therefore it is necessary to conduct further research studies that will engage in the implications of the doses of hours of exposure to the media on the health and functioning indices.

Another factor that influences children's health is parenting style (Russell, Crockett & Chao, 2010). According to the model of the parenting style (Baumrind, 1978; Darling & Steinberg, 1993), the parenting style is described according to the degree of response of the parents to their children and according to the requirements that the parents set for their children. The authoritative parenting style, which is characterized by the fact that the parent sets high demands of his children on the one hand and displays a degree of responsiveness and sensitivity towards them on the other hand, was found in many research studies as the most effective style for the normal development of children (Russell, Crockett & Chao, 2010). Research studies found that coaching and parental instruction have considerable influence on the variety of aspects in the child's development (Hallberg & Hakansson, 2003; Weisner, 2001) and that the parents need instruction through techniques and tools for parenting along with alertness, awareness, and encouragement, so as to believe in their abilities to function as parents (Lindquist & Watkins, 2014). The intervention and parental guidance may be effective for the decline of parental tension and normal parenting functioning (Kazdin & Whitley, 2003; Moshe-Cohen, 2015). A research study that examined types of interventions for parents found that the type of intervention of the psychoeducational group is intervention with great influence on the parents and their children (Hallberg & Hakansson, 2003). The intervention program for parents attempts to help in the different goals between them to develop among the parents greater self-awareness, to use effective methods of discipline, to improve the communication between parent and child and to make the life of the family more enjoyable but with the transfer of useful and vital information on the child's development (Mageau, Joussemet, & Koestner, 2014).

Arab society in Israel is fundamentally a traditional and conservative society. However, the lifestyle in it changes following the exposure to the culture of the West and the different means of media. The process of modernization causes cultural, value-oriented, and structural changes in society (Shahala, 2012; Suleiman-Dehalala, 2013). These changes are expressed both in the daily lifestyle and in the health practices, especially of the young generation.

A multicultural survey conducted on eating disorders in Israel found that Arab adolescents have a lower incidence of eating disorders in comparison with Jewish adolescents (Latzer, Witztum, & Stein, 2008). The researchers hypothesized that there is a relationship between the degree of exposure to Western society and the percentages of eating disorders, so that the traditional society of Arab adolescents constitutes a protection for them, in contrast to Jewish society, which is more exposed to Western society. According to these findings, it is possible to hypothesize that these changes will also be expressed in patterns of sleeping and exposure to media.

The main research objective is to compare patterns of sleep and electronic media use in a cultural context in secular Jewish society and in Arab society, which is characterized as a conservative society that is undergoing processes of modernization. In addition, since in the traditional Arab population there are prominent differences in the education of boys versus girls, in contrast to modern Jewish society, in which the differences are less prominent, another aim is to examine whether the gender is a variable that moderates the relationship between culture and patterns of sleep and media use.

To explore these aims, a "two stage" study has been applied. The first stage is considered as a preliminary one and was conducted in a deductive logic manner on Arab and Jewish adolescents, to examine the cultural context and to compare between the two populations of adolescents in Israel, Jewish and Arab. The aim at this stage was defined as gathering information and insights upon the investigated phenomena. Henceforth, the quantitative research method for the collection of the information has been used based mainly on questionnaires that included closed-ended questions to both populations.

Then, the second stage research was performed, aiming at exploring changes in behavior and patterns of sleep and electronic media use as influenced by experimental intervention. At this phase, premises were given, and valid conclusions were sought in relation to the study objectives through workshops that were held for the parents of Arab adolescents (experimental group) in comparison with parents who did not receive any intervention (control group). By examining the influence of the intervention and evaluate the advantages and effectiveness of the program based on the conceptual model in which the parents are agents of change, a very important gap in knowledge possibly will be proposed.

# **Part 1: Contemporary Sociocultural Trends and Their Influence on Adolescent Life in the Arab Sector in Israel**

The aim of this part is to constitute the theoretical foundation of the work. I present here the selection of theoretical and empirical studies that will enable the understanding of the sociocultural processes that are occurring in Arab society in Israel and that influence the life of adolescents.

## **Chapter 1: Arab Society in Israel in Transition – Globalization, Modernization, and Postmodernization**

### **1.1 Globalization**

The concept of globalization, which was almost unknown before the 1980s, has become in recent years a common expression in discussions in politics, business, and the media. The concept refers to the fact that we all are increasingly living today in another world, in which individuals, groups, and nations are becoming steadily more reciprocally dependent. Globalization in this sense has occurred during a large part of human history and certainly is not unique to the world of our time. However, the arguments of our time focus far more on the accelerated pace of globalization and its increasing power since the 1980s. This central idea of the acceleration of the process of globalization is what makes this period unique from its predecessors.

The process of globalization has been described more than once as solely an economic process. Much has been said about the roles of transnational corporations whose huge enterprises now cross national borders and influence the global processes of manufacturing and the international division of labor. Other observers indicate the electronic integration of the global financial markets and the tremendous volume of the flow of capital throughout the world. Yet others focus on the unprecedented scope of global trade, which today includes a vastly broader spectrum of goods and services than ever before. Economic processes are an inseparable part of globalization, but it would be a mistake to say that they cause it themselves. The globalization of our era is an outcome

of the combination between political, social, cultural, and economic factors (Giddens, 1990).

The main factor that encourages and stimulates the increased globalization is the development of information and communication technologies, which has accelerated the pace of interaction among the residents of the planet Earth and broadened its scope. A simple example is the most recent world championship in football. Because of the global television broadcasts, billions of people around the world watched a number of the games live.

The tremendous leap in the global media was facilitated by a number of important developments in information technology and in the global communication infrastructure. In the period after World War II, there were far-reaching changes in the scope and intensity of the flow of communication. The traditional telephone communication, which was based on the transmission of analogue signals through lines and cables with the use of mechanical switchboards, was exchanged for integrated systems that digitally transmit vast amounts of compressed information. Cable technology became more effective and cheaper; the development of optical fibers dramatically increased the number of channels that could be carried. The first trans-Atlantic communication cables that were laid in the 1950s could carry a total of less than one hundred sound channels, while a single trans-ocean cable could carry about six hundred thousand sound channels in the year 1997 (Held et al., 1999). The spread of communication satellites, which began in the 1960s, also filled an important role in the broadening of the international communication relationships. More than two hundred satellites circle the earth today and contribute to the dissemination of information around the world.

The influence of these communication systems was enormous. In countries where there are developed communication infrastructures, homes and offices are today connected to the outside world with many connections that include telephone (both line and mobile), television (digital, satellite, and cable), email, and Internet. The Internet has emerged as the fastest growing media medium ever developed. In the middle of the year

1998 about 140 million people around the world used the Internet, and in the year 2007 the number of users reached more than billions of people.

These technological systems contribute to the shortening of the time and space (Harvey, 1989): two people who live on opposite sides of the planet earth – Tokyo and London, for instance – not only can talk in real time but also can send documents and pictures through satellite technologies. The use of the Internet and mobile phones is increasing and is steadily accelerating processes of globalization: more and more people are now connected to one another using these technologies and they do so in places that previously had been isolated or dependent on the limited services of the traditional media. The communication infrastructures in the different parts of the world are not equally developed, but an increasing number of countries can today connect to international communication networks in a way that was impossible in the past. In recent years the use of the Internet has increased at the fastest pace in regions that previously had lagged behind – in Africa and the Middle East.

As we saw, the dissemination of information technologies extended the possibilities of contact between the residents of the world and simultaneously encouraged the exchanges of information on people and events in distant places. The global media every day brings news and information to people's homes and connects them to the outside world in a direct and continuous connection. A number of the more fascinating events of the past decades, such as the fall of the Berlin Wall, the violent repression of the democratic protest in Tiananmen Square in China, and the September 11, 2001 terrorist attacks, occurred live, in front of the global audience. Events of this type, alongside thousands of less dramatic events, changed the outlook of the residents of the planet earth and directed their look from the nation state to the global stage. Individuals are more aware today of the reciprocal relationships between them and others and tend more than in the past to identify with global problems and processes.

The transition to global reference includes two main dimensions. First, as members in the global community, people feel today more and more that their social responsibility does not end at the borders of their country; rather it applies also outside of

them. Disasters and wrongs that harm people on the other side of the world are no longer perceived as disasters to be reconciled with but as a legitimate reason for action and intervention. We see the steadily increasing recognition of the obligation of the international community to act in situations of crisis to defend their physical safety or the human rights of people threatened by danger. When talking about natural disasters, these interventions take the form of humanitarian and technical assistance. The earthquakes in Turkey and Tokyo, the tsunami in the Indian Ocean, the famine in Africa, and the hurricanes in Central America were in recent years focuses for the recruitment of global aid efforts.

Recently, the voices that call for the global recruitment in cases of wars, ethnic clashes, and human rights violations are strengthening. Interventions of this type are more problematic than recruitment at a time of a natural disaster, but in cases of the first Gulf War in 1991 and the violent clashes in the former Yugoslavia (in Bosnia and Kosovo) many people believed that there was justification for the military intervention and that human rights and national sovereignty deserved to be defended. Second, the adoption of a global perspective means also the steadily increasing tendency among many people to search for other sources of the definition of their identity aside from the nation state. This phenomenon was created following the process of globalization, but simultaneously it also contributes to its acceleration. We see today many cases of the revival of local cultural identities at the expense of the traditional identification with the nation state. In Europe, for instance, the residents of Scotland and the residents of the Basque region in Spain will generally prefer to define themselves as Scots or Basques – or simply as Europeans – and not as British or Spanish, respectively. The political changes in the regional and global dimensions loosen the connection of many people to the countries in which they live, and the nation state thus is steadily disappearing in many regions as a source of the definition of the self-identity.

Another factor that encourages globalization is the continuing integration of the global economy. In contrast to previous periods, the global economy is no longer based first and foremost on agriculture and industry but is controlled more by activity that is weightless and intangible (Quah, 1999). This weightless economy is an economy whose

products are based on information, like in computer programs, media and entertainment products, and Internet-based services. These new economic circumstances have received many diverse names, such as “post-industrial society”, “era of information”, or “new economy”. The formation of an information society was facilitated by the development of a broad base of consumers with technological knowledge who are prepared and invited to assimilate in their everyday life innovations in the fields of computerization, entertainment, and the media.

The behavior of global economy reflects the changes that have occurred in the information era. Many aspects of the economy act today through networks that do not stop at the national boundaries but rather cross them (Castells, 1996). To preserve the competitiveness under the new global conditions, businesses and corporations prepare anew and adopt a more flexible and less hierarchical structure. The methods of production and the organizational patterns become more flexible, the partnership arrangements with other firms became a common phenomenon, and the participation in the global dissemination networks becomes essential to the management of businesses in the rapidly changing global market.

Of the many factors that nurture the globalization, the roles of the transnational corporations are especially important. The transnational corporations are companies that produce merchandise or services in more than one country. These may be relatively small firms with one or two factories outside of the base country or enormous international companies whose factories are spread throughout the world. A number of the largest transnational corporations are well-known names: Coca-Cola, General Motors, Kodak, Mitsubishi, and many others. The transnational corporations see before them, first and foremost, the global market and the global profits, even when they have a clear national base.

The transnational corporations are the main proponents of the economic globalization. They control two-thirds of world trade, make a decisive contribution to the spread of new technology around the world, and are key players in the international financial markets. According to one of the observers, these corporations are the “main

axis of the global economy of today” (Held et al., 1999). In the year 2001, five hundred transnational corporations had annual sales of more than ten billion dollars, as opposed to only seventy-five countries whose gross national product exceeded this figure. In other words, the transnational corporations that lead the world are larger in financial terms than are most of the countries of the world. In essence, the overall volume of sales of the largest five hundred transnational corporations in the world reached about 14.1 trillion dollars – almost one half of the value of the merchandise and services produced in the entire world.

The transnational corporations became a global phenomenon in the years after World War II. In the first years after the war, primarily firms based in the United States spread around the world, but from the 1970s European firms and Japanese firms began to invest more outside of their borders. At the end of the 1980s and 1990s, there was a dramatic spread of this phenomenon following the establishment of three strong regional markets: Europe (the European Common Market), East Asia (the Osaka Declaration that promise free and open trade in the year 2010), and North America (the North American Free Trade Agreement). From the beginning of the 1990s, countries in other regions of the world facilitated the conditions of foreign investments. By the start of the 21<sup>st</sup> century, there remained in the world very few countries where the transnational corporations did not have footholds. In the first decade of the 21<sup>st</sup> century, the transnational corporations whose bases were in the industrialized countries increased their efforts to broaden their hold in the developing countries and in the countries of the former Soviet Union and Eastern Europe.

The argument that the manufacturing has become today more and more global is frequently phrased in terms of global commodity chains, global networks of work processes and manufacturing that produce the finished product. These networks include all the important manufacturing activities and they combine into tight “chains” that extend from the raw materials needed to create the product to the final consumer (Appelbaum & Christerson, 1997; Gereffi, 1995; Hopkins & Wallerstein, 1996).

Manufacturing was responsible for about three-quarters of the economic growth in the years 1990-1998. The sharpest growth was recorded in the countries with moderate income: in the year 1990 the manufacturing was only 54% of the export of these countries, in contrast to 71% only eight years later. China moved from the list of the countries with the lowest income to the list of the countries with moderate income, primarily because of its role as exporter of industry products, and contributed its part to this trend. However, the most prevalent activities in the chain of commodities – the engineering, the planning, and the advertising – are concentrated generally in the central countries, and while the activities that have the lowest profits, such as manufacturing plants, are performed for the most in the periphery countries. Global commodity chains are used, for example, in the production of Barbie dolls.

The economic globalization of today is based on the “electronic economy”: on the ability of banks, corporations, fund managers, and single investors to move money from side of the world to another with the click of a mouse. This new ability to immediately send “electronic money” also entails tremendous risks. The transfer of tremendous quantities of capital can upset economies and induce international financial crises such as those that spread in the year 1998 from the Asian “tiger” economies to Russia and beyond. In the period in which the global economy is becoming steadily more integrated, a financial collapse in one part of the world can cause difficult economic outcomes in distant places. The overall influence of the political, economic, social, and technological factors creates a phenomenon unprecedented in intensity and scope. The implications of globalization are many and far-reaching.

Although globalization is identified frequently with changes in large systems, such as the financial markets, systems of manufacturing and trade, and global communication means, its influences are no less apparent in the individual domain. Globalization is not just an external phenomenon that is found and acts somewhere in the distance and does not touch upon human issues. Globalization is an internal and close phenomenon that influences our intimate and personal lives in many different ways. The forces of globalization that have penetrated into our homes and our communities through impersonal sources, such as the media, the Internet, and the popular culture, and through

personal contacts with people from other countries and cultures have unavoidably changed our personal lives.

Globalization fundamentally changes the nature of our daily experiences. The profound changes that have occurred in the societies in which we live have made the old institutions, upon which our lives were based, into something whose time has passed. We are required to redefine personal and intimate areas of life, such as the family, gender roles, sexuality, personal identity, our reciprocal relations with others, and our attitude towards work. The way in which we think about ourselves and our relationships with other people has changed from one extreme to another following globalization.

Individuals in the present era have incomparably more opportunities to shape their lives. In the past, tradition and custom largely determined the paths of our lives. Factors such as social status, gender, ethnic origin, and even religious affiliation could for a person close certain paths or open others. The fact that a person was born the eldest son of a tailor, for instance, generally assured that he would learn his father's profession and engage in it for his entire life. Tradition determined that the woman's place is in the home; her life and her identity were dictated largely by those of her husband or her father. In the past, people's personal identities were determined according to the community into which they were born. The values, lifestyles, and ethics reigning in this community provided its members with a rather rigid outline according to which they lived their lives.

However, today, under the conditions of globalization, we have witnessed progress towards a new individualism in which people need to form their identities themselves. The interaction between the local communities and the global reality greatly lessens the weight of tradition and the institutionalized values. The social rules that guided people in the past in their decisions and their actions have considerably weakened. Today, for instance, the eldest son of the tailor who plans his future can choose for himself any track he wants, women do not have to remain housewives, and many of the road signs that in the past shaped people's lives have disappeared. Traditional identity patterns fade away and dissolve, and new patterns take their place. Globalization forces

us to live a more open and reflective life. We respond constantly to our changing environment and adjust ourselves to what is asked of it; as individuals we develop concurrently with the development of the broader environment that surrounds us and even in it. Even the little decisions that we make in our everyday life – what to wear, how to spend our free time, and how to maintain our health and our bodies – are a part of the unending process of the change and shaping of our self-identity (Giddens, 2013).

To summarize, in the era of Internet and communication, when it is very easy to go from place to place, we speak about globalization. The citizens of the entire world are influenced by the same phenomena: transfer of merchandise from place to place, environmental phenomena such as global warming, work migration, refugees, illnesses, wars, and so on.

When speaking about globalization, the intent is the process in which social, cultural, economic, and political factors exist in the global dimension, regardless of the borders of states or geographic distances. All these activities and developments make the earth “one place” or a “global village”. The globalization has many characteristics: in general distances and borders influence less in all areas of life.

Countries that are geographically distance become dependent on one another: it is easier to go from country to country and primarily to transfer money, property, and merchandise from country to country. Companies and factories operate all around the world, and every component in a certain product is produced in another country.

Some see globalization to be a sign of the advancement of humanity in a positive direction, or in other words, the weakening of the nation state, which many people believe is the source of most of the problems in the world and primarily of wars. If people think in concepts of the good of the “global village”, then it will be better for everybody; a world without borders will be created, and an era of universal equality, wellbeing, peace, and freedom will begin. The opponents of globalization see it to be an attempt to impose the culture of the West on the entire world. They maintain that homogeneity (uniformity) that globalization aspires to expresses the lack of tolerance for the “other”. The goal, in their opinion, needs to be a heterogeneous global society, in which every

state, in its difference, contributes to the good of all. In addition, globalization acts to benefit the rich and strong at the expense of the weak and the poor and it prevents many countries and regions, which are exploited by industrialized countries and multinational companies for their benefit, to embark on a path of balanced and controlled economic and cultural development.

This research examines the influence of globalization on Arab society in the State of Israel, the influence of the social changes that have occurred in recent years as a result of the use of the Internet and the social networks, the exposure of society to other cultures in the West and Jewish culture, and the influence on Arab society and Arab adolescents who live in a conservative society.

## **1.2 Modernization and Postmodernization**

The literature defines modernization as a process of change that occurs following the transition from a traditional-rural to a modern-industrial society, a process following which changes occur in society on the level of urbanization and in the social, cultural, and economic structures (Cowgill, 1974). In recent years, research and theory on socioeconomic development have given rise to two contending schools of thought. One school emphasizes the convergence of values as a result of “modernization” – the overwhelming economic and political forces that drive cultural change. This school predicts the decline of traditional values and their replacement with ‘modern’ values. The other school of thought emphasizes the persistence of traditional values despite economic and political changes. This school assumes that values are relatively independent of economic conditions (DiMaggio, 1994).

Modernization affects societies worldwide and presents the need to better understand the interchange between processes of the convergence of cultural values and norms together with the persistence of traditional values (Inglehart & Baker, 2000). According to modernization theory, industrialization and economic development facilitate a change from a traditional to a modern society. This process can be attributed to urbanization, changes in labour market participation and employment patterns increasing levels of education, exposure to the media and disengagement from the

extended family and traditional social institutions (Inglehart, 1997; Lavee & Haj Yahia-Abu Ahmad, 2010).

Contemporary studies on modernization have found that significant cultural changes can be present and accompanied by traditional cultural values; while cultural values may shift, distinctive parts of the traditional belief systems often remain (Inglehart & Baker, 2000).

Modernization theory has been the target of criticism, with researchers noting that some of the changes hypothesized based on it have either not occurred or not occurred to the expected extent. Some traditional and religious values and beliefs remain unchanged despite processes of modernization (Williams, 1997).

Thus, it is important to examine the areas in which modernization impacts specific societies, while also exploring which traditional aspects are retained through empirical research. This will allow for the development of a theoretical model that will help to better understand the trajectories of modernization in specific societies and the relationship between modernization and cultural values, norms, history and religion (Inglehart & Baker, 2000)

The theory of modernization maintains that the processes of change that have occurred in the industrialized countries in the West will, sooner or later, reach the developing countries. Another main assumption in this theory is that modernization is a multidimensional process that includes changes in the different fields of society that occur simultaneously. These changes occur on the structural level (urbanization, democracy, technology) and on the value-oriented level (cultural pluralism, achievement, secularity) (Eisenstadt, 1975; Inkeles & Smith, 1974; Shils, 1965).

The new time is characterized by a rapid pace of changes in all areas of life, when a change in one area influences other areas, when it creates a chain of changes that is steadily broadening in concentric circles and in a linear manner concurrently. The new time is characterized by a number of processes: intensive urbanization, transition from agriculture to industry that is steadily and rapidly developing in the cities, capitalism,

appearance of modern banks that contribute to the development of new economy, the development of ways and means of transport, the construction of train tracks, roads, and bridges, the spread of education and its ideas through increasing populations, through diverse channels – the multiplicity of schools and students who learn at all levels, the circulation of newspapers and libraries, the establishment of a direct relationship between the government and the citizens of the State through the cancellation of the autonomous corporations, the expansion and divergence of the system of government bureaucracy, the development of the liberal professions, and the appearance of movements for social change and civil equality. The communication between different and distant places, between the center and the periphery, is perhaps one of the most essential components in the process of modernization. In essence, it cannot develop and spread without it (Koren, 2002).

Modern man is classified as having energy and initiative, as largely independent from the traditional sources of dependence and influence, open to ideas and outside influence, flexible and insightful, educated, displaying interest and participation in the public affairs, in the national and international aspirations, and interested in formal public leadership instead of local traditional leadership. The experience of modern man is expressed in his approach to technological progress and innovation. He displays openness in his social relations and evinces willingness to forge relations with foreigners and he supports providing the woman with the possibility of taking part in the process of social advancement (Inkeles & Smith, 1974; Tipples, 1973).

Modern person has attitudes and values that differ from the person in traditional society. He has an internal locus of control, flexible, tolerant of cultural change, and believing in equality between nations, minorities, and sexes (Goode, 1963). Inkeles and Smith (1974) assert that when the traditional man objects to the liberation of the woman, the modern man tends to permit women to utilize opportunities outside of the areas of housework (Inkeles & Smith, 1974).

Hunter (1983) notes that pre-modern society is characterized by a very dispersed population, which lived in rural or semi-rural regions. There is little technology and

minimal role division. The social relations are personal and intimate, and they are essential to the preservation of the family relationships and institutions. The political leadership is strengthened by receiving authority from the social sanctions. The everyday life is committed to tradition based on religious and sacred circumstances. He adds that modern society is characterized by a population situated in urban regions. It has an increased division of roles and a high degree of institutionalization and segmentation, and its economy is based on developed technology. The social relations in society are not personal. The organizations that act in it in all areas are bureaucratic. The members are open to innovation, critical, and not committed to social sanctions.

Al-Aquil (1992) maintains that the process of modernization, which includes industrial development, urbanization, and social-economic and political changes, is perceived as an undermining social power since it leads to the contradiction of old values and traditional ways of life that link between people and themselves and between them and their environment. This is a process of the transformation of the traditional economic, social, and political institutions into more rational, secular, impersonal, and professional institutions. This is a process in which agrarian societies become industrialized societies. In this process, societies experience changes in both the internal and external sources, when the sources of the internal changes include innovation, new technology, new culture, new social structures, group conflicts, and growth, and the sources of external changes include dispersion, conflict, and ecological changes.

There are many factors that influence the occurrence and penetration of innovation, such as changes in the environmental conditions, such as immigration to new places, relationship with different cultures, growth, internal complexity, and differences in the social group; internal conflicts between completely different and unconnected cultural elements, and perception of desired goals in a relatively negative way (Abercombie, 1984; Al-Aquil, 1992; Theodorson, 1970).

Modernization is sometimes defined in terms of adjustment, or in other words, the ability of society to withstand conflicts, to overcome them, and to plan for new challenges through the re-shaping of its social structure. The origin of the challenges does

not matter; whether it is internal social dynamics or external social relationship or the influence of the natural forces of any another other source; what is important is that a society that is undergoing a process of modernization must adjust to the need for change (Al-Aquil, 1992).

Al-Aquil (1992) researched the attitudes of students from the King Saud University in Saudi Arabia towards modernization and found that the attitudes of students who come from rural regions on the topic of the role of women in society are conservative. The men students object to the fact that the woman is working outside of the home, since they do not want to lose control over their marital life and do not want to act against the social trend in this issue. In contrast, the woman students see that they can fit their marital life with their liberation from social limitations. The women's attitudes are more liberal and modern on the topic of the role of the woman in society.

Researchers who examined the process of modernization in Arab society in Israel indicate an accelerated process in this population. However, they are of divided opinions in the context of the different dimensions where there were changes. Shmlatz (1981) notes that after the establishment of the State the process of modernization in the Arab sector increased, the process of occupational transformation extended, and consequently the work in agriculture lessened. The intensive contact with the Jewish population had comprehensive implications, so that the education system, the local government, and other services that required skilled manpower and a different reference than in the past broadened and changed. The signs that indicate the process of modernization are the constant increase in the level of education, the decline in the centrality of religion, and the steadily increasing exposure to the different means of media. These signs steadily emphasize the modern process that influences the lifestyle in general and among women in particular.

Al-Haj (1983) sees the characteristics of the Arab family and the processes of change of the family units at the different levels to be a product of the variables of the individual modernization: modern attitudes, education, employment, exposure to means of communication, and contact with the Western society. He holds that the contact of

Arab society with Jewish society led to the adoption of some of the modern values that are dominant in this society. As a result, there was a significant change in the dimension of behavior of the field of the family.

Al-Haj (1987) notes that the process of modernization among the research population he conducted in Shefar-am influenced the ideology but not the behavior. This argument was based on the comparison between adults and young people about the support in the change of the woman's status. He found that the change in the woman's status is supported by the older men and not by the young educated men who are exposed to the influence of modern society. In light of this finding, he negates the main argument of the approach of individual modernization that emphasizes that the change in the normative and psychological dimension is a pre-condition that results in a similar change in the behavioral dimension. He holds that the change in attitudes is not necessarily accompanied by a change in behavior.

Datan (1972) conducted a comparative research study on Muslim women in the Arab village in Israel and Jewish women who immigrated to Israel from South Africa, Iran, Turkey and central Europe and examined the influence of menopause on these women. She presented three types of women: the modern woman, who is educated, has free choice of her husband, plans her family, is initiative and is active; the woman in transition, who attempts to cultivate for herself a modern way of life, through the abandonment of the traditional lifestyle, and the traditional woman, who is inferior to the man, does not know how to read and write, is committed to a system of limiting customs, is passive, and gives birth to and raises many children.

Katz (1980) in her research study examined the influence of the resources and the cultural background on the balance of power between married spouses and found that the modern urban family, as has crystallized in a number of cultures, draws closer to the equal allocation between married spouses. She also indicates the factors of the cultural-value-oriented background regarding men and women, when as the values tend towards the conservative direction, the balance of power tends towards masculine dominance, and

the liberal values are related apparently to the reduction or disappearance of this hierarchy.

Scot (1995) criticizes the theory of modernization and maintains that this theory, which is based on liberalism, cannot constitute an appropriate basis for the continuous quality of life of women and men in the third world. Her argument is that the separation that the theory of modernization draws between the public realm and the private realm takes out the traditional-female housework from the public policy. Some of the proponents of this theory associate the traditionalism explicitly with women. Tangible proof of this is that the battle over modernization is perceived as a battle against traditional housework. Men make history in the rational world, when the women continue with their initial 'natural' responsibility for housework. The men are busy with mental roles and the women with physical roles.

Modernization and the use of electronic media have caused many social and cultural changes in the world in general and in Arab society in particular. In the research of the influence of modernization on adolescents it is important to discover the implicit functions. The research of the implicit functions in sociology has a significant contribution. Implicit functions of a custom or belief are unknown, since they constitute social and psychological chronicles no one had intended and generally they are not even recognized. Hence, the findings discovered in the research of the implicit functions should be seen as a greater addition of knowledge than findings addressing the explicit functions. The research of the implicit functions also reflects a greater deviation from the knowledge according to the "common sense" regarding the social life. If the implicit functions deviate from the explicit and declared functions, the research that discovers implicit functions may frequently lead to "paradoxical" outcomes. What appears as a paradox originates in the extreme change that has occurred in the early widespread opinions prevailing in the nation, according to which they look at a standardized practice or a standardized belief only according to explicit functions, a change that occurred because of the mention of a number of their secondary functions or side functions. The discovery of the implicit functions not only adds precision to the perception of the functions filled by social patterns but also makes a different contribution in qualitative

terms to the knowledge that had existed beforehand (Merton, 1957). Therefore, in the analysis of the influence of modernization, the explicit functions caused the development of Arab society and its advancement and the improvement of the woman's status and growing accessibility of modern technologies, but there are implicit functions, one of which is sleep problems and change in the sleep patterns of adolescents in general and Arab adolescents in particular.

### **Postmodern Society**

The supporters of post-modernism have asserted since the middle of the 1980s that the classic social thinkers drew their inspiration from the idea that history has direction, that "it advances from some place" and leads to progress. However, this idea has collapsed today and no longer has justification. Moreover, there are no longer any "great narratives" or "meta-narratives", world-encompassing perceptions of history or society, in which it is possible to believe. Furthermore, it is impossible to defend any general idea of progress, and even history is now an outdated concept. The post-modern world does not stride towards unavoidable socialism, as Marx hoped, but rather is controlled by the new media, which "take us out" – or disconnect us – from our past (Lyotard, 1985).

Postmodern society is pluralistic and highly diverse. Different characters wander in the world through infinite films, television programs, and Internet websites. We encounter a tremendous number of ideas and values, but they do not have great connection to the history of the regions in which we live or in essence to the history of our lives. Everything is supposedly found in constant flow and as authors expressed, our world is now being recreated. The mass production, the mass consumer, the large city, the big brother state, the expanding housing projects and the nation-state, all these are in regression, while flexibility, diversity, difference, mobility, media, decentralization, and internationalism are on the rise. During this, our identities, our self-perception, our subjectivity completely change. We are on the threshold of a new era (Hall & Jacques, 1988). These changes that occurred in the West began to influence different societies in the world. Arab society in Israel was influenced by the changes and the process of

modernization, following its exposure to the Western world through different means of media and primarily the Internet and through the relationship with Jewish society in Israel (Abu-Becker, 2008).

One of the important theoreticians of post-modernism is the French author Jean Baudrillard. Baudrillard maintained that the electronic media have destroyed our relationship with the past and have created an empty and chaotic world. In his first years he was greatly influenced by Marx, but he opined that the spread of electronic media and mass media has changed the Marxist theory according to which economic forces shape society. Instead, social life is now primarily influenced by symbols and images.

Baudrillard says that in our world, controlled by the media, meaning is created by the flow of images, like on a television program. A large part of our world has become an imaginary universe, in which we respond to the images of media instead of to real people or places. Therefore, when Princess Diana was killed in the year 1997, there was a huge burst of sadness not only in Britain but also throughout the world. However, did people mourn the death of a real person? Baudrillard would say not. Princess Diana existed for most people only in the media. Her death was more similar to an event in a soap opera than to a real event, as people experience it in their lives; Baudrillard speaks of the “transformation of life into television”. Another example from the Western world is the dissemination of the picture in the media of the Syrian boy, aged two, who was found dead on the beach in Greece after the boat that carried Syrian migrants sank. This caused many human rights activists in the world to work to provide entrance permits for the Syrian migrants to the Western countries.

The Polish sociologist Zygmunt Bauman (1992) proposed a useful distinction, which distinguishes between two ways of thinking about postmodern ideas. On the one hand, it is possible to argue that the social world is moving rapidly in the postmodern direction. The tremendous growth and spread of the mass media, the new information technology, the more fluid movement of people around the world, and the development of multicultural societies all attest that we no longer live in a modern world but in a postmodern world. Modernity has died, and we are entering a postmodern period. The

question then is as follows. Can modern sociology properly analyze a postmodern world? Is sociology of postmodernism possible? On the other hand, some argue that the aforementioned postmodern changes cannot be analyzed using the old sociological theories and concepts and we must change them for new ones. In short, we need postmodern sociology for a postmodern world.

Bauman concurs that the modern task to shape society in a rational manner, a task that began with European enlightenment, is no longer applicable, at least not in the way that Comte, Marx, or other classic theoreticians saw in front of them. However, since the beginning of the present century he turned his back on the term “postmodern”, which he said had been corrupted by diverse and inconsistent use, and began to describe our world as a “fluid modernity”, an expression that reflects the fact that it is in constant flow and uncertainty despite all the (modern) attempts to impose on it order and stability (Bauman, 2000, 2007).

One of the consistent critics of postmodern theory is Jürgen Habermas (Habermas, 1983), who maintains that the time has not come to abandon the “project” of modernity. He sees modernity as an “unfinished project”, and instead of giving up on it and tossing it into the garbage can of history, we must broaden it and develop it: to strive for more democracy, for more liberty, and for more rational policy. In his opinion, the postmodernists are fundamentally pessimists and defeatists. It seems that the postmodern analyses are today yielding their place to the theory of globalization, which has become the primary theoretical framework for the understanding of the direction of the social change in the 21<sup>st</sup> century.

The concept of late modernity differs from the concept of postmodernity, in that it does not assume the achievement of an absolutely new quality, but rather the intensification of processes rooted in classical modernity, which can generate effects beyond the currently available possibilities of precise forecasting (Giddens, 1990). According to Ulrich Beck (2002), the risk society is a characteristic feature of late modernity associated with the uncontrollability of the effects of development. According to Beck, the basic risks are: ecological, health, and social risks (including

individualization and loneliness, mass unemployment, education without employment, and tensions in relations between the genders). As Beck writes, the transition from industrial society to the risk society occurs against the will of its members, imperceptibly and in an uncontrolled manner due to the autonomous dynamics of modernization, similarly to the hidden side effects.

Social theorists and sociologists such as Scott Lash, Ulrich Beck, Zygmunt Bauman, and Anthony Giddens assert (against postmodernists) that modernization continues into the contemporary era, which is therefore better conceived as a radical state of late modernity (Cools et al., 2010). Regarding technological and social changes since the 1960s, the concept of “late modernity” proposes that contemporary societies are a clear continuation of modern institutional transitions and cultural developments. These authors speak about a reflexive modernization process: according to Giddens (1990), “social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character”. Modernity now tends to be self-referring, instead its definition largely in opposition to traditionalism, as with classical modernity (Giddens, 1990). Reflexive modernization is a process of modernization characteristic of the risk society, in which progress is attained through re-organization and reform. Science and technology, as used for the purpose of reflexive modernization, is less occupied with the expansion of the resource base; rather it is concerned with the re-evaluation of what is already being used by society. There is a constant flow of information between science and industry, and progress is achieved through the consequent reforms, optimizations, and adaptations. Examples of reflexive modernization that have recently gained political momentum are sustainability and the precautionary principle. The new social movements (namely, the feminist, green, and pirate parties) are also viewed as an expression of reflexive modernization (Giddens, 1990).

It can be said that the focus of postmodern sociology is conditions of life that became increasingly prevalent in the late 20<sup>th</sup> century in the most industrialized nations, including the ubiquity of mass media and mass production, the rise of a global economy, and a shift from manufacturing to service economies. Jameson and Harvey described it as

consumerism, where manufacturing, distribution, and dissemination have become exceptionally inexpensive but social connectedness and community have become rarer. Other thinkers assert that postmodernity is the natural reaction to mass broadcasting in a society conditioned to mass production and mass politics. The work of Alasdair MacIntyre informs the versions of postmodernism of such authors as Murphy (2003) and Bielskis (2005), for whom MacIntyre's postmodern revision of Aristotelianism poses a challenge to the kind of consumerist ideology that now promotes capital accumulation (Cools et al., 2010).

The sociological view of postmodernity attributes it to more rapid transportation, wider communication, and the ability to leave the standardization of mass production, thus leading to a system that values a wider range of capital than previously and allows value to be stored in a greater range of forms. Harvey argues that postmodernity is an escape from "Fordism", a term coined by Antonio Gramsci to describe the mode of industrial regulation and accumulation that prevailed during the Keynesian era of economic policy in OECD countries from the early 1930s to the 1970s. According to Harvey, Fordism is associated with Keynesianism in that the former addresses methods of production and capital-labor relations while the latter refers to economic policy and regulation. Hence, post-Fordism is one of the basic aspects of postmodernity from Harvey's point of view. Anthony Giddens does not dispute that important changes have occurred since "high" modernity; rather he asserts that modernity has not truly been abandoned. The modernity of contemporary society is a developed, radicalized, "late" modernity – but it is still modernity, not postmodernity. From such a perspective, postmodernism appears only as a hyper-technological version of modernity (Giddens, 1990).

On the basis of the aforementioned theories, we have seen the influence of modernization on different societies and the changes that have occurred following the accelerated process of technology. The process of modernization has also influenced Arab society in Israel, which is considered a conservative society.

### **1.3 Arab Society in Israel**

#### **1.3.1 Research Population: Arab Society in Israel**

The Arab population in Israel is composed of three primary religion groups: Muslims, Druse, and Christians, who share a language, customs, and traditional life style and three socioeconomic groups, Bedouin, urban, and rural. The Arab population in Israel constituted, as of the end of 2016, 1, 757,000 people: in other words, 21% of all the citizens of the State (Central Bureau of Statistics, 2017) are characterized by the fact that it is a relatively young population relative to the general population. The Arab population is composed of a number of subgroups: the largest group is Muslim, 1,488,000, 18% of all the residents of Israel, 2% of the entire population is Christian (170,000), and the rest are Druse (Central Bureau of Statistics, 2017).

Arab society in Israel is a fundamentally traditional society and includes characteristics of the collectivist and authoritarian culture. It emphasizes values that serve the group, such as family cohesion, harmonious relations, conformity, and reciprocal dependence (Suleiman-Dehalala, 2013; Shahala, 2012).

Culture is collective in that the individual defines himself in the context of the social and physical environment in which he lives and primarily the emphasis is on harmony with the group of belonging. The collective self that is formed depends largely on the reputation and status of the family and on the agreement and approval that the individual receives from the family (Dwairy, 2004). Society is characterized by the existence of clear role division (Antonovsky, Meari, & Blance, 1978; Florian & Zernitsky-Shurka, 1987) and the control in the family is built in a patriarchal hierarchy, so that the father is situated for the most part at the head of the pyramid and is perceived as having power and his children and wife are subordinate to him (Alhiadari, 2003).

Traditionally, children are expected to heed the family laws, to adjust themselves to education, work, and marriage, and to meet the family expectations. In addition, there is preference for male children over female children (Haj Yahia, 2003), which leads to different education for boys and girls in the family and influences differently their social

development, especially in adulthood (Sharabi, 1975; Antonovsky et al., 1978; Florian & Har-Even, 1984). It should be noted that this society is found in gradual transition from a collectivist society to a more individualist society, when its main characteristic is the abandonment of traditionalism in favor of a more modern and open life (Al-Haj, 1987, 1989, 1995; Laves & Katz, 2002; Shapira, 2011).

### **1.3.2 The Process of Modernization in Arab Society in Israel**

Today Arab society is undergoing a process of modernization expressed in the rise in the level of education, which is a condition of livelihood and exposure for means of media (Al-Haj, 1995) and changes in the method of raising the children (Amar Imar, 2012). The process of modernization caused cultural, value, and structural changes in society (Dwairy, 2004). In addition, over the years, Arab population has adopted standards and aspiration of Jews, especially in terms of the family, so that the nuclear family grew instead of the extended family and the sons left the family businesses and shared family residences after they married (Amar Imar, 2012).

Samooha (1998) maintained that changes have occurred in Arab society in general and in the personal and family patterns in particular and they were expressed in changes of the consumption habit, entertainment habits, family life, and even change of the personal traits and thinking ways. Other research studies undertaken in recent years among groups of adolescents support this argument that the characteristics of Arab society are changing gradually and that Arab society in Israel is found in a period of transition and is influenced by what is happening around it. It is exposed to Western values and norms following its encounter with Jewish society, satellite television, Internet, and many other factors (Anabusi, 2007; Perach, 2002; Sharabany, Eshel, & Hakim, 2006). In the theory of the French social scientist Émile Durkheim (1858–1917), the social cohesiveness of small, undifferentiated societies (mechanical) and of societies differentiated by a relatively complex division of labor (organic), mechanical solidarity is the social integration of members of a society who have common values and beliefs. These common values and beliefs constitute a “collective conscience” that works internally in individual members to cause them to cooperate. Because, in Durkheim’s

view, the forces causing members of society to cooperate were much like the internal energies causing the molecules to cohere in a solid, he drew upon the terminology of physical science in coining the term *mechanical solidarity*. In contrast to mechanical solidarity, organic solidarity is social integration that arises out of the need of individuals for one another's services. In a society characterized by organic solidarity, there is relatively greater division of labor, with individuals functioning much like the interdependent but distinct organs of a living body. Society relies less on imposing uniform rules on everyone and more on regulating the relations between different groups and people, often through the greater use of contracts and laws (Durkheim, 1895).

According to the theory of Durkheim (1895), following modernization and the changes that have occurred in Arab society in Israel, Arab society has shifted from a collective society, with mechanical solidarity based on similarity, to an organic solidarity based on dependence. In the past, people in Arab society were born in the same village and educated there and absorbed the entire culture from the same place and they all were more or less identical, without meaningful differences between them and they did not absorb any outside "harm" of something that contradicts their lifestyle. Everyone does the same thing and contributes the same thing to the system. All people do their parts, but all the parts are equal (the person provides for himself all the needs of his livelihood). Today, following the social changes as a result of the rapid process of modernization that Arab society is experiencing in the cities, this similarity no longer exists. Durkheim proposes an approach that solidarity in modern society is solidarity based on dependence. If in the past it was based on similarity, today it is based on dependence, and dependence is a stronger "social glue" than similarity. Society will survive since people become more and more dependent on one another.

### **1.3.3 Influence of Modernization on the Arab Family**

The Arab family in Israel is considered a part of patriarchal society, which situates the woman in a low place in the family hierarchy and raises the status of older and young men (Alhiadari, 2003; Ibrahim, 1993, in Haj Yahia, 1994). The changes that have occurred in Arab society, like the decline of agriculture and the rise in

unemployment, caused quantitative changes at different levels in the woman's status and have forced her to enter the work force (Hasan, 1999).

The extended family was the basic social unit in Arab society and served both as an economic unit and as a unit of property and unit of residence, when at the head of the family there was the father, who completely ruled his family. In the shared household there was his wife (or his wives), his unmarried daughters, his unmarried sons, and his married sons, with their wives and children. The nuclear family was assimilated in the extended family, and this influenced the woman's status, the patterns of consumption, and the planning of the family. The woman's status steadily strengthened as she advanced in the family lifecycle, and especially with the division of the typical extended family and the establishment of a new family unit, which later became an extended family, in which the mother acquired a strong status in the different decisions in family issues, in the sons' marriages, and in the control over their wives. In contrast, the young bride suffered from a low status and needed to adjust herself to a large number of family members (Al-Haj, 1983, 1987; Rosenfeld, 1981).

The couple relationship was not perceived as equal in the family relations. The role of the father is to punish, to control, and to impose discipline, while the role of the mother is to support, to educate, and to raise. The role of the child is to obey and to submit to the parents. Arab society prefers harmony with the environment and preserves the family relations and collectivist behavior over individual orientations and behaviors. Family problems develop when the family or the individuals do not maintain harmony between them and the environment and the outside world. Emotional difficulties and personal and interpersonal conflicts derive from the disobedience of the instructions and the ignoring of society's expectations (Haj Yahia, 1994).

Al-Haj (1983) found that the young woman who lives with her extended family has to adjust herself to the expectations and requirements of all the family members. She has to work at home and fulfill the needs of her husband, parents, and single brothers. In addition, she has to work in the field, in the family's agricultural farm.

Recently, the researchers report changes in the family characteristics. However, they maintain that these are not included in the traditional structures and relations, when a certain degree of continuity is retained in the family unit and in the father's control. Regarding the status of the woman, the change is quantitative more than basically qualitative, a change that modifies her status in the family and in her relations with her children (Haj Yahia & Ben-Arieh, 2000). The changes that left their influence on the social processes included in Arab society and on the personal family life were expressed in the patterns of leisure time activity, in the family life, and in the personal traits and ways of thinking. The expansion of the Arab villages, along with the processes of modernization and urbanization they experienced, gradually led to the internalization of modern values, such as personal freedom, social equality, and political democracy, instead of the traditional norms that had reigned for a long time in Arab society. These processes contributed to the rise in the level of education and level of life (Haj Yahia, 1994). Additional changes occurred in the family life. Many Arab women have acquired an education and work today outside of the home. Therefore, there were changes in their status, in the division of the roles between them and men in the home and in society, and in the roles of parenting and education of the children (Kurazim & Abu Asba, 2002).

Many researchers are interested in what is happening in the Arab family and have attempted to provide explanations. Mari (1974) thinks that the creation of the nuclear family is an outcome of changes that occurred with the exposure of Arab society of the different Western culture through the media. In contrast, Habash (1977) holds that the relationship between the nuclearization of the family and the process of modernization is not clean and pure. The nuclear family grew in an atmosphere of contradictions between two forces, one pushing in the direction of modernization while the other pulling in the direction of conservatism and traditionalism. However, Al-Haj (1987) maintains that the revolutionary change in the patterns of manufacturing and the comprehensive occupational transformation and reinforcement of the process of modernization after the establishment of the State did not bring about the replacement of the extended family with the nuclear family in an absolute manner. He even holds that the extended family still exists in the psychological dimension, if not in the practical dimension. Samara (1993) asserts that the Arab family of today carries with it customs and values from the

old family patterns (clan and extended family) that are adjusted to the man's expectations of control and ownership of the woman.

Some of the researchers have attempted to clarify whether the change in the family structure influenced the relations between the spouses in it. The findings show that despite the changes that occurred in the family the relations between the couple are not equal and the topic of equality does not have a main place at the head of the priorities of society and the Arab family (Haj Yahia, 1994). However, the processes of social and cultural transformation can influence the inter-couple relations and the Arab family to the point that they will change the traditional character of complementary relations between the spouses – dominance on the part of the husband and obedience and submissive on the part of the woman (Al-Haj, 1987, 1989). Tradition determines that the communicative processes between Arab family members will be conducted according to the vertical hierarchical and will be determined according to age, sex, generation, and birth order of family members (Al-Haj, 1987; Haj Yahia, 1994). Al-Haj (1983) found that there is a separation between the fields of action of men and women, when the woman's field of action is inside the home and in its immediate environment, while the man is active in fields outside of the family, with the governments, the job market, in the local and national organization, and party activity.

The research findings of Girasi (1991), who examined the influence of modernization and the resources of the Arab woman who works on the ways of her coping with the duality of her role, indicates the strengthening of the nuclear family and the weakening of the extended family. In addition, they indicated changes in the perception of Arab society regarding the division of the roles between the sexes, which came following the woman's going to work. The working mother often uses the strategy of the enlistment of physical, emotional, and economic support from the husband. However, as the physical help acquires the image of 'more feminine', the help from the husband decreases. In addition, the woman's degree of the commitment to members of the origin families is found in decline relative to the situation in the past.

Another research study that was performed on Arab women in Israel, in which 340 women participated, found that there was an improvement in the status of the Arab woman following the process of modernization that Arab society undergoes and because of the rise in the level of resources of the woman herself. As the community is more modern and the woman has more resources, her status in the family and in the community is better (Heshbon, 1997).

The woman's education, work, and professionalism influence the entire family system. However, the main reason for all these factors is modernization. All the social changes in the family structure, roles in the family, customs, tradition, and religious are an outcome of the spread and accessibility of general education and of the development and spread of medicine (Aziza, 1991).

In the past decade, there has been a considerable improvement in the status of the Arab woman in Israel, but despite the great change there is still a gap between her status and the Jewish woman's status in Israel. According to the data of the Central Bureau of Statistics, Arab women constitute 49.5% of the Arab population and 20% of the entire population in Israel, and the size of the average household in the Arab sector is estimated at 3.4 people. In addition, the fertility rate among Arab women has declined in the past decade (2002-2011) by about 23%, from 4.58 children per woman in the year 2002 to 3.4 children per woman in the year 2011, and to 2.25 in the year 2018. To the same extent, the data of the education and the participation in the job market among Arab women have increased in recent years. In the year 2015 the percentage of employment of Arab women aged 25-64 was 31.5%, despite the continuation of the trend of gradual increase in the percentage of employment of Arab women, this is still an especially low percentage, in comparison to the percentage among Jewish women (79.7%) and among Arab men (74.2%). In addition, it is possible to see that Arab women are employed at a lower rate by about 65% of the Jewish women in the professions of engineering and technology (6.4% versus 18.1%, respectively) and in the management roles (2.9% versus 8.7%, respectively). (Central Bureau of Statistics of Israel, 2018)

Structurally, the trends of modernization are changing the status of women in Arab society in Israel. In general, these are trends of the decline of the clan and the extended family and the rise of the nuclear family, the transition from a structure of a closed and conservative society to a modern and open society, and the increase in the level of education of women and their entry into the job market outside of the home, both as a personal need and as a need for family income (Abu-Becker, 2008). Thus, Arab women are found in a process of the separation from their marginal, passive, and traditional roles and become active participants in the field of making decisions in the family, participate more in activities in the public sphere (Abu-Achmad, 2006; Abu-Becker, 2008).

The changes in the status of the woman as a structured part of the trends of modernization resonate and upset the man's traditional status. In this trend, there is a challenge to the perception of traditional normative masculinity, which transforms from a clear and uniform category of identity into a relatively flexible category of identity defined on an axis between the model of the traditional religious man and the new masculinity in the formation according to the model of modernist secular masculinity in the Western style (Montresco, 2003; Said, 2008). Again, like the situation of Arab society in general, here too it is possible to see the Arab men, especially the educated men, as subject to deliberation and as walking the fine line between equality and patriarchy, between conservatism and permissiveness, between theory and practice. Still, for the time being, the adjustment of Arab men and their coping with the dilemmas entailed by the changes in the definition of gender categories amount to the display of a certain degree of flexibility towards the nonessential aspects of traditional culture and determination about the essential ones (Montresco, 2003).

According to Anam (2004), it is possible to say that in the vertical perception between the past and the present the changes in the woman's status are rather apparent. However, from a value-based social reference point, in comparison to changes in the woman's status in the global environment, the status of Arab women inspires frustration and lack of satisfaction with the achievements.

The acquisition of a higher education is considered one of the basic instruments in social-economic mobility in every society. Thus, the improvement of the status, standard of living, and quality of the minority group on a religious, ethnic, or national background depends on its members' education achievements. This argument can be posited for a certain group from in the group itself: the improvement of the social-economic status of the Arab women depends on their level of scholastic achievements (Abu Asba, 2006). Hence, the data on the closing of the gender gap, as expressed in trends of the increase of level of education of women in Arab society, predict positive changes, since this constitutes a breakthrough and provides an opportunity for the improvement of these women's status both in their own eyes and in the eyes of the surrounding social system (Abu Asba, 2006; Mustafa, 2006). According to the data of the Central Bureau of Statistics, the percentage of women among university graduates, including advanced degrees, is higher than that of men. Among the graduates of the bachelor degree, the percentage of women is high in comparison to men in each one of the religious groups, when the percentage of women among the Christian Arab graduates is the greatest. The percentage of women among the Christian Arab graduates of master degrees is higher compared to the other religious groups. The data are slightly different among the graduates of the academic colleges, when the percentage of women among the Jewish graduates is slightly higher than among the Arabs.

However, despite the encouraging data on the significant increase in the degree of the Arab women's access to higher education in general, as presented above, it is necessary to be cautiously optimistic on the prediction of the significant extension of the structure of opportunities and essential change in their status in society. It is necessary to remember that despite the impressive percentages of participation of women in the acquisition of higher education, experience indicates that a more in-depth look shows that the gender gap tends to be in favor of women primarily in the areas of learning with relatively low potential of salary earning and professional prestige, such as the social sciences and the humanities, education, nursing, and so on, while the percentage of women among the graduates in professions with high potential of salary earning and professional prestige, such as the technological professions, continues to be relatively low (Tamir, 2007).

A research study recently conducted in Israel on women with higher education focused on the retrospective look of married and educated Arab women on their social experience in their community in the period of their studies. The women related that during their studies they encountered difficulties related to the manner of their coping between the world of the home and children, with all its obligations, and the world of academia, with all its tasks. Although they all mentioned that they received help from outside factors such as mothers and sisters, they still had to bear many obligations, with which nobody could help. It should be noted that the husband provided very limited support in all that pertained to helping his wife, especially in all that is connected with the housework and the children. Moreover, in most cases the husband consented to let the woman go to study as long as this did not come at his expense and at the expense of the family. Consequently, the woman worked day and night to cope with the tremendous pressure (Kasum-Bashir, 2013).

#### **1.3.4 Influence of Modernization on the Lifestyle of Arab Adolescents**

Arab society in Israel is undergoing processes of change as a result of the local and global modernization, and changes that influence society in a wide range of dimensions are occurring. In the demographic dimension, significant changes are occurring, such as the migration from the village to the city, the decline in the birthrate and family size, the weakening of the clan and the extended family, and the transition to the model of the nuclear family. In the cultural dimension, the changes are expressed in the rise in the level of income and education, the increase in the participation in the formal institutions, the strengthening of the relationship with the Jewish population, and the adoption of Western and modern life styles (Abu-Becker, 2008). In addition, a tremendous change has occurred in the status of the woman. Many women go to work outside of the home and participate in earning the family's livelihood and the financial burden is not only borne by the father as in the past. There is a rise in the level of education among women. This change obviously influences the entire family and especially the adolescents.

The modernization and the many changes to which Arab society was exposed greatly influenced the adolescents and their lifestyle. Today the Arab adolescents are exposed to the electronic media and are influenced by European society (Anabusi, 2007). Nevertheless, there are no research studies on the influence of the modernization and exposure to the media on the health and functioning indices of the Arab adolescent.

In a multicultural survey conducted on eating disorders in Israel, it was found that Arab adolescents have the lowest rate of eating disorders, in comparison to their Jewish peers. The researchers hypothesized that the degree of exposure to Western society increases the rates of eating disorders so that traditionalism in Arab society constitutes a defense for them, in contrast to Jewish society, which is more exposed to Western society (Latzer, Witztum, & Stein, 2008).

The present research study is intended to provide a response to another aspect of the constellation of questions that arise regarding the influence of modernization on the functioning and health of adolescents in Arab society. Specifically, the research study will examine the relation between the habits of the exposure to electronic media and sleep habits (as a window into the health and functioning situation) and accompanying behaviors among Arab adolescents. According to the data, an intervention program is built for the parents of adolescents to raise the awareness and knowledge of the developmental changes during adolescence and to reinforce the authoritative parenting style.

## **Chapter 2: The Internet and Its Influence on Society**

The Internet constitutes an important part of the lives of children and adolescents. Many research studies have been published in the past decade on the patterns of the use of the Internet and its implications on the psychological, social, and academic dimensions of the child and the adolescent. This type of research is a continuation of the research tradition on new technologies and their influences on adolescents. For the most part, the research studies derive from the concerns about the negative impacts on the children caused by new technologies (Livingstone, 2003; Ribak & Turow, 2003; Shaul, 2018; Wartella & Reeves, 1985).

The Internet provides possibilities and services more than do previous media technologies (such as television, radio, telephone, etc.). It enables access to contents that are not accessible in the near environment and communication with people both known and unknown with immediacy and in different methods (Turow, 2003). All this induces many concerns among the parents and the educators because of their absence and their inability to follow up or mediate between their children and the contents and the interpersonal contexts. Postman (1986) called the exposure to the contents of adulthood by the name he titled his book, *The Loss of Childhood*. According to Postman, the children are exposed to contents for which they are not ready in emotional and cognitive terms.

The open and two-way communication on the Internet also inspires the fear of invading the privacy of the user and his family, and thus leading to true dangers (Ribak & Turow, 2003). In general, research studies indicate gaps in the skills of use between the ages, when as the age is younger, the skills are greater (Ganayem, 2010). The children are considered more skilled and expert in the Internet in relation to their parents (Ribak & Turow, 2003). The development of technology including laptops and handheld computers, which enable mobile access to the Internet and especially in the bedroom, which become a “media room” (Livingstone, 2003), further reduces the parents’ involvement in the contents and the media to which the children are exposed.

Ribak and Turow (2003) showed that Israeli parents and children tend to give more information online than do Americans, who expressed greater concern about the damages the Internet can do to their children. Lamish, Ribak, and Aloni (2009) showed that adolescents tend more to give details and personal information than younger children, which may be related to adolescents taking risks and extending the circle of personal acquaintanceships. They showed that Israeli parents are less skilled than their children on the Internet and also know little about their children’s use of the Internet. They show that nearly 60% of the children were exposed to pornography websites, when older boys were exposed more than were girls or younger boys. The same research study showed that most of the online communication with immediate messages between children is with known friends and one-third of the children communicate with strangers

(Lamish et al., 2009). However, most of the children in the middle schools (67%) and high school (97%) communicate also with strangers and even about 30% met face to face. These communication possibilities may endanger the children and youths (Gross & Acquisiti, 2005).

In general, the children and adolescents are classified by the adults either as innocents who need protection or as threats who harm others and endanger them (James, Jenk, & Prout, 1998). Mesch and Talmud (2007) showed that the children's behavior in the online world is more associated with the characteristics of the interaction between the parents and the children and not with the use of the Internet, therefore reducing the anxiety that the medium has influence on the children (Mesch, 2003; Mesch & Talmud, 2007).

The online social networks enable the users to join an existing social network or to create a new network of their own. On the Internet there are different systems that enable the construction of such networks, such as Facebook, MySpace, Friendster, and Linked, and the recent network Google+. Although the social network Facebook was established only in the year 2004, there are millions of participants on the network and billions of views every day (Cassidy, 2006). On these social networks, the participants fill out a personal profile, when there are both mandatory fields and optional fields to be filled out.

The profile is a list of data of identification that can include the real name or a pseudonym, birthday, sex, country of birth, the residential address, and hobbies. Of course this information is reported by the user without examination or validation. According to Lennhart and Madden (2007), 46% of the young people who respond reported that at least one datum of all the data inputted into their profile is mistaken. In addition, a participant connects through connections from the personal page to other people who already are found on this network. These connections are created by sending an invitation to participants on the network to join the inviter's social network, when the invitation recipient can accept or refuse. The acceptance of the invitation enables reciprocal exposure to the pages of people who are found on the same social network

with possibilities of reciprocal correspondence. In general, the users share with their friends on the network personal experiences, pictures, and opinions, which together constitute the online identity that the participant wants to show the friends online. All the interactions between the participants are saved on the system servers, when a large part of this information is presented on the participants' pages as the default, unless the participants defined correctly the level of privacy and exposure of their personal profile to others (Lenhart & Madden 2007).

Facebook was started for academic purposes of students in the university and developed as a social network open to all. Rafaeli (in Weiss, 2010) defines the phenomenon of social networks as a new and interesting phenomenon. He explains the innovation of the phenomenon in that the user of email is today labeled "outdated" and that this generation was replaced by the generation of applications, in which there is greater participation and motivation and also more content for users. According to Facebook data (Facebook, 2011), there are more than 750 million active users on the network, when 50% use Facebook daily and the mean of network friends is 130. Although Facebook began in the United States, more than 70% of the friends on Facebook are outside of the United States. It is important to note that a steadily increasing number of people use Facebook from their cellular phones, reaching around one-third of the users.

According to the PEW Report, in 2011 in the United States about 60% of all Internet users are found on some social network, when most of them (92%) are found on Facebook (Hampton, Goulet, Rainie, & Purcell 2011). The characteristics of Facebook use in the United States show that on a daily basis 26% of the Facebook users use the "like" label, 20% respond to others' pictures, 22% respond to status or write a response on another's wall, and only 10% send personal messages. This shows that most of the users communicate with others publically. Regarding the number and type of friends, the PEW survey indicates that the mean number of friends is 229, when on the average only 7% of the user's friends are strangers (people the user has never met). The survey indicates that most of the friendships on Facebook are based on prior acquaintanceship from the institution of studies, the workplace, or the family. Friends from the immediate

family constitute about 8% of all the users' friends, when friends from the extended family constitute 12%.

Recently, a steadily increasing number of articles are being published in the press on the topic of social networks, especially Facebook (Acquisti & Gross, 2006; Lampe, Ellison, & Steinfield, 2007; Stutzman, 2006). This shows on the one hand the importance of this global phenomenon and on the other hand the absence of precise information regarding the users' manners of use of networks of this type, as well as the absence of information among the users themselves on questions such as "what do social network users know about these networks?". Most of the published research studies show that Facebook users tend to use this network to strengthen their relationships with their known friends and classmates. Mesch and Talmud (2007) showed that the online relationship is weaker than the relationship formed in the school and that a strong online relationship is generally based on true acquaintanceship. Additional research works confirm this and show that Facebook users search for people they know in reality more than strangers (Lampe, Ellison, & Steinfield, 2006).

The survey "Israeli Youths in the Year 2010" demonstrates that the preferred activity of these youths is their interaction with one another in their leisure time hours through social networks (Kaplan, 2010). According to the survey of the BrianSolis.com website and Google performed in 2010, it was found that 57% of Facebook users are women. In addition, the survey shows that while women for the most part use social networks as instruments for the creation of relationships and sharing of their personal lives, men use social networks to collect information and improve their status. The TIM Survey (2008), performed by TNS/Teleseker, indicates that Israeli users not only visit social networks and sharing websites in large numbers but also do so very frequently, perform on them many actions, and even draw from them considerable information for the purpose of making decisions about the purchase of products and services. The same survey indicates that almost 70% of the Israelis registered on the social networks responded that they are busy on them in corresponding with friends. The correspondence with friends is the preferred activity in all the age groups. In addition, it becomes clear

that their frequency of visits is high, when about 30% responded that they visit social networks at least once a week.

Additional articles document that too many users do not understand the implications of their active participation on social networks and what others can know about them as a result of the participation (Grimland, 2010; Sela, 2010). According to the survey conducted by Microsoft Corporation, published on the CNN website, 70% of the recruiters and human resources managers in the United States rejected a candidate on the basis of information they discovered about him online (Grimland, 2010).

According to Weiss (2010), an active user stays about seven hours on the average a week on Facebook. Dwyer, Hiltz, and Passerini (2007) examined the development of the virtual contexts on social networks and found that most of the Facebook participants, 55%, are active users who visit the website every day. Furthermore, they found that 8% of the Facebook users send a general message to the profile of a friend on a daily basis. From the same research it is clear that 82% of the Facebook users reported that they update their profile periodically (Dwyer, Hiltz, & Passerini, 2007). Ross, Orr, Sisic, Arseneault, Simmering, and Orr (2009) found also that most of the respondents (79%) spend between ten and sixty minutes a day on Facebook. Moreover, the situation is that very few users understand how to define the level of privacy and exposure of their personal profile on the social networks (Grimland, 2010), and therefore many users on Facebook do not know what information they are revealing to others (Sela, 2010). Hence, another important question arises: To what extent are Facebook users aware of the topic of privacy and the information revealed about them?

The meaningful cause of manners and patterns of use of the users of the Internet and in addition the awareness of the topic of privacy are primarily *not* an issue of age but other aspects, including the experience with the instrument and the ways of use of it as well as digital literacy (Weiss, 2010). In this chapter we discuss at length the development and use of the Internet and its impact on society and on youths and the risks of improper use of the Internet and social networks.

## **2.1 The Internet, Online Social Networks, and the Search for Information**

One of the ways most accessible to people in general and young people in particular for the search of information is the Internet, which already more than a decade ago was perceived as a common medium that serves the masses (Wellman & Haythornthwaite, 2002). The Internet constitutes a multifaceted space that enables many uses for the users, ranging from a place of entertainment and society to a place of education and information. The implications of technology that was developed around the growth of the Internet created changes in all parts of society, from economics and government to social relationships – and in the field of information and knowledge in particular. Before the era of the Internet, the knowledge resources were relatively limited, the libraries were among the sole reliable sources of information accessible to the public, and their access depended on the user’s adherence to the procedures of the place, and in addition, the information itself was limited and dependent on the library (Connaway, Dickey, & Radford, 2011). Because of the development of the Internet, the accessibility and availability of information grew. Familiar encyclopedias in the print version, for instance, became online, and thus information became more accessible to people who had access to an Internet connection, in terms of the saving in time and in terms of the financial aspect, for information became free or less expensive than the physical option. With the development of the second generation of the Internet (web 2.0), technology that represents network-based instruments and services (blogs, chats, social network websites, wiki pages, etc.), the goal of which is to make it easy to share with the user through focused design, knowledge resources were even enriched through the use of the “wisdom of the masses”, and hence the resources are widely available in digital form and are available to the general public with relative ease (Hughes, Joshi, Lemonde & Wareham, 2009).

In addition, the use of social networking services (SNSs) like Facebook proliferated. People spend a large part of their time on SNSs, and they broaden the community in the real world. A person in a group tends to conformity and to the adoption of the majority opinion, when the expression of the opinion is influenced by the audience of listeners and the group itself creates stereotypes on different groups according to the

group interest (Baron & Byrne, 2001). Hence, it is possible to conclude that social networks are a place where information is acquired and attitudes are created and entrenched, so that because of the network people can find with relative ease information on almost any topic. The search results will yield outcomes on different levels, when each one can choose to read information that will be presented in relatively simple and clear language depending on the topic.

In the context of health, even about twenty years ago research studies found that the Internet was considered an important source of knowledge in medical topics, when the research emphasis was the community of physicians and care-providers. Over the years, the use of the Internet has only increased, and it has become an important source of information for the public at large. The extraction of medical information from the Internet not only is a common behavior but also is increasing, when in the United States more than 60% and in Europe more than 50% of the population sought advice on the Internet on a medical topic at least once and 4% of all searches online are on health-related topics (Samal et al., 2011).

### **Facebook – A “Global Plague” and Its Victims**

Facebook is a free social network that allows information to be shared with every person who is a member in it. This network was created in 2004 as a social network of only Harvard University (in the United States). However, from 2006 the website became accessible to the entire public on the Internet. Since then the number of users of the website has avalanched. In 2006 Facebook had sixteen million members, and in 2010 more than five hundred million active users. Thus, Facebook became the most popular social network in the world and in Israel as well. According to the data of the website CheckFacebook, the number of members of this network on August 2011 in Israel was 3,488,120 people. This social network became so very vital and irreplaceable, to the point that it is impossible to imagine the daily life of the young generation without it (Yaron, 2013).

The Internet survey was conducted by the Toluna Research Company in a representative sample of 16,750 users above the age of sixteen from eighteen countries,

including Israel (Israeli Internet Association, 2017). The researchers of Kaspersky (in the Israeli Internet Association, 2017) address topics such as social confirmation, goals of surfing the social network, feelings after the surfing, the personal information that people share online, and the influence of the social network on our relationships with those dear to us in reality. The research study found that people tend to share considerable personal information on the social networks, yet the surfing does not necessarily improve their feeling, In the Kaspersky laboratories they say that their objective is to educate users for healthier relationships with social media and to teach them that there is no need to endanger themselves to succeed in this.

The findings indicate that the users turn to the social networks to feel better – 61% of the respondents published optimistic posts or something that caused them to smile. However, in the end the use of the social network does not cause people to be happy. 57% said that after they are on the social networks they think that the life of other people is better than their life and only 31% of the users are not bothered by the number of likes they received. Men primarily may be disappointed by the number of likes they received. 24% of the men said they are worried that they do not receive enough likes and their friends will think they are not popular. Only 17% of the women declared that they are worried about this issue. Many people share personal information on the social network, if they think it will bring them more likes. 37% share the city of residence, 31% share their email address, 30% share the status of their relationships, 18% share their workplace, and 14% share their address. The social network influences our relationships in the physical space. 31% of the respondents admitted that they now communicate less with their parents since they can speak to them on the social network, 33% communicate less with their children, 23% communicate less with their spouses, and 35% communicate less with their friends (Israeli Internet Association 2017).

According to a survey conducted in a secondary school in Israel, about 94% of young people (age thirteen to seventeen) in Israel have a Facebook profile. Most of them have used it for more than two years. Israel is found in the second place in the world, after the Philippines, in young people's use of Facebook, and in the first place in the users' time spent on the website – about 10.7 hours a month per user. The research study

showed that the main goal of the young users of Facebook is to spend free time when they are bored and the secondary goal is to maintain the relationship with the friends. 60% of the students blocked or erased users from their list of friends and prevented them from viewing their profile. 30% of the world did not do this, and 10% do not at all know how to do this (Boniel Nissim, 2012).

Although the website is supposed to protect minors, many children and adolescents are exposed to difficult violence, sometimes fatal, on Facebook. It is impossible to refrain from mentioning here the horrific case of the young man from the center of Israel, a tenth grade student, who committed suicide during a chat with “friends” from the class. This is not the first case in which Facebook is accused of violence towards children and youth. This phenomenon is called cyberbullying, which is bullying over the Internet. Sadly parents and the education system in Israel are not sufficiently aware of the dangers lurking for young users of this website. Some do not refer seriously to virtual violence, believing that it does not leave marks and signs on the body. Nevertheless, the public humiliation may be fatal, especially for the adolescent, for whom the friends’ opinion is very critical (Ben Porat, 2011; Boniel Nissim, 2010).

It is impossible to ignore the worrisome fact that the dimensions are not known to anybody. Despite the prohibition to open an account for children under the age of thirteen, a large and unknown number of children aged eight to thirteen have a Facebook account. In some of the cases, their parents, who are not aware of the dangers, know of the account. Sometimes children and adolescents tend to hold competitions: who has the most Facebook friends. Thus, they add to their list of friends people they have never met. As a result, all these “new friends” become partners in everything that happens with this minor 24 hours a day. With great nonchalance, minors publish all their personal information, such as exact address, school, phone numbers, photographs, sometimes even immodest ones of themselves and their friends, even without the friends’ permission. These details, in addition to the status “I am alone at home”, can allow criminal elements to commit robbery, burglary, and even rape and murder (Boniel Nissim, 2012).

In light of the multiplicity of victims of violence on social networks in general and on Facebook in particular, parents and education institutions along with the government institutions must adopt urgent steps to improve the situation. A society must determine a uniform policy towards digital offenses and in addition form state-wide instruction programs that will begin in early childhood and continue through the twelfth grade (Ben Porat, 2011; Boniel Nissim, 2010). In addition, the legal authorities in cooperation with the education institutions must determine methods of punishment for offenders in the field of the Internet, whether they are adults or minors. Parents on their part must cooperate fully with the teachers and with the authorities and provide a personal example of the proper and intelligent use of social networks and primarily align with the school in correct instruction.

## **2.2 The Internet and the Human Brain**

### **Anatomy of the Brain**

The human brain can be divided into many regions and sub-regions, according to its spatial anatomy and the functions of every region. The brain is composed of two hemispheres, when each one of them is divided into four lobes: the frontal lobe, the parietal lobe, the occipital lobe, and the temporal lobe. The lobes are separated from one another by main anatomical “markers” and primarily by large grooves made from folds of the cortex. Deep in the brain tissue, under the cortex, there are a number of subcortical regions separated anatomically from their environment. For the most part, these are nucleuses in which there are cell bodies with defined roles. The surface area of the human brain is far greater than the area of the skull. The bumps and grooves are created from the need to compress the very complex structure of the brain in the skull. During the course of fetal development the brain steadily grows and many folds are created. A number of the folds are so large that they conceal in them complete brain lobes. From a functional perspective, every hemisphere obtains information from the opposite side of the body and controls its functioning. In other words, the right hemisphere obtains sensory information from the left side of the body and instructs it how to respond and move, while the left hemisphere supervises the right half of the body. However, the hemispheres are not

completely symmetrical, and certain functions exist primarily on one side of the brain and not the other. One of the prominent examples of this is the Broca area, located in the frontal lobe. This area fills a vital role in people's linguistic ability and without it people cannot produce speech and have difficulties with the understanding of other people's speech. Although the anatomical structure itself exists in both sides of the brain, among most people the functional Broca region is found in the left hemisphere. In the brain there are a number of commissural structures with the role of transferring information between the two hemispheres. The main one is the corpus callosum. The commissural tract is responsible for the transfer of information between the two hemispheres, so that although each hemisphere is the first station of the information that comes from the opposite side of the body, in the end some of the processed information comes to both hemispheres together. In addition to the corpus callosum, there are two commissures in the front of the brain: the anterior commissure, which transmits information on the sense of smell between the two hemispheres, and the hippocampal commissure, which transmits information between two structures called the hippocampus, found deep in the brain. Two additional commissures were found in the back part of the brain: the posterior commissure, which transmits information on the sense of vision, and the habenular commissure (Kaminsky, 2012).

### **The Influence of the Internet on the Human Brain**

In the dynamic world of today, the pace of changes in the individual's life is the pace of technological innovation. The technologies create the ways in which the person thinks, acts, and perceives the reality. Like the world has dressed itself in a technological character, the individual is also dressed – by a culture that is driven by machines and the Internet, which is found in the home of nearly every person.

Children identify this niche while they are young. They are born into this imagined world and live in it from the moment they learned to speak. They spend hours and hours in Internet pages, wandering for countless days on the narrow paths of the social network. They meet people, talk, and are updated about what happens in others' lives. There is no doubt that the human voyeuristic need has increased and received more

practical expressions in recent years, namely seen through the genre of reality shows with infinite cameras. Facebook gives this significant expression, since the lives of people are spread out on a silver platter for anybody to see (Shaul, 2018).

Max Frisch, the noted Swiss author and playwright, wrote in the past that “technology organizes the world so that we will not need to experience it ourselves”. According to a psychologist from the University of Virginia, Joe King, who published a very worrisome research on the psychological implications of the Internet on adolescents around the world, research studies indicate a rise in the intelligence quotient of young Americans but a significant decline in their creativity and in their ability to think about original and practical ideas in their lives. She conducted an in-depth research through the TTCT test (test for the examination of creative thinking, which has been held in the United States from the 1950s) (King, in Shaul, 2018).

Computer games, since they are “interactive”, are considered more stimulating than watching television or DVDs. Nevertheless, research has found that computer games create limited neurological activity. The Global Neurology Federation reported in the year 2001 about a Japanese research that mapped the regions of the brain of children as they played computer games and the regions of the brain of children who performed simple repetitive mathematical exercises. It was found that the computer games created activity only in the regions related to vision and movement. In contrast, the mathematical action created activity in the two frontal lobes. It is known that these lobes are related to learning, memory, and emotions important to social behavior. Moreover, it is known that these lobes continue to develop until the age of twenty. Hence, the message from the research is that the computer games may inhibit the frontal lobe development and even the development of the ability to master social behavior. The report of the Global Neurology Federation thus recommends reducing the playing of computer games, to encourage children to play outside of their home with other children and to be in as much interaction as possible with others (Kawashima et al., 2001).

The worrisome research relies on additional data presented by the National Association of Colleges and Employers, one of the largest organizations that focus on the

employment of academically educated workers. According to its data, young people born from the year 1982 have a lower professional output level. As students and as workers, they are assessed as short tempered and superficial, dependent on their parents to a later age, and lacking the ability to accept criticism and to focus on one thing. The lack of concentration that characterizes these young people is expressed in a most significant manner according to this research. The National Center for Statistics confirms these data. According to a research study performed in the year 1997, more and more children suffer each year from ADHD, as expressed in low scores in the school, which have also reached a low point of all time.

UCL in London published a research study with numerical data on the surfing times on the Internet in the period 2003-2008. The average reading time on the Internet was measured as less than one minute. Instead of reading, it is possible to say that people scanned the document with their eyes. In those years the average surfing time doubled from six weekly hours to twelve (Shaul, 2018).

Nicholas Carr in his book *The Shallows: What the Internet Is Doing to Our Brains* notes worrisome data that indicate the influences of our lifestyle on our cognition. People who work in a position that requires “multitasking” learn to grasp the essence quickly and strengthen their decision making ability. Yet to the same extent they are significantly harmed, almost without realizing it. They lose the ability to focus, to analyze, and to think in-depth. They lose creativity, they suffer from emotional dullness, and their memory is impaired. The quality of this worker’s work and life declines significantly. However, the main problem is the true and significant loss of intellectual abilities that cannot be restored (Carr, 2017).

One of the greatest researchers of communication and culture is Marshal McLuhan. He coined the sentence “The medium is the message”. The meaning of the sentence is that the “way the message is transmitted” is more important than the message itself. The way the message is transmitted influences our brain and the manner of information processing on the cognitive level. Thus, in essence, the content to which we are exposed has less intellectual meaning than the way in which it is transmitted.

McLuhan died in 1980, before the Internet became the province of all. However, this sentence resonates and connects to a plethora of contemporary research works, which shed light on the issue. The work requirements in today's job market are very demanding. A standard work day requires for the most part the absorption of many materials and many environmental stimuli and the dealing with an abundance of tasks and pressures. Such everyday activity requires rapid but superficial brain activity. The brain degenerates, in the full sense of the word, when it becomes accustomed to shallow tasks and superficial and immediate thinking. The decline in the brain activity is physical, and it is possible to see a real change in laboratory tests (Shaul, 2018).

Carr (2017) describes in his book that reading is a tool for the development of the cognition and the deepening of the thought. In his opinion, reading books and newspapers and going into depth in articles are not natural for people. In terms of instinct, people are survivors, like any animal in nature. They hunt, walk, sleep. The action of concentration is not natural to people, since in evolutionary-instinctive terms, a person needs to see his environment, be aware of it all the time. The digital medium supports this instinct fundamentally, reinforcing the evolutionary need to look around the self without focusing in-depth on any one thing (Carr, 2017).

The book presents research data of neurological scans conducted on the brains of taxi drivers in London. Then the purpose was to examine the influence of the everyday action of driving on the roads on the structure of the brain. In all the research subjects it was found that the dorsal hippocampus, the region responsible for spatial memory, was enlarged. To the same extent, the ventral hippocampus, the region responsible for the memory of other issues, was smaller than the average (Carr, 2017). A research conducted in Taiwan found that among students who are addicted to the Internet and to the iPhone 32% suffer from attention disorder. Among students who use the Internet infrequently only 8% suffer from this. His research adds further color to the data, since they reveal the release of small amounts of dopamine in the brain during average surfing time on the Internet. Dopamine is a chemical excreted in the brain that causes an uplifted mood and an increased motivation. A daily amount of it harms the memory and our ability to focus – just like marijuana does, which causes the release of dopamine (Aboujaoude, 2011).

Nora Volkow, the head of the National Institute on Drug Abuse in the United States and a psychologist by profession, sheds additional light on the topic. She conducted a research that examined addiction in all its aspects and discovered that addiction is primarily in the brain and less psychological and physical, as people had tended to think. Addiction changes the structure of the brain and is responsible for the difficulty in recovery. She performed the same research on people with Internet addiction and found that the exaggerated consumption of the Internet puts great pressure on the brain and harms the short-term memory. When a person is surfing the Internet, adrenaline is excreted, accelerating the metabolism in the body and creating a sense of alertness. About half an hour after the end of the surfing of the Internet, the expectation is for the user to feel tiredness, irascibility, and lack of focus (Nora Volkow in Shaul, 2018). These findings reinforce the influence of the use of electronic media on the sleep patterns and cause sleep problems among adolescents, especially the use of media at late hours of the night and a short time before bed.

People who surf the Internet frequently and extensively learn to conduct their life according to rapid decisions and impulsive thinking devoid of all emotion. The Rationalism comes at the expense of emotion, even in the examination of moral decisions. Dana Zuskind, a researcher of languages from the University of Chicago, performed an experiment in six American families. She examined the small talk between parents and their children with technological devices in the surroundings, such as smartphones, computers, television, and video games. She again performed the same examination, when she made certain that all the devices were turned off. The number of words said in the conversations with the presence of the technological devices was half the number of words said in the conversations without the presence of the devices. This is a very important finding, since experiments indicate and recommend that 2,000 words an hour be said to an infant so as to ensure the child's normal cognitive development (Shaul, 2018).

It is still difficult to know the long-term influences of the phenomenon of the increased use of the Internet and technology, since it is still in its infancy. However, the

research studies presented are sufficiently valid to understand that some change must be made.

In the United States, countless books and articles now recommend preventative actions and the reduction of the amount of time spent on the Internet. Some propose cognitive exercises to preserve brain abilities.

### **2.3 Influence of the Internet on the Education of Young People**

The prevalent assumption that children who spend time on the Internet are lonely and “unaccepted” children is not always correct. Rather, frequently children and adolescents who are active on the Internet are also very active in society, and this is simply another channel that they use for their already extensive social activity. In parallel, the Internet can also help children who have difficulties with creating social relationships, the shy children of the class. The written word, the possibility of thinking before “saying” something, the possibility of erasing and correcting, and the safe space that the screen creates instill confidence in the children and enable them to surmount the anxiety about speaking in society. In a continuous and structured manner, positive experiences like this can help the child overcome lack of confidence and succeed in communicating also when not on the Internet. The education system today is aware of the many Internet-based changes and attempts to monitor them and to integrate them in the curricula. If in the past the teaching relied on frontal instruction, the teacher dictating to the students who wrote in their notebooks and passively listened, today the students are required to be far more active. This is a part of the dominant trend today, the goal of which is to help students acquire higher thinking abilities (meta-cognition), the ability to search effectively on the Internet, and the ability to learn independently, to expose them to considerable material and diverse knowledge, to allow them progress at an individual pace, and to integrate between sources of information so as to form a uniform texture, and so on (Carvel, 2015).

Today, the Ministry of Education of Israel and other ministries around the world use the Internet for learning purposes for the school students. The goal is to invest in innovative experiences for the school students for the purpose of the integration of

Internet tools and information and for the purpose of the enrichment of students' education. The schools use the Internet extensively and in some schools there truly is an increase of Internet use. Today, school websites are pleasingly designed, many requests can be made via the school website, through the format of the Ministry of Education, and there is no longer a need for a phone response – or even sending a stamped letter via postal mail. However, the Internet also has many disadvantages in the education of our children. There is a trend of decline in the reading of books in Israel, when most young people do not read books at all and prefer to spend most of their time in front of the computer, surfing different websites, visiting social networks, playing games, viewing movies they have downloaded instantaneously, and not learning. They do not remember the feel of the page between their fingers; they do not know the meaning of the development of the imagination and the enrichment of the knowledge entailed by the world of books. Many learning activities were developed by senior factors in the Ministry of Education (from localized class activity to whole courses), innovative attempts were made to integrate Internet tools and information that can be found on the Internet into the learning process, but despite all the investment it appears that the program has not borne the anticipated fruit. The use of the Internet among young people is increasing. This is a dramatic change that has occurred among young people, from the moment the easy surfing of the Internet was brought into our homes (Yaron, 2013). The marginal information is available for the young people, while the true essence remained concealed and remains unused on the shelf.

#### **2.4 Influence of the Internet on the State of Health**

The increasing use of the Internet as a source of health information, the influence of this information, and the broadening use of online health services all indicate the steadily increasing creation of a health consumer who takes greater responsibility for the management of his health situation. Consequently, there is erosion of the traditional power of the physician and the medical establishment.

In addition, if in the past people would spend time with people and outside of their home, today most of the time people are engaged in staring at the computer screens,

thus causing the degeneration of their creativity (it is no longer necessary to imagine what things look like: the moon, other countries, since everything is accessible), to the point that the issue was examined and it was found that the creativity demonstrated by children born in the past decade is so low that according to assessments when they grow up they will not pass the acceptance tests of most large companies in the United States (Yaron, 2013).

However, the development of the Internet has considerable impact on the lifestyle of the modern person. Everything is more accessible, quicker, and can be attained without moving from the chair. People become lazier because of the rapid accessibility via the screen. The first danger is to the eyes. Prolonged sitting in front of the computer screen places considerable stress on the eyes because of the radiation from the screen. If once it had been rare to see a person with glasses, now glasses have become an inseparable part of us and many children wear glasses already from a young age, relative to the years prior to the Internet era (Sharavi, 2011). Another part of the body that may be harmed by the continuous sitting in front of the screen is the back. Prolonged sitting in front of the computer monitor may cause back problems, which worsen over the years. As people sit for a longer period of time, the back becomes bent, and this has implications on the shoulder blades, and then on the neck, to the point of muscle contraction in extreme cases. Pain in the wrists has become a common problem among people who sit for lengthy periods of time in front of the computer screen. The use of the mouse and the keyboard is not always commensurate with the ergonomic structure of the joints and certainly is not individually suited to every person. After continued use, the wrists are tired (at best), and some people need to wear protective bands to stabilize the hand (Yaron, 2013). The knees are also impacted. When a person sits on a chair for a long time facing the screen, the legs are bent for a long time and the tendons and joints move less, the muscles work less, and thus there is a sense of tiredness as well as pain in the knees (Ziri, 2011). Along with all these issues, research studies prove that extended sitting in front of a screen may increase the risk of heart disease, cancer, and weight gain (Sharavi, 2011).

## **Influence of the Internet on the Bio-Psycho-Social Functioning of Children**

The Internet is an essential factor in the person's weight, especially with regard to children. Following the development of the Internet, it is possible to see that the percentage of excess weight among children has increased significantly in recent years, since today children sit for hours on the Internet without doing any physical activity. In addition, during the use of the Internet they are exposed in an uncontrolled manner to advertising contents that encourage the consumption of processed foods, sweetened drinks, and candies and thus induce excessive consumption of fattening foods (Stern, 2011).

In an article published in the journal *To Be Parents* in June 2011, Laura Walmer, a clinical psychologist for children and author of books *I-You-We* on the emotional and social empowerment of children, mentions that many research studies show that in the past century the intelligence quotient (IQ) of children has increased but the emotional quotient (EQ) has decreased. In the article Walmer (2011) emphasized the importance of the true (human) social relationships by the very definition of the person as a "social animal" from the day of birth. She maintains that the social relationship begins already at birth through the infant's crying and develops at the age of three months through the infant's smile. The very fact that the infant prefers a human face to other shapes is an indication that we are social animals from an evolutionary perspective.

Walmer (2011) presents a number of negative implications of the advanced Internet/technological era on the children's emotional intelligence. First, a generation has grown up that has fewer social instruments and consequently develops social difficulties, depression, and even violence. Second, Facebook, messaging, and attractions of available computer games have become a substitute for real relationships, and children develop a steadily increasing number of virtual relationships. Third, children's conversations on virtual social networks (such as Facebook) prevent the development of eye contact, reading body language, and the art of the developing a conversation among these children, because of the character devoid of content of these conversations. Fourth, children today boast about the large number of "friends" they have on the social network,

but they barely know most of these “friends”, and thus the social network creates an illusion of a great number of “friends” among children.

Walmer and Yossi Maaravi, a researcher and counselor specializing in organizational psychology, bring up a negative implication that sheds light on children during their attachment with friends on the social network. They argue that since the child is found in a conversation with his friend behind the screen, without supervision and monitoring of a responsible adult, he does not hesitate to hurt his friend and even to use the Internet as a means of harming and insulting the friend (for instance, posting insulting pictures so as to hurt and vex the child he is arguing with from behind the screen).

Walmer (2011) also lists the reasons for the negative implications of the Internet on the children’s level of emotional quotient (EQ). First, the parents are comfortable with the existing situation. The parents obtain quiet in the short term. When children argue between them, the parents for the most part prefer to refer them to the computer, the smartphone or the tablet. Second, the content of the messages (SMSs) is empty. The messages written today by the children are written in broken language, thus causing the children to be accustomed to immediate, short, and empty communication. Therefore, a family conversation around the table at mealtimes is thought by the children to be boring, the teacher’s speaking at a human pace (normal) is interpreted by the children as slow and boring, so they are bored in the lesson, since the brain becomes accustomed to the hysterical pace of clicking a button. The article (Walmer, 2011) proposes a number of solutions for the prevention of the negative implications of the Internet on the level of the children’s emotional intelligence. First, it is recommended to increase the conversations at home, or in other words, to accustom the children not to only eat in front of the television/computer/smartphone but to sit together as a family and hold a real conversation. Second, playing board games (such as Monopoly) with friends or parents contributes to the child’s personal/emotional development in many respects, such as the child learns to wait patiently for his turn, to read the body language of other participants, to learn about winning and losing, etc. Third, it is recommended to remove computers from children’s bedrooms and place them in an open space in the home so that the

children are not shut most of their time in their room. Fourth, it is suggested to limit the hours of computer use. Last, the resolution of arguments among children should be conducted face-to-face and not behind computer screens (Walmer, 2011, in Yaron, 2013).

The solutions that Walmer (2011) offers to prevent the negative implications of the increased use of the Internet among adolescents will greatly help reduce the sleep problems and to maintain normal sleep patterns among adolescents.

## **2.5 Adolescents on the Internet**

In the developed world of technologies and the Internet, children make use of these means. Generally they use applications such as email, IMs, chat, and others. Additional factors of interest among children are the tools that enable viewing of movies, hearing music, and playing games. In addition, in recent years children are using the Internet to prepare homework. Since the stage of adolescence is an important and meaningful stage in the process of social development, parents and educators have raised their concerns about the influence of the exposure to the Internet on their children's patterns of social development. According to the research studies performed in the field, it is possible to see that the increased use of the Internet led to harm to the studies and sometimes to the end of the studies. Additional research works that identify risks to young people on the Internet are studies that address the exposure to pornography and hatred online. These works have reached the conclusion that one-quarter of the adolescents examined was exposed to pornography on the Internet. Some of the research respondents felt discomfort (Yaron, 2013).

Bezek (2017) published the third report on the situation of the Internet in Israel to conclude the year 2016. The report reviews the practices of use and behavior of Israelis in the digital era. The report is based on an in-depth research conducted by the company on the Internet in Israel, the trends prevailing in it, and its different uses and on data from the company's activity and systems. For the purpose of the report, a survey was conducted in collaboration with the TNS Research Institute among 1000 respondents, including youths. The survey included different categories that comprise the digital life of each and every one of us. The survey and data of the infrastructures collected from the Bezek

systems along with the analysis of market data reflect a picture of life in the digital era for the year 2016.

The report indicates that in the year 2016 the number of users of the Internet in Israel is about 6.4 million. The pace of surfing continues to increase according to the increased uses of the Internet, when the average broadband on stationary Internet is 65 mega, an increase of about 30% from the previous year. The average Internet user today downloads files of about four Giga a day, an increase of 38% in a year. 10% of the homes are smart homes, and the field of cloud computing continues to gain momentum, when about 60% back up photographs and films on the cloud (Bezek, 2017).

In addition to the quantitative data on the number of Internet users, their pace of surfing and the division into stationary and cellular Internet, considerable data on phenomena and our practices as users were reviewed in the report, with focus on six chapters that have become central in recent years: social networks, applications and smartphones, shaming, video consumption, cyber-purchases, and couplehood (Bezek, 2017).

About 90% of the youths are active on WhatsApp. This is an amazing datum of market entry by any standard. Snapchat remains the arena for young people and is continuing to grow, when about 50% of young people are active on it, as opposed to 10% of adults. In addition, one-quarter of the young people regularly upload films to YouTube and also dream about being stars online, when Musically is the new social network, with penetration of 14%. One of the less lovely sides of social media is shaming. In the year 2016 there was an increase in the level of exposure to shaming online, when about 70% of Internet users were exposed to shaming. This is an increase of ten percent compared to the previous year. What do we do with posts or pictures that include shaming? 33% answered that they do not do anything, and 22% said they erase immediately. But there are those who talk about it or pass it onward: one-third of the young people experienced themselves or know somebody personally who was shamed online, when 14% of them indicated that they themselves were victims of shaming. “In the past month, did you see embarrassing photos or naked photos of famous people passed online?” This question

received an affirmative response by many more men and adolescent males than women or adolescent females: 38% adolescent males versus 8% adolescent females and 34% adult males versus 25% adult females. In terms of sharing this type of picture, the numbers indicate that the young people race to tell others, while the adults attempt to be responsible, and the media does not stop talking about this. 53% of the adults erase these pictures immediately, while a similar percentage of young people talk about it. But not everything is negative online. The social networks also serve as a platform of mutual assistance, when about 85% of the surfers were exposed to requests for help, such as financial assistance, medical assistance, or adoption of animals (Bezek, 2017).

### **Influence of the Internet on the Social Relationships of Adolescents**

When the young people have an entire world on their computer screen within the four walls of their home, there is no motivation to go outside and to search for concrete friendly relationships, since on the Internet they know new people and create worlds of their own where it is good and safe for them. The time dedicated to the social relationships is dedicated now to sitting in front of the computer. Feelings of loneliness and depression were found among children who spend their time primarily facing the computer instead of dedicating their time to the formation of relationships. Virtual friends take the place of real friends, who are supportive and meaningful. An “unaccepted” child whose social life in the school is poor can find many friends with common interests and change his social life from one extreme to another since the possibilities in the field of social life are infinite (Yaron, 2013).

With the development of the Internet and with its increased accessibility (smartphones), it appears that the social relationships of the young generation are deteriorating. If in the past it was customary to come to a friend’s home on his birthday or at least to give him a call, then today it is customary to write a message on the “wall” on Facebook. The decline of the physical social relationships in favor of the Internet creates a feeling of loneliness among many children (Sharavi, 2011). The research focuses on students and especially learning disabled students and found that a student with a high level of learning disability whose social relationships are mainly on the Internet lives in

greater loneliness (Sharavi, 2011). Another research study (Subrahmanyam, Greenfield, Kraut, & Gross, 2001) asserted that the child's level of ability to create social relationships is not harmed but is exchanged: instead of creating relationships with the physical environment the child creates virtual relationships with other children his age. There are research works that found that Facebook actually helps children cultivate social relationships (Subrahmanyam, Greenfield, Kraut, & Gross, 2001).

Therefore, the question is: What is the nature of the relationship? It appears that Facebook attempts to focus on quantity and not quality. Namely, the aim is to create as many social relationships as possible and not necessarily to cultivate them.

## **2.6 Influence of the Internet on the Family Relationship**

In the "pre-Internet" division of roles between parents and children was clear. The parents made the decisions in the family and had the authority in the process of decision making. In addition, the parents prepared the children to cope effectively with the life tasks and instilled values and boundaries that were clear. The fact that in almost every home in the Western world there is today a computer / cellular device with access to the Internet that necessitates technical and cognitive skills challenges parenting and has far-reaching implications on the power relations in the family and on the division of roles that was accepted in the "pre-Internet" phase. The computer is used for work, studies, entertainment including games, music, and films, communication with friends, as a source of information for making decisions in the fields of purchases, medicine, choice of entertainment outside of the home, general knowledge, etc. However, beyond the many advantages of the computer, it requires financial resources for its purchase, with all the concomitant aids, cognitive resources of skills of operation and understanding the virtual world, and time resources (Gur, 2013).

Generally the children acquire before their parents the knowledge and skills required to use the computer and the Internet. This may lead to a change in the family's balance of powers, following the fact that the child becomes the figure from whom technical help is sought, including reading and search for materials on the Internet, reading documents, skills of "Internet language", where to search for information, and

what tools to use to avoid dangers. Research studies indicate that children take more than once control over the home computer and limit the use of other family members, and this may inspire conflicts. It was further found that as the parent knows the computer less, there are fewer arguments about it, since the parent tends to work in cooperation with the expert child. However, as the parent's skill with the computer increases, the number of conflicts about it increases (Gur, 2013). The change in the balance of power between the parents and the children in the new era, the Internet era, influences the parenting style and the relationship between the parents and their adolescent children. The styles of parenting, and the changes that occurred in general and the change in the parenting styles in Arab society in particular will be discussed at-length in the next chapter.

In parallel, since in many cases the child exceeds his parents in the level of knowledge and ability to use the computer, a change is created in the balance of powers in the family. Parents develop dependence on the child, who becomes an "expert", a fact that changes the parents' and the children's perception about who is more skilled in computer use, who is a source of knowledge, and who can provide support and assistance to adults or instead of them (Gur, 2013).

The strengthening of the child's status versus his parents because of the advantage of knowledge and skill makes him into an active partner in the processes of family decision making. The position of the "expert" gives him a new status in the family. For example, when the parents ask their children to examine for them information or to perform a comparison of prices on the Internet on topics such as the purchase of the family car or the purchase of a vacation, they significantly increase the children's power of influence. It was found that the process in which the children become the family's "Internet experts" only intensifies when the family is characterized by many tasks and time pressure. Thus, the children's part in the processes of the making of family decisions is empowered. Since adults are using the computer and the Internet to a steadily increasing extent, they are required to go through a process of adjustment, in which they learn to know, think, and act in the virtual space. One of the implications of the recognition of the need for skill and its absence is the erosion of the parent's self-confidence in his way and ability to lead and direct the children in all that is related to the

field. Instead of the parent feeling he knows how to act in the world and what are the values correct for him, he is found in a position of hesitation and learning and sometimes tends to accept his child's dominance in the processes of making decisions or to adjust his perceptions and way of action to the world of those younger than him. This is the place to see himself in a leading position that is required to educate the children how to cope with the life tasks and to fit into it (Gur, 2013).

In addition, the Internet contributes to general changes in the family relationships. Since the power relationships in the family have changed in the modern era, when one of the expressions is the fact that relations of generational authority and hierarchy have become more equal. Parental authority deployed through control of the laws and rewards has been replaced in many families by parent-children relationships based on negotiations and dialogue about rights. In parallel, the new Internet media obligate the parents to perform another change, and instead of focusing on the norms upon which they grew up as children, they are required to focus on the norms accepted in the world of their children. These changes challenge the parents and erode the perception of the parents about what is good parenting (Gur, 2013).

Children today are exposed through the Internet fully to the world of adults, as well as to the private world of their parents through shared friendship on Facebook. The exposure to the content world of the adults along with the increase of their involvement in the family decisions may lead to the further blurring of boundaries. This situation may create more conflicts about the nature and boundaries of the relationships. However, the exposure may also empower the closeness and the intimacy between the parents and the children (Yaron, 2013).

Research studies on the topic of Facebook show that when the parents connect with their children as a "friend" on the social network the element the most influences the relationships between them is the style of the relationship the parents on Facebook choose. Frequently the parents behave with ease, with a sense of humor and less formality in the writing online – and this becomes meaningful in the creation of a feeling of closeness. In this style, the children feel that the parents connect with them like their

peer group does. However, when the parents are “friends” of their children on Facebook, they must also disrupt the imbalance in the balance of powers that characterizes the relationships between parents and children, not only because they need the child to “approve” them, a fact that gives the child a degree of sense of control. In parallel, during adolescence the children’s identity steadily forms, the relations with the parents can improve through Facebook, and great closeness can be created – because both sides adapt to the new situation as “friends”. Therefore, the level of equality in the relationship increases, and the children feel more independence in the decision making processes. It was found in research studies that as the feeling of equality in the virtual relationships between the parents and the children increases, the relationships improve accordingly and the sense of closeness increases (Gur, 2013).

In the encounters with parents and children on the topic, the issue of privacy arises, and many children and parents see the virtual space as a private space. The child expects to maximize his privacy and independence in these spaces, thus creating conflicts following the parents’ attempts to implement control. In addition, the sense of privacy is strengthened since most adolescents use a home computer, when they are alone most of the time and not in the framework of activity with a sibling or parent, or they use the Internet through a mobile device. Research studies show that children experience the use of the computer as an experience that empowers their privacy and independence. One of the implications of these feelings is that sometimes, instead of the discussion on the Internet being perceived as the joint coping of the child and the parents with problems of outside dangers that may harm the child, it is seen as the struggle against the parents, primarily in adolescence, according to the child’s need to define the independence. The value of privacy is strengthened through the engagement in the computer. Often the struggle moves into the non-virtual world, for example, “It is not your business what I am doing with the money I received from the Bar Mitzvah”, and thus the conflicts in the relations between the parents and the children worsen (Gur, 2013).

The fact that the children indeed know better than their parents how to create for themselves the privacy in the virtual space brings up another problem. While parents develop methods for the control of their children’s use of the Internet, in parallel

techniques to promote their children's "evasion" improve. In meetings with the children on this topic, we hear that the parents "have no chance" of following up after their activity in the virtual spaces, whether through the erasing of the history, use of entry passwords, opening of parallel profiles on Facebook, etc. As aforementioned, the family game becomes more complex because the children have more confidence and skill in the new media relative to their parents.

Since not all parental control is undertaken personally but can also be performed through technological means, such as programs that block websites, block emails with crude words, limit the hours of computer use, etc., it was found that the conflicts may be intensified and may create strong objection of the children and the struggles about the perception of privacy and independence recur. Moreover, it was found that as the parents have more fears and negative perceptions of the Internet, the struggles are increased (Yaron, 2013).

In the traditional perception, the parents' role is to protect their children. The Internet challenges this perception. Today a high percentage of the children feel a need to protect the parents in the virtual space against what they do or experience on the Internet. Both the children and the parents perceive the parents as powerless and as unable to protect the children against what happens on the Internet. Thus the parental sense of powerlessness and the erosion of their ability to protect their children against the lurking dangers increase (Gur, 2013).

Professionals in the fields of psychology, education, and technology attempt to propose practical instruments for the coping with the new challenges that the Internet poses to the parents. The rapid changes in the means of exposure and in the contents to which the children and adolescents are exposed make it difficult to create clear understanding of the possible tasks and tools. It appears that the understanding of the meanings that the Internet has on the shaping of the child's personality and on the relations between the parents and their children is only at the beginning, and more years will pass until we can understand the depth of the changes in the children's development

and the changes in in the relations between parents and children following the virtual revolution.

## **2.7 Characteristics of the Use of the Internet**

The Internet, as another living space, brings with it unique characteristics that on the one hand increase the risks and exposure to violence and harm and on the other hand provide different opportunities for personal development and learning and for receiving assistance and care online. Activity on the Internet has a number of unique characteristics that influence both the violence and the risks on the Internet and the opportunities the Internet provides for learning and personal development.

### **1. Anonymity and Invisibility**

The sense of anonymity and sense of defense against exposure, alongside the user's invisibility, which is expressed in the lack of eye contact, lack of body language and facial expression, and lack of sound, may create a feeling of security and courage to act and lead to free behavior online, in comparison to the behavior of the same person in the physical space. Because of these characteristics, the user can conceal part of his identity or adopt another identity or a multiplicity of identities, thus enabling him to express himself freely without fear of physical visibility, to express a variety of personality sides, and to investigate the self, as well as to adopt identities from origins that do not correspond with reality (Boniel Nissim, 2013). Many of the factors that may inspire anxiety in social situations, such as the need to answer on the spot and the feeling that somebody is looking at you, disappear in online communication in which the participants have greater control over the way in which they present themselves and their opinions. Therefore, in online communication the participants feel more comfortable, control the situation, and can express themselves more easily (Amichai-Hamburger & McKenna, 2006). These characteristics contribute to the flattening of the system of statuses. Because of the lack of signs indicating the status, such as clothing and body language, a feeling is created on the Internet that everybody is equal and everybody has an equal opportunity to make their voice heard (Boniel Nissim, 2013).

As a result of the sense of anonymity, invisibility, distance, and flattening of the system of statuses, in combination with personal characteristics, a phenomenon occurs of the removal of inhibitions that is expressed in the feeling of liberation, less restrained behavior, openness, authentic cooperation, and increased expression of emotions and needs that generally tend to be concealed (Boniel Nissim, 2013). This phenomenon has positive aspects, such as the creation of closeness, openness, and sharing personal things such as emotions and fears and the existence of gestures of generosity and help of others despite the lack of acquaintanceship with them (Amichai-Hamburger & Furnham, 2007; Boniel Nissim, 2013). Conversely, it has negative expressions, such as unrestrained behavior, use of inappropriate behavior, expression of sharp criticism, and expressions of anger and hatred. The removal of inhibitions may also lead people to the use of the Internet for violent goals, for the performance of crimes, for pornography, and so on, activities that they would not necessarily be exposed to or be studying outside the Internet. It was found that the absence of eye contact is a main component in the negative expression of the removal of inhibitions (Lapidot-Lefler & Barak, 2012).

## **2. Accessibility, Availability, and Immediacy**

The children of today can reach everything with a click and are exposed to information that on the one hand helps them in the studies, purchases, and games and on the other hand exposes them to contents of violence, hatred, racism, and pornography without control and supervision. The lack of boundaries and the exposure to all possible content influences their process of emotional, cognitive, and moral development and requires them to cope with material that they are not prepared to deal with. Thus, the change was created in a society when children at a young age are exposed to information not for them, hence increasing the chances of violence, imitation of inappropriate contents among children who see and perform these actions without knowing their implications, and too early development and maturation that skipped stages vital to the child's development (Yaron, 2013).

Today, it is possible to connect to the Internet in every place and at all times and generally the use is private, without the presence of others. This may lead to the

immediate release of authentic emotions on the Internet, both in a positive manner, for instance in forums or support groups, and in a negative manner, for instance, in expressions of violence. In synchronous communication on the Internet, which is similar in certain respects to a face-to-face conversation, there is also a dimension of authenticity but a dimension of response in pressure is possible. In contrast, asynchronous communication has a dimension of a delay, when the time between the responses may awaken fears, concerns, and expectations (Boniel Nissim, 2013). The availability of the network contributes both a wide dissemination of the contents brought up in it, so that it is possible to disseminate textual and visual information, such as pictures and films, to a large number of people within a short period of time, even in cases of online violence (Heirman & Walrave, 2008, in Heyman et al., 2014).

### **3. Textuality**

Most of the communication online occurs through written texts, and there is a possibility to save them, to document them, and to return to them. The writing encourages exposure and sharing and has a therapeutic value in providing a voice, in the sharing, and in the release of pressure and mental distress (Boniel Nissim, 2013; Gilat, 2013). Writing also enables the presentation of messages, thoughts, and feelings in a more organized and clear manner, since there is time to think during the action (Gilat, 2013).

Such writing is perceived as more authentic and honest than face-to-face speaking and may provide information of great value on the writer. However, online communication may be accompanied by lack of understanding and difficulties since it is not accompanied by nonverbal communication (Boniel Nissim, 2013).

### **2.8 Risk Factors on the Internet**

The characteristics of the use of the Internet noted above may increase the danger and bullying of young people and towards young people in the digital space. Research studies show that as children and youths use the Internet more and acquire more digital skills, they enjoy many more opportunities, but at the same time they are exposed to more

risks (EU Kids Online Network, 2014). This review focuses on bullying online, which is addressed extensively, but there are a number of additional focuses of risk online that will be reviewed in showed in the continuation.

In recent years, the phenomenon of violence on the Internet, especially among children and adolescents at-risk, has entered the public discourse, and the shapers of policy and practitioners of education and therapy have focused on it. The topic is discussed in the different media outlets, there are intervention programs in the education institutions, organizations and associations have been established to attempt to deal with the challenges, many academic research studies are performed on the topic, and different government bodies engage in the issue (Mani-Ican, Rosen, Marmor, & Berger-Tikochinsky, 2017).

The use of the Internet has become in recent years an inseparable part of life and especially the life of young people. In a research study on the sample of 1094 students in Israel, children and adolescents, 99% reported that they use a computer and 83% surf the Internet at least once a day. The mean of the use of the computer among the participants was 2.8 hours a day (Heyman, Olnik, Shemesh, & Eden, 2014).

A survey found that 83% of the respondents (ages eight to fifteen) have a smartphone and about one-quarter of them use the mobile phone more than five hours a day. Another survey of young people aged twelve to seventeen found that about one-quarter of the respondents spend time online, on the Internet, and on the smartphone between four to six hours a day, and about 20% spend more than six hours a day online (Israeli Internet Association, 2017).

### **Websites Encouraging Self-Harm**

The characteristics of the use of the Internet may increase the exposure and prominence of dangerous contents that are not socially accepted. Thus, it is possible to find on the Internet different websites that encourage and support self-harm and sometimes legitimize it. An example of such websites is the Pro Ana communities that address anorexia as a type of lifestyle adopted by choice and that do not perceive it as a

disease or disorder. These communities provide the users with support alongside information about losing weight (Boniel Nissim, 2015). In addition, there are forums and websites that support suicidal tendencies and self-harm and provide technical information about ways to commit suicide. There are websites providing information about drugs – growing them, using them, purchasing them, disseminating them – and they present the positive aspects of drug use and promote drug use (Forman, 2006, in Belenko, Dugosh, Lynch, Mericle, Pich, & Forman, 2009). Factors that encourage the use of the Internet for self-harm or suicide are a history of suicidal thoughts or self-harm, depression and anxiety in the past, acquaintance with a friend who self-armed, and a low number of close friends (Mars, Heron, Biddle, Donovan, Holley, Piper, Potokar, Wyllie, & Gunnell , 2015).

It was found that populations that tend to make frequent use of websites for the encouragement of drug use are young people at high risk (8.8% versus 2.5% of young people at low risk), and thrill-seekers (7.1% versus 2.1% of those characterized as low in thrill-seeking) (Belenko et al., 2009). The main predictors of visiting this type of website are the intention ahead of time to use marijuana and the thought that there is no risk in one-time marijuana use. Additional predictors were friends who use drugs, suggestion made in the past to the young person to use marijuana, conversation with the parents on drugs, and exposure to the media that is against drugs. The hypothesis is that the messages supporting avoidance of drug use can encourage among some young people curiosity about the use. Factors that lessened the chance of visiting pro-drug websites were the parents' knowledge about their children's actions outside of the home and the young person's perception of the risk of marijuana use (Belenko et al., 2009).

### **Sexual Exploitation and Prostitution on the Internet**

This review will not address at-length the risk factors on the Internet related to these phenomena. However, it is important to note them because of their importance, their steadily increasing presence on the Internet, and their increased strength through the Internet. An example can be in the discussion held in the Knesset in the Secondary Committee for the Fight against Trafficking of Women and Prostitution on the topic of

prostitution on the Internet. The discussion indicated that the Internet has become the central arena that advertises prostitution in general and the prostitution of minors in particular, while enticing people, primarily women and minors, to work in prostitution. The advertisement and enticement to prostitution are stronger through the Internet on a variety of platforms, such as WhatsApp, Facebook, chats, and forums, as well as on designated websites. For youths, this is “prostitution at the fingertips”, since everything is done via the smartphone. Prostitution is generally advertised under camouflage, and it necessary to have expertise to understand the accepted codes. In parallel, phenomena of minors who are used for pornography through Internet cameras have developed. It is argued that the advertisement of prostitution encourages enticement to prostitution, brings additional women into the cycle of prostitution, increases the consumption, makes it easier for the clients of prostitution to use it, and normalizes the phenomenon. The discussion also included mention that today there are enforcement difficulties in this issue (Secondary Committee for the Fight against Trafficking of Women and Prostitution, 2016).

### **Sexual Offenses on the Internet**

The Internet constituted an innovation also in the field of sexual offenses, since through the Internet it is possible to be considered a sexual offender without leaving the home or coming into physical contact with another person. The most common sexual offenses today on the Internet include sending personal messages, harassment on social networks, and harassment via Internet camera. The Internet constitutes today a significant instrument for pedophiles. Today it is far easier for them to find materials that satisfy their drives on the Internet, as well as in extreme cases websites that trade in children for sexual use. Offenses committed through social networks such as Facebook and messaging programs such as Messenger and ICQ are a newer type of offense, and the Court rulings on them are developed from day to day. Today, an adult who holds a conversation on sexual topics with a minor through the Internet commits a criminal offense of sexual harassment and possibly other offenses – although he has never met the minor and in certain cases although he does not know with certainty that she is minor (Yaron, 2013).

## **How to Prevent Sexual Harassment on the Internet**

Since the victims of sexual assault do not always turn to conventional factors for help (because of the embarrassment and shame) in the State of Israel the Takana Forum was established to help victims in the main areas in which they need help – medical, legal, and mental-emotional. Since the sexual harm is not physical harm and does not require treatment in the hospital, it is possible to solve the problem in a number of ways. The first is to turn to the Police. The Police can extract almost all Internet material and can thus help the victim in the continuation as evidence in Court. The second accepted option is psychological or psychiatric therapy to moderate the damage that was done (Yaron, 2013).

## **Bullying on the Internet**

### **Verbal Violence and Bullying on the Internet**

Many children and adolescents have fallen victim to the bullying of members of their age group. The traditional bullying of harassment, gossip, and physical violence in the school yard has been replaced by verbal violence through the social networks. Many children feel a sense of freedom under the anonymity on the Internet and express emotions very powerfully, including negative emotions. They do not stand physically in front of the victim, and they know he does not see them and does not know who they are. This makes it easier for them to act. The humiliated child can become very mentally distressed and nobody may know of this, not the teacher, since the abuse did not occur in the class or in the school area, and not the parents. The phenomenon is broadened since the information on the child is widely disseminated and gains momentum throughout the network and can get out of control. Consequently, we see a phenomenon in society of children who commit suicide because of prolonged abuse of them on the social networks and people did not know of this. When once the physically strong child was the bully, today the control is in the hands of the smart and charismatic child, who brings online with him many others (Mani-Ican et al., 2017).

## **Scope and Dimensions of the Involvement in Bullying on the Internet**

With bullying on the Internet, like bullying in the physical space, it is important to differentiate between three groups with different status in the context of the harm: the bullies, the victims, and the witnesses, who viewed the harm from the side and are forced to choose how to act. It should be noted that there is a certain dynamism in the shift between the groups and the person can change his status and transform from witness to victim and from victim to attacker, and so on (Heyman et al., 2014).

Victims online in a survey conducted in Israel in the year 2015 among 1,295 children in the third to ninth grades found that 47% of them reported that they experienced bullying online (in contrast to 69% who experienced bullying in the physical space of the school), when the percentage of girls who experienced harm was higher. The types of bullying the children and adolescents reported were catalogued into rejection and humiliation, verbal harm and deception. 40% reported they were cursed, 27% were victims of mockery and laughter, and 35% reported they were called insulting names; 29% were rejected by a digital group, 22% had harmful messages written about them, and 10% had a harmful virtual group established against them. 25% of the children were deceived online, 20 reported they were threatened, and 12% reported that somebody pretended to be another person when speaking to them on the Internet. A significant difference was not found between age groups or between boys and girls regarding the frequency of online bullying. In addition, 19% of the children reported that they do not feel safe online, and this is a lower percentage of children who feel unsafe in comparison to different spaces in the school (24%) and in the travel to school and back (28%) (Rollider & Boniel Nissim, 2015).

Another research study conducted in Israel in the year 2014 with 1,094 participants from the fourth to the eleventh grades reported that 27% of the participants were victims of violence online (as opposed to 29% who reported violence face-to-face). The main injuries were verbal violence and insulting messages in Facebook and different chats. In this research study, too, the percentage of girls who were harmed was higher. It is apparent that there is a decline in the level of violence online throughout the different

stages of education, when in the elementary school many more incidents of harm online were reported and in the high school the fewest incidents of harm were reported (Heyman et al., 2014).

A survey performed by the Ministry of Interior Security among 624 young people (aged twelve to eighteen) found that one-third of the respondents were harmed in the past year on the social networks, when 18% experienced shaming, humiliation, or embarrassment, 11% were threatened or suffered verbal violence, and 3% were sexually harassed (Nagar, 2016). In a survey for the monitoring of violence performed by the National Authority for Measurement and Assessment (RAMA, 2016) and distributed to students of the fourth to eleventh grades there were lower percentages of violence online in the years 2009-2015 9%-11% of the students reported that they were victims of violence through digital means. It should be noted that they were asked whether they were victims of violence only in the last month before the survey was held (National Authority for Measurement and Assessment, 2016). In addition, different research studies have found that there is a relationship between bullying online and bullying in the physical space, so that there is greater likelihood that a person who is harmed online was harmed or will be harmed in the physical space as well (Cross, Lester, & Barnes, 2015; Heyman et al., 2014; Rollider & Boniel Nissim, 2015).

### **Participation in Harm Online**

In addition to the dimensions of victimization on the Internet, different research studies examined the participation of young people in the harm caused on the Internet. 17% reported that they took part in harassment (Youths in Bullying and Violence Online, in Heyman et al., 2014). In a research study conducted by Heyman et al. (2014) on the Internet, the types of harm were primarily the harm of somebody on a chat (ICQ or Messenger), harm through a message sent by phone, and sending mail with an insulting message, threats, or crudities. In a survey of the Ministry of Interior higher percentages of participants in acts of violence online were found: 45% of the youths reported that they took part in a violent action online, when the main ones were the sending of emails that included crudities, threats, or insults (21%), the sending of harmful photographs or clips

via the mobile phone (11%), and the dissemination of harmful things on Internet websites (8%). In addition, 16% reported that they took part in shaming, humiliation, or embarrassment on the Internet (Nagar, 2016).

### **Witnesses to Harm on the Internet**

Regarding the scope of the phenomenon of witnesses of bullying on the Internet, half of the respondents in the research conducted by Heyman et al. (2014) noted that they know a victim of online violence and 46% reported that they were witnesses of harassment or violence of somebody else online. The main harm they witnessed was messages, pictures, and films, dissemination of rumors, and participating in calls to shun. More than one half (55%) noted that they did not intervene when they witnessed the harm (Heyman et al., 2014).

### **Perceptions about Risk Behaviors Online and Participation in Them**

A research study performed in the city of Holon in the State of Israel, in which 961 children and adolescents in the sixth to the eleventh grades participated, indicated that the main aspect perceived by the participants as dangerous on the Internet is what was defined as contact dangers. These include primarily the formation of relationships with strangers and online bullying, but also exploitation or sexual harassment, exposure of personal information, and pretense or use of a false identity. In the context of the exposure of information and social interactions, behaviors perceived as most dangerous by the participants are face-to-face meeting with somebody with whom the first acquaintanceship was on the Internet and publication of personal details and sending a message with sexual content. However, most of the respondents noted as dangerous behavior the participation in a boycott and uploading a film that presents somebody in an insulting manner (Sason, Erez, & Algali, 2012).

In the continuation, the participants reported the frequency of their involvement in dangerous behaviors online, most of them (77%-87%) did not reveal their personal information online (sending pictures and films to people they never met, sending personal information, and publicizing personal details), aside from the uploading of personal

pictures that most publish. But they do not see this action as especially dangerous. Most of them (67%-82%) reported that they did not participate in online bullying, sending messages with a sexual content, pretense, or sending insulting message. Most of them (86%) also did not meet face to face with a person they first met on the Internet. However, about one half of them searched for new friends on the Internet and confirmed friendship with people they do not know (Sason, Erez, & Algali, 2012).

### **Social Emotional Aspects and Implications on Those Involved in Online Bullying**

Different research studies indicate that the involvement in online bullying, both as victims and as attackers, is related to different social and emotional characteristics. In a research study performed in Israel among fourth to eleventh grade students it was found that there is a relationship between emotional social aspects and victimization on the Internet and bullying on the Internet. Regarding victimization, a relationship was found between reporting on personal and social measures on a low level – social support, self-efficacy, and personal wellbeing and multiplicity of injuries of violence online (and the reverse). The variables found as predictors of victims of violence on the Internet are: low level of self-efficacy, low personal wellbeing, high sense of loneliness, and education stage. Students of the elementary school and middle school have a higher chance of being harmed (Heyman et al., 2014). Another research study found that low self-esteem among adolescents predicted higher frequency of victimization (Brewer & Kerslake, 2015). A research study conducted in Australia among young people aged twelve to eighteen found that victims of bullying online had low personal wellbeing, low mental health, and infrequently appealed for support online (Spears, Taddeo, Daly, Stretton, & Karklins, 2015a). Different sources collected in the research of Heyman et al. (2014) indicate that there is a relationship between victimization on the Internet and risky and dangerous behaviors like doing drugs and consuming alcohol, vandalism, absenteeism from the school, and feelings that may lead to violence and crime. In addition, it was found that both victims and attackers online reported mental and psychological distress and social difficulties (Cross et al., 2015; Heyman et al., 2014).

As aforementioned, the social emotional aspects were found also related to aggressiveness online, to the participation of students in violence and harassment online, and to its frequency. As they felt more loneliness and had less social support, lower self-efficacy, and low sense of wellbeing, they tended more to participation in violence online. Variables found to predict aggression online are low personal wellbeing and low self-efficacy and gender, namely boys have a higher chance of being aggressors online. It should be noted that similar relationships regarding victims and attackers were found also in the context of face-to-face violence (Heyman et al., 2014). Another research study found that adolescents with a low level of empathy and self-esteem had a higher chance of performing actions of online bullying (Brewer & Kerslake, 2015).

Harm online has different psychological and social implications on the individual. Thus, for example, a survey performed by the Institute for the Child's Welfare (an Israeli organization) among 255 adolescents aged twelve to seventeen found that nearly half of them (47%) experienced suicidal thoughts as a result of different forms of harassment on social media, with a higher rate among the girls. More than one-third (36%) know somebody who attempted to self-harm as a result of shaming or bullying online and about one-third of the adolescents (30%) know somebody who attempted to harm another person as a result of the shaming of bullying he experienced. It is possible that as a result almost all the adolescents who were asked (95%) maintained that it is necessary to define shaming and bullying on social media as a violation of the law. Most of them, albeit a lower percentage (67%), asserted that the supervision of an adult (such as a parent, teacher, or big brother) in social media would be effective in the prevention of bullying or shaming (Institute for the Child's Welfare, 2016). In another survey, more than one-third of the young people (37%) maintained that to cope with the phenomenon of shaming it is necessary to punish those who inflict harm and more than one-third (36%) believed that it is possible to cope with the phenomenon through educational and explanatory programs for dealing with and preventing the phenomenon (Nagar, 2016). Furthermore, the most common emotional responses to violence on the Internet are anger, rage, concern, tension, and poor mood (Heyman et al., 2014).

The personal and social characteristics linked to victimization and aggression on the Internet as well as a low level of social support and personal welfare, low self-esteem, and low self-efficacy and endangering behaviors such as consumption of alcohol and use of drugs, vandalism, absenteeism from the school are known from the literature also as a part of the characteristics of young people at risk. Consequently, these youths may be found in greater risk online. However, in a research study that was conducted among about one-hundred youths and that examined differences between perceptions of normative youths and youths at-risk about self-efficacy and patterns of computer use, it was found that youths at-risk had a lower sense of self-efficacy than did youths characterized as normative but almost no difference was found between the groups in the characteristics and frequency of the use of the computer and the Internet (Manor Moldon & Romy, 2000).

As aforementioned, aside from the phenomenon of bullying, there are additional risk factors on the Internet.

### **Internet Addiction**

Internet Addiction Disorder is the lack of ability or the difficulty of Internet users to regulate and control their Internet use habits, what causes them and others in their environment considerable mental distress and/or deficient functioning in everyday life. The addiction is characterized by exaggerated use of the Internet, difficulties reducing the activity (withdrawal symptoms), the steadily increasing need for the Internet intended to attain the same effect (tolerance symptoms), and negative implications on the personal, couple, occupational, and parental life.

Internet Addiction Disorder (IAD), Compulsive Internet Use (CIU), Problematic Internet Use (PIU), or iDisorder – all these terms are different names that describe the phenomenon in which exaggerated use of the computer or mobile electronic devices harms the everyday functions, such as interpersonal relationships, work, and studies. The addiction to video games on the Internet, the addiction to compulsive online shopping, and obsessive examination of Facebook updates are only examples of ways in which the disorder can be expressed (Bochnik, 2008).

Although the disorder is not recognized officially in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) of the American Psychiatric Association (APA), its frequency in the United States and in Europe is frightening, up to 8.2% of the population, when according to certain reports this number is up to 38%. The difference derives from the lack of agreed-upon criteria for assessment, which delays the advance of research on the topic. Researchers agree that apparently this is a unique case of addiction to technology, such as addiction to the smartphone, the television, or the radio. However, unlike these, Internet addiction disorder is caused by the connection to the Internet, which unnoticed, with full consent, is steadily taking over the life of homo sapiens (Young, 2011).

Young (1996) developed a brief eight-item questionnaire that modified the criteria for pathological gambling to produce a screening instrument for addictive Internet use:

1. Do you feel preoccupied with the Internet (think about previous online activity or anticipate next online session)?
2. Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?
3. Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?
4. Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?
5. Do you stay online longer than originally intended?
6. Have you jeopardized or risked the loss of significant relationship, job, educational or career opportunity because of the Internet?
7. Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?
8. Do you use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)?

Patients were considered "addicted" when answering "yes" to five (or more) of the questions and when their behavior could not be better explained by a manic episode. Young (1996) stated that the cutoff score of "five" was consistent with the number of

criteria used for pathological gambling and was viewed as an adequate number of criteria to differentiate normal from pathological addictive Internet use.

The main problem with a plague of this disorder is rather circumstantial – technology surrounds us completely, almost all of our actions can be performed online – from the purchase of a shirt through the order of a pizza to the identification of a rival for playing a video game at four in the morning. However, the very fact that we watch at all opportunities YouTube films, examine what happens in the news from time to time, and are frequently curious about the intensive occurrences on Twitter and Facebook does not mean that we suffer from Internet addiction disorder. The problem starts only when the Internet activity harms our everyday life. In essence, it is possible to divide Internet addiction disorder into subcategories, when the prominent ones are computer games, social networks, email, operating a blog, online purchases, and exaggerated consumption of pornography, which may dramatically harm the couple relationship (Psychological Treatment Website, 2018).

The avoidance of face-to-face meetings as a result of the artificial satisfaction of the interpersonal needs online may contribute over time to social isolation and significant harm to the identity and sense of vitality, in addition to the reduction of the self-image and self-esteem. Young people who did not suffer from previous mental disorders may develop depression as a result of the exaggerated use of the Internet. Internet addiction may empower social anxiety among adolescents (Psychological Treatment Website, 2018).

### **Causes of Addiction**

While there is no one cause behind Internet and smartphone Addiction Disorder, there is evidence that the structure of the brain of people with IAD is similar to that of drug and alcohol addicts. Certain research studies found a relationship between the disorder and a change in the number of gray and white brain cells in the region of the frontal lobe, which is responsible for the recall of details, attention, planning, and prioritization of tasks. One of the possible implications of the disorder, for instance, is the prioritization of the Internet over everyday tasks. Like other addiction behaviors, it

appears that this also influences the pleasure center of the brain. Addictive behavior causes the release of dopamine, which produces a feeling of pleasure, but with time more and more activity of this type is required so as to reconstruct the pleasuring effect, which creates dependence. Thus, for instance, a person who finds pleasure in online purchases and suffers from Internet addiction disorder may develop an addiction to purchasing, since he will feel the need to perform the purchasing at a steadily increasing frequency so that he will feel the pleasure he felt before he developed the dependence (Psychological Treatment Website, 2018).

Another cause of this disorder is based on the variable relations reinforcement schedule (VRRS), according to which addiction derives from multi-layer reward. For instance, going on Facebook may provide many and unexpected layers of reward, when each time the user is exposed to online updates he always encounters good news – one of his friends got engaged, or a friend had a baby, or a girl in whom he is interested separated from her partner. Each one of these causes the user to go back and check for updates – repeatedly. Moreover, there are online computer games that cause addiction because they simply do not end (Bochnik, 2008).

Biological tendencies may also contribute to Internet addiction disorder, when it is possible that people who suffer from a lack of dopamine and serotonin will tend to use the Internet more so as to feel the pleasure that others achieve with less use, thus increasing the chances of addiction. In addition, the tendency to Internet addiction may be related to anxiety disorders and depression, since the use of the Internet may ease the situation of those suffering from these disorders. Alongside these, very shy people are also found at risk of addiction to the Internet, because of their attempt to fill the social void in their offline life (Mani-Ican et al., 2017).

Symptoms of addiction to the Internet may be physical or emotional (Psychological Treatment Website, 2018).

- Emotional Symptoms. These include depression, lack of honesty (tendency to lie), sense of guilt, anxiety, feeling of euphoria when using the computer, lack of ability to prioritize tasks or to adhere to a schedule, entertainment, loss of sense of

time, defensiveness, avoidance of work, mental turbulence, fluctuation in the mood, fears, loneliness, boredom with routine tasks, and procrastination.

- **Physical Symptoms.** These include back pains, carpal tunnel syndrome, headaches, sleeplessness, deficient nutrition, deficient hygiene, neck pain, dry eyes, and other vision problems, weight gain or loss.

The disorder can impact all areas of life, when those who suffer from it may isolate themselves or lie to people around them in the attempt to conceal the addiction and may even create for themselves false Internet identities for camouflage. The economic situation of people suffering from addiction may decline because of their absence from work or their excessive purchases online or online gambling.

### **Negative Consequences of Addictive Use of the Internet and electronic devices use**

The hallmark consequence of substance dependence is the associated medical implication, such as cirrhosis of the liver due to alcoholism and increased risk of stroke due to cocaine use. However, the physical risk factors involved with an addiction to the Internet are comparatively minimal yet noteworthy. Although time is not a direct function in the definition of Internet addiction, generally addicted users are likely to use the Internet anywhere from forty to eighty hours per week, with single sessions that can last up to twenty hours. To accommodate such excessive use, sleep patterns are typically disrupted due to late night log-ins. The patient typically stays up past normal bedtime hours and may report staying online until two, three, or four in the morning with the reality of having to wake for work or school at six a.m. In extreme cases, caffeine pills are used to facilitate longer Internet sessions. Such sleep deprivation causes excessive fatigue, often detrimentally influencing academic or occupational functioning and possibly the immune system, leaving the user vulnerable to disease. Furthermore, the sedentary act of prolonged computer use may result in lack of proper exercise and may lead to an increased risk for carpal tunnel syndrome, back strain, or eyestrain. While the physical side-effects of Internet use are mild compared to those of chemical dependency, the addictive use of the Internet will lead to similar familial, academic, and occupational harm (Young, 1999).

### *Familial Problems*

The scope of relationship problems caused by Internet addiction has been undermined by its current popularity and advanced utility. Young (1996) found that serious relationship problems were reported by 53% of Internet addicts surveyed. Marriages, dating relationships, parent-child relationships, and close friendships have been reported to be seriously disrupted by "net binges." Patients will gradually spend less time with the people in their lives in exchange for solitary time in front of a computer.

Marriages appear to be the most affected as Internet use interferes with responsibilities and obligations at home, and it is usually the spouse who takes on these neglected chores and often feels like a "cyberwidow." Addicted online users tend to use the Internet as an excuse to avoid necessary but reluctantly performed daily chores such as doing the laundry, cutting the lawn, or going shopping for groceries. Those mundane tasks are ignored as well as important activities such as caring for children.

Lawyers have reported seeing a rise in divorce cases due to the formation of *cyberaffairs* (Quittner, 1997). Individuals may form online relationships which over time eclipse the time spent with real life people. The addicted spouse will become socially isolated and refuse to engage in events that the couple previously had enjoyed, such as going out to dinner, attending outings, or travelling, and will prefer the company of online companions. The ability to hold romantic and sexual relationships online further undermines the stability of real life couples. The patient will continue to emotionally and socially withdraw from the marriage, putting forth more effort to maintain recently discovered online "lovers." Internet use then interferes with real life interpersonal relationships as those who live with or who are close to the Internet addict respond with confusion, frustration, and jealousy (Young, 1999).

### *Academic Problems*

The Internet has been promoted as a superb educational tool, and consequently schools have integrated Internet services in their classroom environments. However, one survey showed that 86% of responding teachers, librarians, and computer coordinators

believe that Internet use by children does not improve performance (Barber, 1997). Respondents argued that information on the Internet is too disorganized and unrelated to school curriculum and textbooks to help students achieve better results on standardized tests. Furthering question its educational value, Young (1996) found that 58% of students reported that their study habits deteriorated, their grades decreased significantly, they missed classes, or they were placed on probation due to excessive Internet use.

Although the attributes of the Internet make it an ideal research tool, students go to irrelevant websites, talk in chat rooms, talk with Internet pen pals, and play interactive games at the expense of their productive activity. Alfred University's Provost W. Richard Ott investigated why normally successful students, had recently been dismissed. He was surprised to discover that 43% of these students failed school due to extensive patterns of late night logons to the university computer system (Brady, 1996). Beyond tracking Internet misuse among students, college counselors began seeing student's whose main problem was their inability to control their Internet use. A survey initiated by counselors at the University of Texas at Austin found that of the 531 valid responses, 14% met criteria for Internet addiction. This resulted in forming a campus-wide seminar called "It's 4am, and I Can't, U h-Won't Log Off" to increase awareness about the risk factors of Internet misuse among students. Dr. Jonathan Kandell at the University of Maryland at College P ark's Counseling Center initiated an Internet addiction support group when he noticed academic impairment and poor integration in extracurricular activities due to excessive Internet use on campus (Murphey, 1996).

### *Occupational Problems*

Internet misuse among employees is a serious concern among managers. A survey from the United States of America, carried out in 1,000 companies revealed that 55% of executives believed that time surfing the Internet for non-business purposes is sabotaging their employees' effectiveness at work. New monitoring devices allow bosses to track Internet use, and initial results confirm their worst suspicions. One firm tracked all traffic going across its Internet connection and discovered that only 23% of the use was business related. There is growing availability of such monitoring software as employers not only

fear low productivity but also need to stop the use of valuable network resources for non-business related purposes. Managers have been forced to respond by posting policies detailing acceptable and unacceptable Internet use. The benefits of the Internet such as assisting employees with anything from market research to business communication outweigh the shortcomings for any company, yet there is a definite concern that the Internet is a distraction for many employees. Any misuse of time in the workplace creates a problem for managers, especially as corporations are providing employees with a tool that can easily be misused (Young, 1999). Employers who are uncertain how to approach Internet addiction among workers may respond to an employee who has abused the Internet with warnings, job suspensions, or termination from employment instead of making a referral to the company's Employee Assistance Program (Young, 1996).

### *Emotions*

Addictions accomplish something for the person, however illusory or temporary these benefits are. The mental pleasure that people find in their addictions causes them to behave more intensely about them. Feelings of excitement, euphoria, and exhilaration typically reinforce addictive Internet use patterns. Addicts find pleasant feelings when online in contrast to how they feel when off-line. The longer a patient is away from the Internet, the more intense such unpleasant feelings become. The driving force for many patients is the relief gained by going on the Internet. When they are forced to go without the Internet, they feel a sense of withdrawal with thoughts such as "I must have it," "I can't go without it," or "I need it." Because addictions serve a useful purpose for the addict, the attachment or sensation may grow to such proportions that it harms a person's life. These feelings translate into hints that cultivate a psychological longing for the euphoria associated with the Internet (Young, 1999).

To best focus on emotional triggers, the clinician should ask the patient "How do you feel when off-line?" The clinician should then review the responses and determine whether they range on a continuum of unpleasant feelings such as lonely, unsatisfied, inhibited, worried, frustrated, or troubled. The clinician would then ask the patient "How do you feel when using the Internet?" Responses such as excited, happy, thrilled,

uninhibited, attractive, supported, or desirable indicate that use of the Internet has changed the patient's mood state. If it is difficult for the patient to determine such emotions, then the patient should be asked to keep a "feelings diary." The patient can carry a notebook or card so as to record feelings that are associated with being both off-line and online (Young, 1999).

### *Cognitions*

Addictive thinkers, for no logical reason, will feel worried when anticipating disaster. Although addicts are not the only people who worry and anticipate negative happenings, they tend to do this more often than other people. According to Young (1996), this type of catastrophic thinking may contribute to addictive Internet use since it provides a mechanism for psychological escape to avoid real or perceived problems. In following studies, she found that maladaptive cognitions such as low self-esteem and clinical depression triggered pathological Internet use (Young, 1997a, Young 1997b). Young (1997a) hypothesized that people who suffer from deeper psychological problems may be the ones who are most attracted to the anonymous interactive capabilities of the Internet in order to overcome these perceived inadequacies.

Dr. Maressa Hecht-Orzack of McLean Hospital (Boston- USA), founded the Computer/Internet Addiction Service in the spring of 1996. She noted that the referrals she received were from various clinics throughout the hospital instead of direct self-referrals for Internet addiction. She reported that primarily depression and bi-polar disorder in its depressive swing were co-morbid features of pathological Internet use. According to Hecht-Orzack, patients typically hide or minimize their addictive Internet use while being treated for the referred disorder. It is likely that a patient will self-refer more readily for a psychiatric illness than for pathological Internet use, so the clinician should screen for maladaptive cognitions which may contribute to the patient's addictive use of the Internet. Clinicians should assess whether patients hold core beliefs about themselves such as "I am no good" or "I am a failure" so as to determine whether these may contribute to their pathological Internet use. It is important to mention that intervention should focus on effective management of the person's main psychiatric

illness and on whether this treatment improves the symptoms of pathological Internet use (Young, 1999).

Ko et al. (2009) reported one of the earliest researches on potential brain correlates of craving in subjects with Internet (gaming) addiction. They studied excessive World-of-Warcraft (WoW) players (all participants played at least thirty hours a week) with fMRI using a picture paradigm, which is comparable with those used beforehand in alcohol addiction research. The results were very similar to those reported in substance-dependent individuals (Schacht et al., 2013). The WoW players had, compared to the control group, stronger activations within the nucleus accumbens, the orbitofrontal cortex, and the caudate while watching WoW pictures. These activities were also correlated positively with the subjective gaming urge. Sun et al. (2012) reported comparable findings in their research of excessive WoW players with a picture paradigm to induce craving. In their study, activities in bilateral sections of the prefrontal cortex, in particular the dorsolateral prefrontal cortex, and the anterior cingulate cortex were positively correlated with subjective craving when watching WoW pictures. The results emphasize the assertion that the brain of Internet-addicted people reacts with craving to the confrontation with Internet-related cues in the same way as the brain of substance-dependent individuals reacts to substance-related stimuli.

A research of both structural and functional neural correlates of Internet/computer gaming with a large sample (N = 154) of adolescents reported higher gray matter volume in the left ventral striatal region in frequent/excessive players compared to infrequent players (Kühn et al., 2011). In the functional part of the research, activity in the region of the ventral striatum was higher in frequency compared to infrequent players in the loss condition of a monetary incentive delay task. The researchers conclude that the volume changes in the left ventral striatal region may reflect changes in reward sensitivity linked to frequent playing of computer games. Yuan et al. (2011) examined gray matter density in a smaller sample (N = 18) of adolescents with Internet addiction and found decreased gray matter volume in several prefrontal regions, the dorsolateral prefrontal cortex (bilaterally), the orbitofrontal cortex, and the supplementary motor area, as well as in

posterior parts of the brain (cerebellum and the left rostral anterior cingulate cortex). The changes in the prefrontal areas were correlated with the reported duration of the disorder.

These results have both scientific and clinical impact and facilitate a better understanding of the neurobiological basis of Internet addiction. According to the results, addictive use of the Internet is linked to functional brain changes involving parts of the prefrontal cortex, accompanied by changes in other cortical (e.g., temporal) and subcortical (e.g., ventral striatum) regions. Furthermore, there are some hints at structural brain changes also entailing parts of the prefrontal cortex. The functional changes in prefrontal and striatal areas are mainly observable when individuals with Internet addiction perform certain tasks, in particular those measuring executive functions and cue-reactivity. These results, along with the results from neuropsychological studies, indicate that prefrontal control processes are diminished in Internet addicts and may be related to their loss of control over their Internet use (Young et al., 2014).

### *Life Events*

A person is vulnerable to addiction when feeling a lack of satisfaction with life, an absence of intimacy or strong connection to other people, a lack of self-confidence or compelling interests, or a loss of hope. Similarly, people who are dissatisfied or upset by a certain area or multiple areas of their lives are more likely to develop Internet addiction because they do not understand another way of coping (Young, 1997a, 1997b). For instance, instead of positive and fulfilling choices, alcoholics drink, an action that dulls the pain, avoids the problem, and maintains their status quo. However, when they become sober, they understand that their difficulties are unchanged. Their drinking changes nothing, but it seems easier to drink than to cope with their issues. Like the alcoholic, the Internet addict uses the Internet to dull the pain, avoid the real problem, and maintain the in status quo. However, once off-line, the Internet addict realizes that nothing has changed. The substitution for missing needs frequently enables the addict to momentarily escape the problem, but the substitute behaviors are not the way to solve any problems. Hence, it is important that the clinician assess the patient's current situation to determine whether the addict is using the Internet as a "security blanket" to avoid an unhappy

situation such as marital or job dissatisfaction, medical illness, unemployment, or academic instability (Young, 1999).

### **Treatment of Addiction**

Some researchers maintain that this is a disorder that passes on its own. However, in the population that supports treatment, it is agreed that the first stage must be the recognition of the problem. Moreover, research studies have shown that the addict can correct his behavior himself through special programs that control the use of the Internet and types of websites where he is allowed to go. Most experts concur that complete abstention from the computer is not an effective mode of remedy (Mani-Ican et al., 2017).

The Internet is legitimately used in business and home practices such as electronic correspondence to vendors and electronic banking. Thus, traditional abstinence models are not practical interventions when they suggest a ban on Internet use. The focus of treatment should consist of moderation and controlled use. This is a relatively new field, and studies with results are not yet available. However, according to individual practitioners who have seen Internet-addicts and prior research findings on other addictions, several techniques to treat Internet addiction are: (1) practice the opposite time in Internet use, (2) use external stoppers, (3) set goals, (4) abstain from a particular application, (5) use reminder cards, (6) develop a personal inventory, (7) enter a support group, and (8) family therapy (Young, 1999).

The first three interventions are simple time management techniques. However, more aggressive intervention is required when the use of time management techniques does not correct pathological Internet use. In these cases, the treatment should focus on assisting the patient in developing effective coping strategies in order to change the addictive behavior through personal empowerment and proper support systems. If the patient finds positive ways of coping, then the patient should no longer need to rely upon the Internet to deal with frustrations. However, it is necessary to note that in the early days of recovery the patient will most likely feel a sense of loss and will miss being online for frequent periods of time. This is normal and should be expected, since for most

patients who derive considerable pleasure from the Internet, living without it as a central part of their life can be a very difficult adjustment (Young, 1999).

**Practice the Opposite:** A re-organization of the time management is a major component in the treatment of the Internet addict. Therefore, the clinician should spend a few minutes with the patient to consider the current Internet use habits. Once the clinician has evaluated the specific nature of the person's Internet use, it is necessary to construct a new schedule. This is called *practicing the opposite*. The aim of this exercise is to have patients disrupt their normal routine and re-adapt new time patterns of use in an effort to break the online habit.

**External Stoppers:** Another simple technique is to use concrete things that the patient needs to do or places to go as prompters to help log off. If the patient has to leave for work at 7:30 am, the patient must log in at 6:30, leaving exactly one hour before it is time to stop. The danger is the patient may ignore such natural alarms. If so, a real alarm clock may help: decide upon a time for the patient to end the Internet session and preset the alarm and tell the patient to keep the alarm clock near the computer. When the alarm rings, it is time to log off.

**Setting Goals:** Many attempts to restrict Internet use fail because the user depends on an ambiguous plan to reduce the hours without deciding when those remaining online slots will be. To avoid relapse, structured sessions should be programmed for the patient by determining reasonable goals, say twenty hours instead of the current forty. Then, those twenty hours should be scheduled in specific time slots and noted in a calendar or weekly planner. The patient should keep the Internet sessions brief but frequent. This will help avoid cravings and withdrawal. A tangible schedule of Internet use will give the patient a sense that he is in control, and not the Internet.

**Abstinence:** A particular application may be a trigger for Internet addiction. In the clinician's evaluation, a particular application such as chat rooms, interactive games, news groups, or the World Wide Web may be the most problematic for the patient. If a specific application was identified and moderated use has failed, then abstinence from the application is the next appropriate intervention. The patient must stop all activity

surrounding that application. This does not mean that patients cannot engage in other applications they find to be less appealing or those with a legitimate use. A patient who finds chat rooms addictive may need to abstain from them. However, this same patient may use e-mail or surf the World Wide Web to make airline reservations or shop for a new car. Another example may be a patient who finds the World Wide Web addictive and may need to abstain from it but may be able to scan news groups related to topics of interest about politics, religion, or current events. Abstinence is most applicable for the patient who also has a history of a prior addiction such as alcoholism or drug use. Patients with a premorbid history of alcohol or drug addiction often find the Internet a physically "safe" substitute addiction. Namely, the patient becomes obsessed with Internet use as a way to avoid drinking or drug use. However, while the patient justifies the Internet is a "safe" addiction, he still avoids coping with the compulsive personality or the unpleasant situations activating the addictive behavior. In these cases, patients may feel more comfortable working towards an abstinence goal as their previous recovery involved this model. The integration of past strategies that worked for these patients will enable them to effectively manage the Internet so that they can concentrate on their problems.

**Reminder Cards:** Frequently patients feel overwhelmed since they exaggerate their difficulties and minimize the possibility of corrective action, through errors in their thinking. To help the patient stay focused on the objective of either reduced use or abstinence from a particular application, the patient needs to make a list of the five main problems caused by their Internet addiction and the five major benefits for reducing Internet use or abstaining from a particular application. Some problems might be lost time with the spouse, arguments at home, problems at work, or poor grades. Some benefits might be spending more time with the spouse, more time to see real life friends, no more arguments at home, improved productivity at work, or improved grades.

**Personal Inventory:** Whether the patient is attempting to reduce or abstain from a particular application, the patient can try to cultivate an alternative activity. The clinician should have the patient conduct a personal inventory of activities that have been eliminated or reduced because of the time spent on the Internet. Perhaps that patient has

put off attempting an activity. The clinician should direct the patient to list every activity or practice that has been neglected or curtailed since the development of the Internet habit. Then the patient should rank each one on the following scale: 1 - Very Important, 2 - Important, or 3 - Not Very Important. When rating this lost activity, the patient should genuinely reflect how life was before the Internet. Specifically, the patient should examine the "Very Important" ranked activities and think how these activities improved the quality of life. This exercise will help the patient to become more aware of the choices regarding the Internet and to resume lost activities once enjoyed. This will be particularly helpful for patients who feel euphoric when engaged in online activity through the cultivation of pleasant feelings about real life activities and reduction of their need to find emotional fulfillment online.

**Support Groups:** Some patients may develop Internet addiction due to a lack of real life social support. According to Young (1997c), online social support greatly contributed to addictive behaviors among those who lived lonely lifestyles (for example, homemakers, singles, the disabled, or the retired). This research work found that these individuals who spent long periods of time home alone turned to interactive online applications such as chat rooms as a substitute for the lack of real life social support. In addition, patients who recently experienced situations such as a death of a loved one, a divorce, or a job loss may use the Internet as a mental distraction from their real life problems (Young, 1997c). Their focus on the online world temporarily causes their problems to fade into the background. If the assessment reveals the presence of such maladaptive or unpleasant situations, then the treatment should focus on improving the patient's real life social support network. The clinician should help the client find an appropriate support group that best addresses the situation. Support groups adjusted to the patient's specific life situation will improve the patient's ability to make friends who are in a similar situation and will lessen their dependence upon online cohorts.

**Family Therapy:** Last, family therapy may be needed for addicts whose marriages and family relationships have been upset and detrimentally influenced by their Internet addiction. Intervention with the family should focus on several main dimensions: (a) educate the family on how addictive the Internet can be, (b) reduce the blame of the

addict for behaviors, (c) improve open communication about the pre-morbid problems in the family which caused the addict to search for online psychological fulfillment of emotional needs, and (d) encourage the family to help the addict's recovery in ways such as finding new hobbies, taking a vacation, or listening to the addict's feelings. Strong family support may help the patient's recovery from Internet addiction (Young, 1999).

However, it is likely that after all the exaggerated use of the Internet is simply obsessive compulsive disorder (OCD) or impulse control disorder (ICD). This new situation, which the digital era induces, requires additional research, and perhaps in the end we will understand what is happening.

### **Social Media Addiction and Negative Outcomes**

Social media addiction can be seen as a form of Internet addiction, in which individuals display a compulsion to excessively use social media. Individuals with social media addiction are frequently too concerned about social media and are motivated by an uncontrollable drive to use social media. Researches have shown that the symptoms of social media addiction can be expressed in mood, cognitive, physical, and emotional reactions and interpersonal and psychological problems. Social media addiction has been reported to affect approximately 12% of users across social networking sites. Many researches on social media use and mental health have indicated that the prolonged use of social media such as Facebook is positively linked with mental health problems such as stress, anxiety, and depression and negatively related with long-term well-being. For example, the time spent on social media was positively associated with depressive symptoms among high school students in Central Serbia (Pantic et al., 2012, in Hou, Xiong, Jiang, Song, & Wang, 2019) and among young adults in the United States (Lin et al., 2016, in Hou et al., 2019).

Furthermore, certain categories of social media use have been shown to be associated with reduced academic performance (Al-Menayes, 2014, 2015; Junco, 2012; Karpinski, Kirschner, Ozer, Mellott, & Ochwo, 2013; Kirschner & Karpinski, 2010, in Hou et al., 2019). For example, Lau (2017, in Hou et al., 2019) found that while the use of social media for academic purposes did not predict academic performance indexed by

the cumulative grade point average, the use of social media for non-academic purposes (video gaming in particular) and social media multitasking negatively predicted academic performance. A large sample (N = 1893) survey carried out in the United States also found that the time students spent on Facebook was negatively related with their total GPAs (Junco, 2012, in Hou et al., 2019). Laboratory experiments have provided further evidence for the negative relationship between social media use and academic outcomes. For example, Wood et al. (2012, in Hou et al., 2019) found that multi-tasking via texting, email, MSN, and Facebook had negative effects on real-time learning performance. Jiang, Hou, and Wang (2016, Hou et al., 2019) found that the use of Weibo, the Chinese equivalent of Twitter, had negative impacts on information comprehension.

A research study conducted in Hong Kong (Yan Lee & Merrick, 2016) presented results that show a higher likelihood of addiction on the part of those who suffer from low self-esteem, loneliness, depression, interpersonal anxiety and those that show a need for belonging. Microblogs, like Twitter and Facebook, are very successful since they offer a respite from those negative feelings (Shek, Lee, & Merrick, 2016).

Park and Lee (2017) show this clearly. The use of social media among students who suffer from mental problems, which let them develop interpersonal connections they did not have beforehand, lessens the risk that they will attempt to take their lives (Park & Lee, 2017).

These positive phenomena to which the use of social media leads are reversed when the use is excessive: where normative use causes a respite from the tensions and negative emotions, the excessive use led to an increase of them. A research performed at San Diego University and Florida University on 506,820 adolescents aged eight to twelve found that among the youths who intensively use social media there is a 13% higher chance to present depressive symptoms (Twenge, Joiner, Rogers, & Martin, 2018).

One of the symptoms found of the addiction to the mobile phone is the belief among those addicted that the systems of relationships they cultivate in cyberspace are more intimate than those they can create in the real world, in face-to-face relationships. This may lead to a worsening in the feeling of loneliness. Another research study

indicated that it is likely that those who search through their use of the mobile phone and social media to preserve or built systems of relationships will not find themselves addicted to the phone. The problem begins when the individual's goal comes from one-sided motives (such as the recognition of others, the creation of an impression, and the escape from loneliness) and not from a motive of the desire for a reciprocal relationship; these may lead to exaggerated use and addiction (Shek, Lee, & Merrick, 2016).

Hou et al. (2019) carried out a research that examined the relations between social media addiction and mental health and academic performance among college students, studied the role of self-esteem as a mediator for the relations, and tested the effectiveness of an intervention in lessening the social media addiction and its potential adverse outcomes. In the first study, the researchers used a survey method with a sample of college students (N = 232). They found that social media addiction was negatively associated with the students' mental health and academic performance and the relation between social media addiction and mental health was mediated by self-esteem. In the second study, the researchers developed and tested a two-stage self-help intervention program. They recruited a sample of college students (N = 38) who met criteria for social media addiction to receive the intervention. Results showed that the intervention effectively lessened the students' social media addiction and improved their mental health and academic efficiency. Therefore, these research findings contribute to the empirical database on social media addiction and have important theoretical and practical implications (Hou et al., 2019).

### **Mobile Phone Addiction**

Addiction to the cellular phone is a dependency syndrome among users of the cellular phone. Some cellular phone users exhibit problematic behaviors that are similar to the disorders in the use of drugs. These behaviors can include excessive engagement in correspondence via the mobile phone, the investment of too much money or time in the mobile phones, and the use of cellular phones in situations that are inappropriate socially or physically, such as driving a vehicle. The exaggerated use can also lead to the waste of

too much time in writing on the mobile, to negative influences on the systems of relationships, and to anxiety (Davey & Davey, 2018).

The rise in the use of mobile phones brings with it also thoughts about the influences of the phenomenon on society all around the world. The numbers that report the addiction to mobile phones are steadily increasing. In South Korea, one of the largest consumers of technology in the world, a government survey indicated that 18% of the adolescents are addicted to the smartphone and among adults, who suffer less from the phenomenon, this figure is 9.1%. England, where the percentage of adolescents indicating about themselves that they are addicted is 60%, has declared itself a smartphone addicted state (Davey & Davey, 2018). In demographic terms, young people aged thirteen to fifteen are found at the highest risk of suffering from addiction and the possibility of addiction among men is higher than among women (Shek, Lee, & Merrick, 2016).

Mobile phone addiction (MPA) is very common but is not often spoken of, although it is silently affecting young people in many countries. Mobile phones are acknowledged for their technological benefit to people for the ease with which they enable the carrying out of daily chores, and for their bridging of information gaps as well as communication gaps among people. The rapid development of mobile phone technologies has led to the increase of the range of functions and portability, thus advancing the prevalence of mobile phone use, especially among young people. The use of mobile phones, especially smart phones, is steadily increasing in recent years in both developed and developing countries. Although mobile phones are very convenient, they can have detrimental effects and cause extreme emotional changes and even serious physiological reactions. The phenomenon popularly known as “mobile phone addiction” is the extreme outcome. A mobile phone can thus be a double-edged sword for young people. On the one hand, the use of the mobile phone helps young people increase the frequency of their social communication, improve their relationships, and make new friends. On the other hand, the improper use of the mobile phone has a detrimental impact on young people. Specifically, improper mobile phone use can lessen the person’s concentration and the amount of information absorbed in a typical class, obstruct face-to-

face communication, and even cause mental or physical stress. The incidence of mobile phone addicts is estimated as 0% to 38% of mobile phone users across cultures and societies, implying that at least 62% of mobile phone users are possibly addicted (Jayanti Indranil and Divyavijay, 2013).

There has been considerable research to understand the effects of MPA on young people. For example, one research study evaluates some of the self-perceived effects of increasing mobile phone use on the well-being of college students, addressing the symptoms and diverse common health effects. According to Kiran, Sanjana, and Reddy Naik (2019), MPA is the constant dependence on the mobile phone, to fill psychological needs and inessential necessities, causing a constant attachment to the device, hence leading to loss of productivity and development of chronic side effects such as depression, loneliness, lack of social behavior, loss of good sleep, and other health issues (Kiran, Sanjana, and Reddy Naik, 2019).

Mobile phones are thought to be one of the greatest inventions of the 20<sup>th</sup> century. But with the technological advances, human dependence increased, and the outcome was that the phone holds an irreplaceable position in daily life. MPA is a behavioral addiction just like any other, but it is different from substance addiction. According to a report by the *New York Times* (2017, in Douillard, 2017), both adults and teenagers check their mobile phones 150 times a day, or in other words, every 6 minutes and send an average of 150 texts per day.

Mobile phones have various features and functions to make it easier for users to accomplish their desired tasks and activities. Kiran, Sanjana, and Reddy Naik (2019) carried out field observations and a survey to assess the level of engagement of Elon University students with their devices and with each other in face-to-face situations. The researchers attempted to have their sample accurately represent the individuals who have mobile phone addiction, focusing on Elon University students aged 18-22. There were 65 responses to survey questions designed to assess the mobile phone habits, the main uses of mobile phones, and the feelings the individuals feel without their mobile phone. According to the survey, when the respondents were asked about the main use of their

mobile phone, 83.1% stated that texting was their most used feature, followed by calling at 10.8%, and social apps at 6.1% (Kiran, Sanjana, & Reddy Naik, 2019).

Another research studied indicators of smart phone use, smart phone addiction, and their associations with demographic and health behavior-related variables in young people by collecting sample data of 1,519 students from 127 Swiss vocational school classes. The analysis of the data indicated that people spend around two to three hours on the social networking element of a smart phone, which is the maximum duration of use on a daily basis, followed by music, phone calls, and texting. This is 80% of all the use time. If the use of this feature can be lessened, then there will be an optimal impact on the overall addiction level (Kiran, Sanjana, & Reddy Naik, 2019).

Tossell, Kortum, Shepard, Rahmati, and Zhong (2019) examined smartphone user behaviors and their relation to self-reported smartphone addiction. A total of 34 students (19 male, 15 female) participated in the research. These students had diverse academic majors, socioeconomic levels, and ethnicities. Thirty-four users who did not own smartphones were given iPhones that logged all phone use over the one year of the research. At the end of the research, the users were asked to rate their level of addiction to the device. Sixty-two percent agreed or strongly agreed that they were addicted to their iPhones. These users showed differentiated smartphone use, compared to the users who did not note an addiction. Addicted users spent twice as much time on their phone and launched applications much more frequently (nearly twice as often), in comparison to the non-addicted users. This use was characterized by Mail, Messaging, Facebook and the Web. A difference was not found in Games between addicted and non-addicted users. Addicted users exhibited significantly lower time-per-interaction than did non-addicted users for Mail, Facebook, and Messaging applications. One addicted user reported that his addiction was problematic, and his use data was beyond three standard deviations from the upper hinge. The research discusses the implications of the relationship between the logged and self-reported data are discussed (Tossell et al., 2019).

## **Symptoms of MPA**

Excessive use of the mobile phone leads to behavioral addiction (MPA). This reflects in the everyday behavioral pattern of the patients (Kiran, Sanjana, & Reddy Naik, 2019). The different symptoms of mobile phone addiction can be summarized from various research studies as follows:

- The person feels an increase of the desire to use the mobile phone when refraining from this use.
- The person experiences constant thoughts about using a mobile phone.
- The person exhibits aggressive / repulsive behavior when forced to switch off the phone.
- The person delays the performance of committed tasks, due to prolonged phone use in unnecessary situations.
- The person's productivity and performance are hampered and impeded following phone use.
- The person prefers social and personal connections through the use of the phone as a medium and therefore eliminates real world contacts.
- The person does not sleep well because of prolonged phone use.
- The person uses the mobile phone as a source of comfort in times of emotional distress and loneliness.
- The person fails to refrain from mobile phone use despite constant attempts to do so.
- The person loses the sense of time because of phone use.
- The person feels the constant need to check notifications, text messages, etc.
- The person ignores face-to-face conversations and looks at the digital displays even when conversing with someone.
- The person feels nervous, moody and anxious when abstaining from phone use.
- The person has the constant drive to use the mobile phone, even when driving, riding, crossing road etc.

- The person feels the need to respond to texts and calls even if the environment is unfavorable to receive/text a reply.

According to the researches, if a person has the following traits, then they can be considered to be addicted to mobile phones to some extent (Kiran, Sanjana, & Reddy Naik, 2019).

### **Reasons and Causes of MPA**

Addiction has diverse psychological causes that influence a person's dependence on various needs. MPA is one such addiction (Kiran, Sanjana, & Reddy Naik, 2019). Based on a few research works, the following list presents some of the main causes of MPA:

- The constant drive to explore and experience new things, leading to excessive use of newer technologies.
- The urge to search for validation and agreement on a social platform, such as Facebook, Instagram, etc.
- The drive to develop new connections or friendships with people on social platforms. One of the main reasons young people go on social networking sites is their hope to expand their circle of friends. Thus, this tends to become an addiction.
- Due to technological improvements, mobile phones can do much more than they did before. From texting to keeping work-related files safe and secure, smartphones are becoming an unavoidable part of life. Thus, smartphones are becoming an extension of the self.
- Smartphone applications are designed to have a strong impact on the human brain. Smartphones are designed to attract users and thus to increase the application outreach, through various marketing and design techniques. The result is that people are very attached to their phone.
- Smartphones provide a sense of false contentment, or in other words, a feeling of being happy and content with the joy derived from the electronic device and avoiding real contact with people.

- The search for rewards such as points in games and likes on the social profile yields a false sense of reward and causes the continual need to attain these rewards.
- Stricter laws about the availability of mobile phones to teenagers are lacking.
- There is a lack of strict checks by parents on the excessive use of phones by their children, as well as lack of proper guidance on mobile phone use (Kiran, Sanjana, & Reddy Naik, 2019).

### **MPA'S Treatment**

On the basis of a detailed analysis of a number of research works, the following list presents a number of remedies for dealing with MPA.

- Make an unplugged zone: disconnect all devices, switch off Wi-Fi, and put the devices away or out of reach.
- Delete unnecessary applications, as well as applications that tend to be addictive.
- Schedule a time slot and limit use to this time span.
- Stop replacing phones as means of entertainment.
- Develop productive habits to deal with loneliness.
- Search for counsel, guidance, and help in difficult situations.
- Explore new paths in life and look for the physical presence of friends and family.
- Develop new work hours and adjust different tasks strategically to prevent long periods of loneliness that can result in MPA.
- Always prefer tasks that do not require mobile phone use, even if it may be difficult (Kiran, Sanjana, & Reddy Naik, 2019).

To conclude, the above review of the literature indicates the sharp increase in the use of mobile phones among adolescents and the negative influences of phone addiction and social networks on their physical and mental health and their relationships with their friends and with their parents. Therefore, the present research study examined the degree of use of the mobile phones among adolescents in the Arab sector in Israel and its impact on their sleep and their functioning. In addition, it was argued that the instruction of the adolescents' parents on the topic will increase their awareness of the need to limit their

children's smartphone use and prevent their addiction to mobile phones. Therefore, we held workshops for Arab parents in Israel, in which they received instruction on the importance of sleep and the detrimental influence of media devices on their health.

## **2.9 The Internet as a Treatment Instrument for Youths in General and Youths At-Risk in Particular**

In parallel to the risk factors existing online, the Internet can constitute a positive resource for adults and adolescents, offering opportunities for investigation and personal development, for the creation of relationships, for the achievement of information, and for counseling and treatment. The Internet serves as a platform for counseling in a variety of methods of intervention and treatment (Arharad, 2014; Gilat, 2013), including self-use of information made accessible online for the purpose of self-help and online treatment in which the Internet constitutes a channel of communication between the therapist and the client. There is use of treatment software for the search for pre-defined patterns that search in the information obtained from the client and produce an appropriate answer based on treatment protocol and support groups online that enable synchr

onous communication (for example in a chat) or asynchronous communication (for instance via email or forums), and this with or without supervision and intervention of a professional (Arharad, 2014). It is possible to differentiate between the different channels of communication according to three of the dimensions: degree of interactivity in the treatment, synchronicity versus asynchronicity, and number of participants in the conversation, for example the difference between a conversation between a therapist and a client and the participation in an online support group (Gilat, 2013).

The treatment via the Internet has different advantages that promote the turning to treatment on the part of a person who needs it and avoids face-to-face treatment. These advantages include the convenience, availability, and accessibility of the direct and comfortable approach of the clients to the resources related to mental health and the increase of the dissemination of intervention and prevention programs, accessibility for different populations, including the populations at the periphery of the country and people with handicap or psychological limitation, flexibility in the time of the treatment

and lack of worry about the external appearance that enables freer and more natural behavior. It was further found that communication online encourages openness and personal exposure through increased and direct expression of emotions and contributes to the reduction of barriers that prevent the appeal for face-to-face help, as in the example of the preservation of privacy, anonymity, and invisibility of the client, the reduction of prejudices regarding the appeal for mental help, and the cost of the therapy (Arharad, 2014; Gilat, 2013). Therefore, the different characteristics of the Internet may contribute both to the promotion of the person's appeal through the Internet and to the promotion of the quality of the treatment because of the anonymity that provides security and openness, the client's invisibility and use of written texts contribute to the focus of the messages, and the feelings that enable documentation of the materials and return to them (Gilat, 2013).

However, there is a dispute among the therapists about providing mental support on the Internet. Some see it to be psychotherapy or psychological counseling, while others address it as a beginning of a new era of psychotherapy. The main difficulties in treatment via the Internet include lack of face-to-face meetings, which constitute a significant part of the relationship between the therapist and the client because of the nonverbal communication in it. Without a meeting, the communication between the sides cannot be effective and cannot be advancing to the same extent. Additional aspects are related to ethical issues that derive from the anonymity of communication online, which does not allow the identification with certainty of the counselor and the person being counseled (primarily when talking about minors) and the difficulty with the preservation of confidentiality and privacy. In addition, treatment on the Internet may contribute to the perpetuation of the digital gap between economic social strata that are not equally exposed to technology (Arharad, 2014).

### **Adolescents At-Risk and Treatment on the Internet**

Many adolescents need outside help in the coping with the pressures, but despite the need for assistance, direction, and counseling, it is very difficult to create with them a treatment contract and the rate of dropping out from treatment among them is especially

high. This situation, in which the adolescents experience difficult events and pressures but do not turn for help, is called the “service gap”, the gap between the degree of need for help and the degree of help in actuality (Silas, 1997, in Ben Hor & Journo, 2010).

Different characteristics of the Internet make it into an attractive source for help for young people, including, as aforementioned, the possibility for anonymity, the written language that advanced openness and exposure and high availability of help (Daniels, 2014). In addition, the appeal for help is undertaken willingly, occurs for the most part from the adolescent’s intimate room, when the world of the adults is not around and is not involved in the decision. The Internet enables the adolescent to examine identities, to release steam, to examine fantasies, and to experiment. The effect of the removal of the inhibitions that occurs in the interpersonal interaction online includes in it for the most part the removal of shame, guilt, and anxiety that sometimes characterize the interpersonal encounter outside of the Internet. The adolescent is exposed in a relatively protected way, receives empathy on the part of the “responsible adult”, and a strong experience of “visibility”, “wonder”, and acceptance is created (Ben Hor & Journo, 2010). It was found that the use of the Internet in forums, blogs, support groups, and so on constitutes a source for support, assistance, and information for youths in general and youths at-risk in particular who are characterized sometimes by a loose relationship with their family and the community. The Internet can serve to empower the youths at-risk through the creation of possibilities to make their voice heard on the Internet in diverse fields. Thus, it was found, for example, that in different programs abroad that inculcate computer and Internet skills the youths at-risk acquired technological tools that allowed them to share their stories and lives with others and to document themselves, when the self-documentation and dissemination brought to the awareness different problems, such as the use of drugs, discrimination, and violence (Ben Hor & Journo, 2010).

Different research studies indicate that adolescents prefer to turn to help via the Internet over other means. For example, 25% of the age groups of children and adolescents until the age of seventeen turned to help online as opposed to 2% who turned via telephone counseling. A similar preference was found among the age group of 18-25 (Arharad, 2014). It was also found that adolescents with a low level of mental wellbeing

preferred the reference to help via the Internet over other sources of assistance. Data of the appeal to ERAN (an organization providing emotional first aid via the telephone and the Internet) indicated that some of the young people who turn to online treatment and support did not turn beforehand for face-to-face help and maintained that without the online option they would not appeal for help at all. Therefore, online assistance is very important among youths (Gilat, 2013). Furthermore, there has been a rise in the request pertaining to severe emotional distress following the harmful and risky use of social networks (Daniels, 2014).

The incorrect use of electronic media and the increased exposure to the contents of the Internet and the social networks are the primary cause of behavior problems and harm the adolescent's physical and mental wellbeing. Therefore, it is necessary to instruct adolescents and their parents in the correct use of media and to reduce the hours spent with the different electronic devices, primarily at late hours or before bed, and to encourage them towards books and family sessions, so as to lessen the physical and mental harm. It is necessary to help adolescents maintain a better quality of life and better sleep patterns.

## **2.10 Challenges and Recommendations for Action**

There are a variety of challenges with which those who engage in risks online cope, from which the applied recommendations for the advancement of the field are derived. The following are a number of main focuses that arise from the literature and primarily from the interviews with key people in the field.

### **Difficulty in Reporting Online Violence and Recruiting Young People to Act on the Issue**

The main action strategies of children when they experience harm or distress online are the request for the help of a family member (20%), the request from the harasser to stop (17%), the putting distance from the harasser (15%), and the request of the school staff (12%). The comparison between these action strategies and strategies adopted by the children towards violence in the physical space indicates that in the harm

online there are fewer strategies for coping (Rollider & Boniel Nissim, 2015). It appears that there is difficulty with the reporting of online violence, and different research studies show that victims online tend to report less their harm (Heirman & Walrave, 2008, in Heyman et al., 2014). Consequently, educational and treatment factors find it difficult to know about cases of violence and to cope with them as needed (Heyman et al., 2014; Rollider & Boniel Nissim, 2015).

In this context, a number of interviewees noted the need to make the witnesses to harm on the Internet active in their empowerment and transformation into gatekeepers who report injuries and act to cope and treat them and do not remain passive observers. This connects to the perception that arose in some of the interviews that young people are the key to the solution of coping with harm and risks on the Internet and it is necessary to recruit them to change the situation, with the understanding of their outlook as significant to dealing with the topic (Mani-Ican et al., 2017).

### **Involvement of the Parents**

In most of the cases of harm on the Internet, the parents are not an “address” where the children and adolescents go to cope with the harm, although supportive communication between parents and adolescents was found to be related to high satisfaction with life among young people and to be a factor that constitute a barrier against and can moderate negative influences of use of digital media. In this sense, the parents are a significant agent of socialization for the maximization of the positive influence and the minimization of the negative influence of the Internet and the technological changes on the young people (Barak, 2012).

The issue of the parents’ involvement was found to be significant, since today the parents are not sufficiently involved and do not take responsibility over their children’s activity on the Internet – and the parents are not even aware of their children’s actions on the Internet. As the literature shows, they are not where their children go when there is harm online. Therefore, in response different organizations, such as the Israeli Internet Association and the Red Button, offer workshops and lectures for the parents, so as to make accessible for them the information and concepts, to foster their understanding

about their children's activity in the digital space and possibilities for action in the case of harm, and in this way to make the parents into a relevant resource for their children and to provide them with tools in the field. It is important to note that the parents' involvement is relevant and essential to prevent and to minimize both phenomena of victimization on the Internet and phenomena of aggression on the Internet (Mani-Ican et al., 2016).

A research study performed in 25 countries in Europe surveyed 25,142 Internet users aged 9-16 and their parents and recommended that the parents investigate their children's Internet use. The rationale is to become aware of both the possibilities that the Internet has to offer and the risks, to focus on the increase of the children's opportunities to participate in enjoyable activities with positive content on the Internet, to develop skills of coping and reducing possible harm, to hold on a routine basis an open conversation with the children about problematic and risky topics online, and to be clear in their expectations and in the setting of laws about surfing and behavior online (EU Kids Online Network, 2014). In addition, it is recommended to instruct the parents in the coping with the technological changes that occur in the environment, in the shattering of myths, and in the adjustment of the outlooks and behaviors to the changing world (Barak, 2012).

### **Need for Instruction of Education and Welfare Staffs and Reduction of the Digital Gap between Youths and Professionals**

In most of the cases, like the need to inculcate knowledge and provide tools for the parents, it is necessary to provide tools to the educational and treatment factors, to the education staffs in the school, to the welfare workers, to the social workers, to the youth workers, and so on. This need arises in the context of education and treatment workers in general and for those workers who work with youths at-risk in particular.

First, it is necessary to provide training and tools for the understanding of what occurs in the virtual space, through emphasis of the intention of professionals how to identify risk on the Internet, for instance, through asking questions such as the following

questions. What are you doing on the Internet? Who provided you with information there? Where do you search for answers on the Internet? The goal is to identify the risk and to characterize the potential for providing help through the Internet. The intervention on the Internet requires designated training and the inculcation of technological literacy and the development of an adequate technological infrastructure among professionals. In addition, it is necessary to develop young people's digital literacy, to develop their ability for critical observation, for the implementation of judgment, and for the understanding of the online space as a commercial arena where different interests are deployed.

Second, it is necessary to reduce the digital gap between the young people and the care-givers. There is a digital gap between the young people and their care-givers, and it is necessary to reduce it. This gap derives from a number of reasons that characterize the caregivers' difficulties, including technophobia, difficulty related to the perception of what treatment is, and difficulty that derives from the broadening of the therapist's role and field of intervention, and the time and duration of the intervention.

Third, it is necessary to work on prevention and treatment by factors in the system. It is important to act in the education system through educational staffs and not only through outside factors. This is alongside the assimilation of norms and values of proper and safe conduct on the Internet, the focus of empathy among the students as something routine, and the positioning of the teacher and the counselor as factors with the knowledge, tools, and ability to provide an answer in the field.

Fourth, it is necessary to have extensive coverage of counseling hours and interventions on the Internet for children and youths at-risk so as to increase the availability and accessibility of the professionals to children and youths at-risk. It is necessary to act to extend the counseling and intervention hours on the Internet, so that there will always be an online solution. It is possible to encourage this, for example, by adjusting the responses to smartphones and reducing the costs of Internet packages. In general, the importance of dynamism, flexibility, and updating of the adults who address the topic and come in contact with the youths was noted, in all that occurs in the Internet and the understanding of the language of young people in general and young people at-

risk in particular, since the moment they are perceived as not up-to-date, it is difficult to create trust and to constitute a relevant factor to which the young person will turn when needing help (Mani-Ican et al., 2017).

It further arises from the literature that it is recommended for educators and education institutions to promote the positive, secure, and effective need of technology in pedagogical means and in different learning environments, to integrate the awareness of safety online and digital skills in the curricula, to emphasize the profit and opportunities derived from the use of technology, to provide teachers with technological and digital skills, to emphasize risks and rules of safety online, and to develop a school-wide policy that addresses the positive use of technology, as well as the clear ways of action how to cope with bullying and harassment online. In addition, the education of children from a young age for the intelligent use of the Internet is important as an inseparable part of the agenda and not only in special events, and it is necessary to include desired behavioral values over the focus of intimidation, prohibitions, legislation, and punishment (Barak, 2012)

### **Creation of a Positive Presence on the Internet in Places Prone to Risks**

The Internet offers with relative ease choice of and exposure to regions prone to risk. To create an alternative for youths at these decision points, Boniel Nissim proposes to invest in positive presence in designated places for risk choice, out of the assumption that the balance in the exposure at the time of choice may lead to choice of places with positive influence (Boniel Nissim, 2010).

This can be done, for example, through advertisements on websites with referral to certain forums, a hot line, cautions of risk, referral to a place where there will be somebody listening, planting information on places that provide help when searching for risky things, and so on. For this purpose, it is necessary to understand what attracts the youths to the risky places, to learn about risky pages, and to “copy” the characteristics to positive contents so as to succeed in attracting young people and children, to create belonging, and to cause them to remain connected to positive websites (Mani-Ican et al., 2017).

In addition, a similar proposal was suggested in the context of reaching out, which can be passive and be performed, for instance, through financed advertisement on Facebook or Instagram, when through one click a young person who is looking for help can turn easily to help and obtain an immediate answer. One research study that examined the use of extensive campaigns to promote the safety and personal wellbeing on the Internet among young people found that the success of such campaigns requires interdisciplinary cooperation and it is very important to include the young people in the process of the definition of the problem, the messages, the goals, and the vision, as they themselves perceive it. One of the focuses that should be addressed in the campaign is respect (Spears et al., 2015b).

### **Unique Populations**

It is possible that there is a lack in response to unique populations, such as the Arab population and the Ultra-Orthodox population, in all that pertains to the dangers of the Internet. Journo addresses, for example, the Arab population. He maintains that because of the characteristics of the Internet it enables the reporting of secrets that cannot be spoken and exposed in the community, as well as sharing and the receiving of support (Mani-Ican et al., 2017).

There are populations that have a cultural or linguistic barrier, such as the Arab population, which today has not been provided with an answer and with simple digitation it will be possible to make accessible for them services through the Internet. There is great importance to this in a society where at least in parts of it turning to systems of counseling, treatment, and support is not perceived as normative. Regarding the responses to Ultra-Orthodox society, Wittenberg (in Mani-Ican et al., 2017) notes that there is a lack of information about the patterns of use of Ultra-Orthodox youth of the Internet. The broadening of the access to the Internet and with it exposure to information and different contents and exposure to risks and violence on the Internet constitutes a challenge for educational and treatment workers who work with Ultra-Orthodox youths and necessitates awareness, direction, and acquisition of tools of these professionals. It appears that for Ultra-Orthodox young people who are at-risk and who are dropping out

from the education institutions, the Internet constitutes a great attraction and enables expression, flexibility, and freedom from conventions and rules and yet may lead to high risk and this is without the intervention of a significant adult. Therefore, it is necessary to develop culturally dependent responses for the variety of populations (Mani-Ican et al., 2017).

### **Absence of Information and Programs Engaging in a Focused Manner on Youths At-Risk**

Interviews that were performed indicate that there is a lack of focused research information about young people at-risk in the context of dangers on the Internet, and therefore it is necessary to consider performing research studies on the topic on this population, for example, through virtual participative observations. Furthermore, today there are no known system-wide action programs that focus on the prevention and the coping of youths at-risk in all that pertains to dangers on the Internet and safe Internet use.

According to the interviewees, the Internet reflects in many regards what occurs in reality, but some note that different characteristics of the Internet – anonymity, availability, removal of inhibitions, possibility of adopting another identity, lack of understanding implications of different activities online, wide dissemination, possibility of examining fantasies, release of steam, and daring – encourage riskiness and may deteriorate more easily into situations of risk, sometimes with radicalization of what occurs in the physical space. Adolescence is a period with risk characteristics for young people, a period of experimentation, examination of the boundaries, inappropriate perception of reality, and certainly for young people at risk who do not necessarily have support at home or at school (Mani-Ican et al., 2017).

In this context of the lack of answers for young people at-risk, the topic of reaching out arises. The ELEM Association (Association for Young People in Distress), and in it YELEM (the system of counseling and mental support and the intervention arm of ELEM on the Internet) maintain that it is necessary to develop a significant constellation of reaching out that will provide a response to the distresses and difficulties

of young people and can reduce the service gap for adolescents. The idea is to develop a virtual axis of mobility for the purpose of the identification of signs of distress of Internet users through advanced technological means that will lead to treatment interventions but today there is a lack of resources for the development of this field. Different activity of reaching out online exists in the framework of the activity of the SAHAR patrol, which acts under the SAHAR association (a Hebrew acronym meaning help and listening on the Internet), to identify Internet users in distress and primarily those who are found in a suicidal crisis. This patrol was established with the aim to provide an answer also for people who do not turn of their own initiative for help. Through a staff of volunteers who undergo training and receive accompaniment, Internet users who are in distress are identified through the use of software the identifies suicidal contents and emergency messages on Internet websites and social networks and offer them help through the Internet support channels of SAHAR and other organizations that work to provide help on the Internet. Further on the topic of the importance of reaching out, the Internet is an arena where young people spend a considerable amount of time, and therefore it is another place for the creation of a relationship with them. Because of its characteristics, the Internet enables high exposure among young people and direct communication with them (Mani-Ican et al., 2017).

### **2.11 Arab Society and the Use of the Internet**

The use of the Internet is steadily and rapidly increasing in Arab society in Israel and especially among adolescents. The rate of use in 2010 is around 63% (The Galilee Society, 2011). This percentage is double the rate of use in 2006, when it was reported as 30% (Ganayem, Rafaeli, & Azaziya, 2009). Today nearly 80% of Arab society in Israel uses the Internet, and about 96% of the young population is found on Facebook (Ganayem, 2018).

Ganayem (2018) showed that there are wide digital gaps between Arab society and Jewish society in Israel, in addition to the digital gaps in Arab society itself according to the region of residence, age, sex, and level of education. The gaps are not in accessibility and use but in the manner of use. She found that boys use more computers

and Internet, while girls reported more use for goals of information and education, when the boys used more tools and services of entertainment.

In a research study conducted in Israel and examining the modes of use of the online social networks among Arab adolescents in Israel, the most common social network is Facebook (Facebook, 2011). The research study is based on a questionnaire with the goal to map the modes of use of young people on Facebook, such as frequency, language, interactivity, and in addition, social relationships with people known and unknown, similar or different in terms of age, sex, and nationality. The questionnaire was disseminated among adolescents from different regions in the Land of Israel from the north to the south. The research results show that there is a high frequency of use of Facebook on a daily basis and throughout all the days of the week. In addition, most of the use of young people is for the purpose of entertainment. Furthermore, there are differences between the genders in the context of the nature of use. The results show communication that is relatively high with strangers, in comparison to global statistics. The results indicate also times of use not especially suited with the needs of learning of the school. In addition to the communication between the youths and their teachers, which is low but is still inspiring educational attention. In general, the manners of use of the young people of the social network are not commensurate with the social norms (Ganayem, Asad, & Tibi, 2011). The research of Ganayem et al. (2011) showed that nearly one-third (29.7%) of the respondents reported more than two hundred friends on Facebook, when 22.1% of all the respondents reported at the most fifty friends, 26.4% have 51-100 friends, 21.9% have 101-200 friends. This shows that around 50% of all the respondents have more than 100 friends. This is close to the general mean of Facebook, according to the report from Facebook itself, which states a mean of 130 friends (Facebook, 2011).

The responses of the respondents to the research questions indicated that most Arab youths (53.6%) use the spoken Arabic language and write it in Latin letters and special characters. Only 3.2% use the official Arabic language. This outcome is supported by the research of Palfreyman and Khalil (2003), who showed that young people from Arab countries wrote Arabic in Latin letters. Interviews with a number of

participants indicated that young people call this language Messenger language. The responses of the participants to the research questions indicated that 51.1% of the respondents use Facebook a number of times a day, when another 22.7% reported the use of once a day. Thus, the large majority of Arab youths (73.8%) are daily users of Facebook. This percentage is among the highest in the world; the statistics of Facebook (2011) indicate that among 50% are daily users and Ross et al. (2007) noted 79% daily users. In addition, the result is commensurate with the statistics published in the press (Segal, 2010). Here too, apparently Facebook constitutes a substitute for the absence of welfare and entertainment institutions for Arab youths in Israel. In terms of times of use, most of the students (40.6%) use Facebook in the afternoon, which is exactly after they return from school. About 32% use the social network in the early evening hours, and 18% use it in the late evening hours, and 6% use it mostly after midnight. The findings indicate a social change, in which apparently the parental authority undergoes changes, thus necessitating additional research studies. The responses of the participants to the questionnaire indicate that around 53% of the participants used daily chats, comments, and likes. The users reported the use at a lower frequency, which is on a weekly basis, of the instruments of writing on a personal board (68%), accepting a friend request (66%), games (56%), uploading and sharing photographs (56.4%), and refusing a friend request (57%). The responses of the participants indicated that 32% update their board on a daily basis and 36% on a weekly basis. Further, most participants tend more to agree and confirm a new friendship request than to initiate friendship themselves. For instance, 66% agree and accept new friend requests on a weekly basis, when 44% initiate new friends on a weekly basis. These results show relatively high active use in comparison to the findings reported by the Pew Report (Hampton et al., 2011). The research findings of Ganayem (2011) show that the frequency of use of the mutual communication media (chat, commenting, and voting) is more than twice the results reported in the United States. The results of the research study show that most of the users respond to others than initiate themselves communication or writing, which can be understood from the difference between the frequency of daily use of youths of response activities (like, comments, chat) as opposed to the weekly frequency in the initiation of writing and creating a relationship (such as writing on the board and uploading pictures). Most of the

daily communication is with friends from the same school, as 56.5% of the respondents reported.

The results fit with the research of Mesch and Talmud (2007), who showed that most of the strong relationships are forged from personal acquaintance, which strengthens in an online relationship. Hence, most of the personal relationships of students are formed in the school.

In terms of the friends' sex, 61% of the respondents in the research of Ganayem (2011) call at least once a week friends of the opposite sex and about one-third of the respondents (33.5%) communicate on a daily basis. The findings indicate that the boys communicate with the opposite sex more than the girls communicate with the boys, and the difference is significant. Of all the boys who participated in the research, 44.4% reported daily communication with girls and in parallel only 23.4% of the girls reported daily communication with boys. These results are not commensurate with the norms in Arab society in communication in social life, thus indicating that youths allow themselves and feel freer to build relationships with the other sex and especially the boys. Regarding the communication of Arab youths in Israel with Jewish friends, 64.7% reported that they do not have such friends, but 8.3% of the respondents communicate with Jews on a daily basis, 13.6% on a weekly basis, and 13.4% on a monthly basis. Apparently the tense political situation is reflected also in online friendships on Facebook. Regarding the communication with friends from other countries around the world, statistics show that there is slightly more openness towards the outside, so that 43.4% reported that they do not at all communicate with friends from other countries when this is less than those (64.7%) who do not communicate at all with Jewish friends. Some of the respondents (12%) reported that they communicate with friends from other countries on a daily basis and about 24.2% report on a weekly basis (Ganayem, Asad, & Tibi, 2011). These results are lower than the findings reported by Ribak and Turow (2011), which apparently characterizes Arab society as a conservative society.

In addition, Ganayem et al. (2011) examined the communication with the teachers as friends on the Internet, and 13.5% of the respondents reported that they communicate

with teachers at least once a week. The absolute majority (86.5%) barely communicate with teachers on Facebook. Apparently the students avoid exposure to their teachers. In addition, more than one-third (36.6%) of the youths communicate with strangers (they had not known beforehand). This percentage is high relative to the PEW report in 2011 in the United States, according to which only 7% noted that they communicate with strangers. It is possible to connect this result with the percentage of communication with people from other countries, as the above data show. Conversely, the outcome is commensurate with the results of the research study of Ribak and Turow (2003) that found that about one-third of the children communicate with strangers through the Internet in general.

From the respondents in the research of Ganayem et al. (2011), 53.8% reported that most of the friendships among them are formed by accepting friend requests, when only 23.1% initiate themselves friend requests on Facebook. 13.6% of the respondents accept friends according to their friends' recommendations and only 9.5% accept friends according to recommendations from Facebook. To the best of the researchers' knowledge, there are no research studies that report data on the method of the friends' recruitment. However, the results show that the acceptance of the friend request is the main method for the development of the social network, than the personal initiative for inviting friends, which necessitates search, verification, and request to be a friend. This outcome can indicate a different perception of friendship in the virtual world, which is easy and shallow. It is possible to explain this result also in that Arab society is a young society with many children and in it the circle of friendship is wide, and thus it is reasonable to assume that the friendship formed on Facebook reflects the situation in Arab society. The respondents' answers about the goals of the use indicate that 70.6% reported that their main goal of use of Facebook is for purposes of entertainment, 40% said that the goal is getting to know people, and 18% answered that the main goal is the expression of emotions. Regarding the use of the Facebook's chat tool, 54% said they use it on a daily basis. Of these results, the use for purposes of entertainment is high, thus connecting with the results of the research of Ganayem (2010). This finding is explained by the lack of opportunities for entertainment in Arab society (Haas, Katz, & Schiff, 2000).

## **Summary**

The culture of the Internet has penetrated into Israeli Arab society very rapidly and enables us in the era of knowledge and globalization to see, for better and for worse, almost every event that occurs around the world. The availability and accessibility of information have increased and are not restricted, and thus children and adolescents in this era are exposed to information without restriction. In other words, children and adolescents are exposed to information without having the maturity and tools for coping, and this situation creates in them a gap between the information that has accumulated on the Internet and the developmental process in life in which they are supposed to mature and develop coping strategies.

The intensive use of the Internet, which is the leading tool in the era of information, exposes children and adolescents to contents without adult control and supervision, thus influencing the process of their cognitive, mental, and moral development. In other words, children and adolescents who are exposed to different types of pornographic contents or extreme violence are harmed unknowingly on the emotional level. This is not a true experience or active coping that can transform from crisis to growth and develop strategies of coping but rather a passive coping that does not develop strategies for coping but exposes children and adolescents in an unmediated and aggressive manner to situations they are not ready and prepared to deal with. This situation warns of the dangerous impact of the incorrect use of the Internet, and this threat enters into almost every home and it is important that it be emphasized. In addition, although there is the danger of incorrect use of the Internet among children and adolescents, it is necessary to use it but it is mandatory to increase the awareness and instruction for the parents to set boundaries since the use of the Internet can detrimentally influence their children. Hence, the parents' involvement in their children's life and degree of Internet use will allow them to cope better with real life.

The extensive literature I reviewed on the dangers of the Internet and the cellular phone and the addiction to them and on conservative Arab society that is undergoing an accelerated process of modernization indicates that there is a strong need to raise the

awareness of the Arab parents and their adolescent children about the dangers of addiction to the computer in general and to the cellular phone in particular. It is necessary to carry out research studies in the Arab sector on the influence of the social networks and the dangers they embody and how to cope with the problems that are created, especially since in Arab society the tendency is to conceal the problem and not to report the vulnerability caused by the social networks.

### **Chapter 3: Sleep Patterns during Adolescence**

**Adolescence** is the stage of transition between childhood and adulthood, which is characterized by many developmental changes: physical, sexual, emotional, cognitive, and social. It begins with the external and internal physical and sexual changes, with all the implications on the psychological dimension, the development of body image and self-image, and the emotional and social change, when the adolescent separates from his parents and forms a unique identity (Porit & Prezic, 2004; Sohlberg, 2007).

The process of adolescence includes the development of the person's self-control of his behavior and largely of his thoughts and emotions. Accordingly, there are many physiological processes and cognitive, emotional, and social changes that influence the adolescent (Berger, 2011). Adolescence is characterized by the formation of the personal and social identity. The child must change his childhood identity for the identity of an adult. According to Erikson (1959, 1968), this stage is a summative stage for the previous four stages the child has experienced. Now the child must process and crystallize all the information accumulated from the other stages, so as to form for himself the personality and sexuality he desires. This stage is the important and significant stage, according to Erikson (1959, 1968). In this stage, the significant figures for the young person are the members of his peer group, or in other words, young people his age. This is the stage of the formation of the adolescent's personal identity. If he does not succeed in forming his identity, then there will be the blurring of the identity (role confusion and self doubt), which may cause destructiveness, indifference to the environment, and so on. Another problem that may be created is the formation of a negative and delinquent identity, walking on the dark sides of life, and the person's labeling of himself as breaking the

laws of society. The peer group constitutes a model of imitation for the young person, and in addition the young person receives feedback from his peers on his behavior and thus shapes it accordingly. In addition, in this stage there is the liberation from the parents or the rebellion against them, so as to achieve independence. However, the main task is the building of the self-identity. It includes the sexual identity and the professional identity. Sometimes the adolescent turns to negative experiences, such as drugs, in order to form the identity. Erikson (1959, 1968) believed that the crystallized identity is a condition of the creation of an intimate relationship with the partners, without the fear of the loss of identity. In this stage, on the part of society there is moratorium, which is the suspension of duties so the young person can experience various positions without obligation. Society addresses the rebellion of youth with forgiveness. A successful resolution of this stage creates the person's loyalty to himself and the person's loyalty to others and to principles and ideas, which is at the basis of friendships. Rites of transition to the stage of adulthood are customary in many societies and are intended to confirm the new identity that the adolescent has assumed. The people who have not appropriately resolved the fifth stage are those who are called by society "eternal children"; these are people who at older ages still behave in a childish and irresponsible manner (Erikson, 1959, 1968).

During adolescence, there are changes in the structure of the brain. These changes reflect a higher specialization of the brain centers, which leads to an increase in the effectiveness of their functioning. In this period, the synaptic system in the frontal lobes undergoes "pruning", which leads to a decline in the thickening of the synapses. This process sharpens the functioning of the brain tissue in the brain centers and improves the functioning of the synaptic circuits. While the white material undergoes gradual thickening equal among all regions of the brain, the development of the gray material changes from region to region. Consequently, there are regions in which the gray material thickens following the rise in the number of synapses and there are regions in which the gray material lessens in thickness following the pruning of the synapses (Monitz, 2016). In addition, many sexual changes occur in the framework of the process of sexual maturation. Following the increased excretion of the male sex hormones, androgens, and the female sex hormones, estrogens, a number of biological changes occur. The sex

organs of the adolescents develop. Among the girls, menstruation commences around the age of twelve, while among the boys sperm is first created around the age of twelve. The sexual desire increases. In addition, facial and body hair grows, there is perspiration, and sometimes there is acne. The boys' shoulders broaden, they build muscle mass, and their voice deepens. The physical maturation of the girl requires that she deal with the aspects of femaleness and fertility, which entailed mixed emotions: the monthly menstruation, the increase of the breast size, and other sex characteristics that entail important personal and social meanings for them (Berger, 2011).

A great change that occurs in the period of adolescence is a social change. Young people tend to spend more of their free time with their peers and less time with their parents. The peer group is different from the family, in that it enables to act without the parents' direct supervision, through (partial) independence. The secret of the magic of the peer group is its ability to let its members engage in activities they were forbidden by the world of adults (for the most part, their parents and teachers). Along with the increasing importance of the peer group, there is the need for belonging that increases the influence of social pressure. Social pressure causes the change in the individual's behavior as a result of the conflict between his desire to behave as he wants and the desire to belong and the push to adjust the self to the surrounding society. The social influence exerted on the person by the people around him may cause him to "give in" and to undertake certain actions, although they are not commensurate with his habits, preferences, or conscience. Despite the distance from the parents during adolescence, the parents still have a respectable part in the support of their children, even if in other ways than what they had done when their children were younger (Litner, 2003).

The period of adolescence is accompanied by the increase of the turbulence and inner tensions, including a dramatic increase in the rate of depression. The assessment is that about 10% of young people (ages twelve to seventeen) will suffer from episodes of depression, and many of them will even consider the possibility of ending their lives. In Western culture, adolescence is perceived today as characterized by tensions and conflicting feelings of the adolescent towards himself, when sometimes he feels that there is meaning to his life and sometimes he feels alienation. The steadily crystallizing

identity of the adolescent is greatly influenced by the perceptions and attitudes of his age group, and when he experiences social rejection or becomes a victim of acts of bullying, he may feel difficult emotions of depression, to the point of suicidal thoughts. This risk has intensified in recent years, with the era of the Internet and the smartphone. A considerable part of the social relationships of youths in the digital era exists on the online social networks (Ophir, Asterhan, & Schwarz, 2017).

There are a number of factors that influence the mental wellbeing and quality of life among adolescents. For instance, curiosity is one that predicts the adolescents' mental wellbeing. Research studies have found that adolescents with a high level of curiosity have more satisfaction, positive emotions, and feeling of goal and hope, in comparison to adolescents with average or low curiosity (Jovanovic & Brdaric, 2012).

Research studies show that in this period the emotional and physical distance between the parents and their adolescent children increases and that the arguments, conflicts, and angers are considered more common (Paikoff & Brooks-Gunn, 1991; Reese-Weber, 2000; Suleiman-Dehalala, 2013).

A sign of adolescence is the transition to a later sleeping time (Hagenauer, Perryman, Lee, & Carskadon, 2009; Yang, Kim, Patel, & Lee, 2005). Sleep patterns among adolescents are characterized by the tendency to a later sleep time and by considerable differences in the timing and duration of the sleep on weekdays and weekends. Thus, in the middle of the week they sleep considerably fewer hours than on the weekends. The decline in the duration of sleep increases throughout adolescence and many youths suffer from a lack in sleep hours (Crowley et al., 2007; Jenni & O'Connor, 2005). Adolescents need nine-ten hours of sleep a night and some even need added sleep during the day (Mercer, Merritt, & Cowell, 1998). Most adolescents present sleep patterns accompanied by a cumulative lack of sleep, so that nearly 27% sleep less than 6.5 hours a day and only 15% sleep more than 8.5 hours a night (Carskadon & Acebo, 2002).

These changes in the sleep patterns are attributed to biological changes in the sleep / wake system and to environmental factors associated with the lifestyle (Crowley

et al., 2007). From a biological perspective, in adolescence there is a delay in the internal timing of sleep (the Circadian factor, related to the internal biological clock), a slow accumulation of sleep pressure (the homeostatic factor that regulates sleep) and a delay in the excretion of melatonin (Carskadon, Acebo, & Jenni, 2004; Taylor, Jenni, Acebo, & Carskadon, 2005). The Circadian rhythm addresses the periodicity of the sleep-wake cycles during the day and is controlled by the supra-chiasmatic nucleus (SCN), which is found in the hypothalamus, which controls the cyclic nature of physiological and behavioral variables in the human body such as body heat and excretion of hormones (Berman, Snyder, Koizer, & Erb, 2008; Smith & Eastman, 2012).

Environmental factors also influence the sleep patterns in adolescence. They include early awakening because of early school start times, homework, extracurricular activities, and social activities, employment, reduced supervision of parents, and increased exposure to the media (Shochat, Cohen-Zion, & Tzischinsky, 2014; Shochat, Flint-Bretler, & Tzischinsky, 2010; Wolfson, Spaulding, Dandrow, & Baroni, 2007).

### **3.1 Gender Differences in Sleep Patterns of Adolescents**

Research studies show that there are gender differences in the sleep patterns. Thus, it was found that girls sleep more than boys the same age (Laberge, Petit, Simard, Vitaro, Tremblay, & Montplaisir, 2010; Olds, Blunded, Petkov, & Forchino, 2010). It was further found that girls tend to suffer more from sleeping problems such as difficulty falling asleep (Ohayon, Roberts, Zulley, Smirne, & Priest, 2000) and from poor sleep quality (and thus they may suffer from insomnia) than the boys (Johnson, Roth, Schultz, & Breslau, 2006). A research study conducted in 23 countries in the world examined the relationship between the gender and the sleep pattern among adolescents and found that the girls sleep more than the boys 29 minutes a night (Olds et al., 2010).

A research study on sleep patterns conducted on Israeli Arab and Jewish adolescents, boys and girls, found gender differences. The girls went to sleep earlier than did the boys in the two samples, both on weekdays and on the weekend (Shochat, 2013). Another research study conducted in Israel on secular and Ultra-Orthodox adolescents found that on weekday nights Ultra-Orthodox boys reported early sleep times than did

girls while among the secular girls reported earlier sleep times than did the boys (Vidal, 2014). It is possible that these findings indicate that gender differences in sleep patterns are also related to culture and lifestyle. The topic of sleep and culture will be discussed in the continuation (section 5.6).

### **3.2 Relation between Sleep and Health**

Sleep is an essential need for the adolescent's healthy development (McKnight-Eily, Eaton, Lowry, Croft, Presley-Cantrell, & Perry, 2011; Sadeh, 2007). The National Sleep Foundation (2011) in the United States recommends at least eight hours of sleep a night for adolescents. However, in actuality during the week, when they are studying, adolescents sleep less than the recommended amount (Shochat, Flint-Bretler, & Tzischinsky, 2010). Harm to the amount of sleep harms the immune system and creates instability of the metabolic system, and the result is a rise in the risk of weight gain and diabetes (Guidolin & Gradisar, 2012). Lack of sleep causes sensitivity to infectious diseases, while a good night's sleep reinforces and improves the immune resistance to external harmful factors (Cohen, 2009; Jerome, 2009).

Insufficient sleep and drowsiness during the day were found to be related to deficiencies in different measures of functioning during the day, in the mood, in the academic achievements, in the health, and in the quality of life (Tzischinsky & Shochat, 2011; Shochat, Cohen-Zion & Tzischinsky, 2014). Thus, the lack of sleep was found related among adolescents to a rise in weight, to inadequate physical activity, and to the consumption of substances such as caffeine, alcohol, and nicotine, so as to combat the drowsiness and the deficient functioning during the day (Shochat, 2012; Shochat, Cohen-Zion, & Tzischinsky, 2014).

A survey research performed in Australia on adolescents aged ten to nineteen found a consistent significant relation between the short duration of sleep and weight problems. An adolescent who suffered from the lack of sleep may suffer from excess weight (Guidolin & Gradisar, 2012). In addition, a relation was found between sleep and other health variables. A longitudinal Finnish research performed on two thousand adolescents found a relation between adequate quality of sleep and back and neck pains

(Auvinen, Tammelin, Taimela, Zitting, Järvelin, Taanila, 2010). A Canadian research study conducted on four thousand adolescents noted a relation between sleep disorders and cardiovascular diseases (Narang, Manlhiot, Davies-Shaw, Gibson, Chahal & Stearne, 2012).

To conclude, it can be determined that sleep is important to the health, to the quality of life, and to the daily functioning. Harm to the quantity and quality of sleep has significant implications on the adolescent's normal development.

### **3.3 Relation between Sleep and Everyday Functioning**

#### **Sleep Quality and Sleep Patterns**

In addition to the impacts on the health, deficient quality of sleep is related to lacks in psychological, social, and personality functioning (LeBourgeois, Giannotti, Cortesi, Wolfson & Harsh, 2005). Inadequate sleep is related to drowsiness during the day and harm to the daily functioning (Liu, 2004; Shochat, Cohen-Zion & Tzischinsky, 2014), to harm to the creative ability and to memory ability (Liu, 2004; Shochat, Cohen-Zion, & Tzischinsky, 2014) and to a decline in the grades (Wolfson & Carskadon, 2003). The quality of sleep was found positively related with four school roles: teacher acceptance and evaluation, student self-image, student achievements, and student motivation (Meijer, Habekothé, & Vav Den Writtenboer, 2000).

Research studies found that there is a relation between sleep patterns and success in the studies. Thus, a research performed among high school students in the United States, in which three thousand students participated, found that the students with the high grades in the class reported a longer duration of sleep and orderly sleep patterns, in comparison to students with low grades in the class (Wolfson & Carskadon, 1998).

For the purpose of further studies, I define sleep pattern as relatively constant behaviors related to sleep which are the combinations of variables such as Bed Time, Sleep Latency, Wake Time, and Total Sleep Duration and Daily Functioning Measures: Sleepiness, Sleep-Harming Behaviors, Mood, and Type.

## **Mood, Sleepiness, Evening Type, and Behaviors Accompanying Deficient Sleep Patterns**

Adequate sleep is related to a positive health situation, while sleep problems and inadequate sleep raise the risk of mental problems and deficient emotional functioning, primarily depression and anxiety (Alfano, Zakem, Costa, Taylor & Weems, 2009). A research study conducted on adolescents for three years (age eleven to fourteen) found that short sleep increased the risk for depression symptoms and low self-esteem (Fredriksen, Rhodes, Reddy, & Way, 2004).

A large survey of nearly one hundred thousand high school students in Japan found that short duration of sleep (less than seven hours) was related to poor mental state, in comparison to long duration of sleep (more than nine hours). In addition, self-evaluation of sleep was related linearly to the mental situation; in other words, poorer evaluation of sleep was related to a poor health and mental situation (Kaneita, Ohida, Osaki, Tanihata, Minowa, Suzuki, et al., 2007).

Another survey of nearly one thousand healthy adolescents aged twelve to sixteen found that the sleep problems were related to problems of attention and focus, as well as anxiety and depression (Coulombe, Reid, Boyle, & Racine, 2011). In addition, a long duration time for falling asleep, difficulty with waking up in the morning, and long duration of wakefulness during the night are a part of the behaviors that accompany deficient sleep patterns. A research study that examined the relation between types (morning/evening) among adolescents found that adolescents who tend to be evening types suffer more from accompanying behaviors during the day (Giannotti, Cortesi, Sebastiani, & Ottaviano, 2002). Behaviors that accompany deficient sleep patterns address falling asleep during the school lessons, tardiness to the studies because of sleeping in late, need to wake up frequently, and sleeping till the afternoon (Shochat, 2013).

A research study conducted in Israel in which students grades eight and nine, whose average age was fourteen, participated found that the evening types went to sleep later, their sleep latency was longer, their waking up time was later, and their duration of

sleep was shorter, in the middle and at the end of the week, in comparison to morning types. Evening people were found to suffer from more sleep problems, sleepiness, and depressive mood (Tzischinsky & Shochat, 2011). Another research study recently conducted in the United States, in which 15,659 adolescents in grades seven to twelve participated, found that adolescents who went to sleep after midnight and showed patterns of evening people in comparison to adolescents who went to sleep at ten at night had higher chances of suffering from a depressive mood and higher chances of reporting a suicide attempt in the past year (Gangwisch, Babiss, Malaspina, Turner, Zammit, & Posner, 2011).

To conclude, it can be said that insufficient sleep increases the risk of mental problems and deficient emotional functioning and that tiredness and daily sleepiness are more frequent among adolescents who adopt behaviors that harm sleep and who are more evening types in comparison to adolescents who are not evening types.

### **3.4 Relation between Electronic Media and Sleep Patterns among Adolescents**

A survey of the World Health Organization (WHO) on the health behaviors in schools that included 41 European countries and Israel found that Israel is one of the countries in which youths spend the most time watching television (World Health Organization, 2008). Today youths live in a world in which there is unending growth of the media (Brown & Witherspoon, 2002). Adolescents and children use the computer and play computer games during the day and there is an accelerating increase in the use of electronic devices among youths (Smith, Stewart, Peled, Poom, & Saewyc, 2009). The technological progress and exposure to a tremendous number of media devices have caused changes in the social and cultural lifestyle and there is steadily accumulating evidence that indicates the influence of this development on the health and functioning (Shochat et al., 2010), including their detrimental influence on the quality of sleep, duration of sleep, and timing of sleep (Shochat, 2012).

A survey article examined the influences of exposure to electronic devices among youths and its impact on the physical and mental aspects of health and wellbeing

(Kappos, 2007). In recent years there have been more research studies that examined their influence on sleepiness, sleep patterns, and sleep disorders (Van den Bulck, 2004; Shochat, Flint-Bretler, & Tzischinsky, 2010). A research study conducted in Israel that examined the adolescents' exposure to electronic systems (television and computer) found that on the average the adolescent's exposure to electronic devices was three hours a day for television and 2.5 hours a day for the Internet. It was found that adolescents went to sleep at 23:00 in the middle of the week and 01:45 at the end of the week and slept less than 7.5 hours. Increased exposure to electronic media was related to later sleeping hours, shorter sleep, and a higher level of tiredness, while use of mobile phones was related to tiredness and sleepiness during the day (Shochat et al., 2010).

In the attempt to understand how activity performed by adolescents in the evening before sleep influences their sleep patterns, a research study was performed in a proximal suburb of Philadelphia, Pennsylvania that examined the number of electronic devices used by adolescents aged twelve to eighteen (Calamaro, Mason, & Ratcliffe, 2009). This survey showed that 66% of the adolescents had a television in their room and 33% had a computer in their room, 90% had a MP3 device after nine at night, and more than 82% watched television, 34% sent text messages, 44% made phone calls, 55% surfed the Internet, 24% played computer games, 36% watched a movie, and 42% listened to music on their MP3 for an hour to two hours on the average. An interesting finding of this survey was that adolescents who engaged in media activity in the evening hours used on the average four types of media concurrently, and a direct relation was found between simultaneous use of electronic media devices and sleep measures. Adolescents who slept enough hours at night (eight to ten hours) used fewer media devices as opposed to adolescents who slept little (less than eight hours). As the simultaneous use of media devices included more devices, the likelihood of difficulties falling asleep at nights in the middle of the week and of falling asleep during the studies increased (Calamaro et al., 2009).

Another research study found that adolescents who had a media device in the bedroom went to sleep significantly later on weekdays and weekends and woke up

significantly later on the weekends, as opposed to adolescents who do not have in their room a television or computer (Calamaro et al., 2009).

A survey article (Cain & Gradisar, 2010) proposed a model that illustrates the influences of electronic media on sleep patterns among young people. On the basis of this model, background variables such as age, socioeconomic status, and parent authority may influence the intensity of the use of electronic media devices, including the presence or absence of the media devices in the bedroom (Cain & Gradisar, 2010). The presence of a media device in the bedroom leads to sleep disruptions, including physiological delay in the sleep/awake mechanism and sleep disorders that cause deficiency in the daily functioning. In the present research study we propose another factor for this model: the factor of culture.

A number of additional explanations were proposed to explain the relation between exposure to media devices and harm to the sleep. One argument is that exposure to electronic media causes wakefulness (Blask, Brainard, Dauchy et al., 2005). According to another argument, it is possible that the brightness of light of the television screen or computer monitor may lead to a depression of the excretion of melatonin, which is supposed to occur under dusky condition (Cain & Gradisar, 2010; Higuchi, Motohashi, Liu, Ahara & Kaneko, 2003). An increase in the melatonin level with darkness is related to sleep, while the depression of the excretion of melatonin occurs with the dawn, near to waking up (Arendt, 1998).

To conclude, although the mechanism is still not clear, cumulative evidence indicates a close relation between exposure to electronic media and quality and duration of sleep. It becomes clear that as the access to electronic media is higher there is harm to the measures of sleep.

### **3.5 Quality of Life and Sleep**

The concept of Health-Related Quality of Life (HR-QOL) was developed according to the definition of health of the World Health Organization (WHO), which describes health not only as a situation of the absence of illness but as a situation of physiological, mental,

and social wellbeing. The term addresses the person's subjective assessment regarding his health situation as such that enables him to maintain a level of functioning, which addresses the physical, mental, and social dimensions that allow him to achieve his goals in life (Shumaker & Naughton, 1995).

Few research studies have examined the relationship between quality of life and patterns of sleeping. A research performed in Israel (Tzischinsky & Shochat, 2011), in which 470 students in the eighth and ninth grades, with an average age of fourteen, participated, found that the evening types went to sleep later, their sleep latency was later, their waking time was later, and their sleep duration was shorter in the middle and end of the week in comparison to the intermediate and morning types. The evening types were found to suffer more from sleep problems, drowsiness, and a depressed mood. Evening types received a lower score in the quality of life questionnaire in comparison to intermediate types and morning types. The regression analysis found that the variables that had the strongest influence on the quality of life were sleepiness, sleeping problems, and depressed mood, alongside the type (evening/morning), sleep duration in the middle of the week, and sleep latency at the end of the week (Tzischinsky & Shochat, 2011).

Another research study conducted in Taiwan on 656 adolescents (Chen, Ang, & Jeng, 2006) found a positive relationship between sleep duration and health situation and health practices. The correct sleep duration was related to positive health practices, such as physical activity, and even reduced the risk of being overweight. There is evidence that the sleep practices influence the quality of life over time. In a longitudinal research, one-quarter of the children with sleep problems aged four-five will continue to suffer from these problems when they are six-seven. In addition, among these children a relationship was found between sleep problems and quality of life, behaviors that promote health, language, and learning (Quach et al., 2009).

It can be concluded that the intervention in the sleep problems at an early age may prevent harm to the health and quality of life at a later age. Therefore, the present research study examines the influence of the parental intervention on the sleep patterns and quality of life of Arab adolescents.

### **3.6 Sleep and Culture**

In recent years, research studies began to be interested in the role of culture in the shaping and determination of sleep patterns among children and adolescents. These investigations relied on surveys or evidence and primarily addressed sleep patterns among infants and toddlers and elementary school students (Corwin, Lesko, & Heeren, 2003; Milan, Snow, & Belay, 2005). This issue derives from the assumption that sleep is a biological behavior influenced by values and cultural norms (Jenni & O'Connor, 2005; Porteimsson & Karlsson, 2009).

Sleep patterns change considerably between cultures. In comparison to sleep patterns in the elementary schools in Israel, China, and the United States, the sleep time declined with the increase in the age of the children. However, the children of Israel went to sleep later and they had a high rate of sleep disorders and sleepiness in the day in comparison to their peers in China and in the United States (Tzischinsky, Lufi, & Shochat, 2008). In another research study that recently examined in Israel the influence of culture on sleep patterns, the differences in sleep patterns between Ultra-Orthodox adolescents and secular adolescents were examined (Vidal, 2014). The research found differences between Ultra-Orthodox adolescents and secular adolescents in sleep patterns: the Ultra-Orthodox fell asleep faster and awoke earlier in the middle of the week, and during the weekend they went to sleep earlier. However, they slept less on the weekend and suffered less from sleepiness, behavior disorders, and moods.

About two decades ago, the World Health Organization (WHO) conducted a survey in eleven countries of Europe, including Israel. This survey found that Finnish adolescents had great difficulty falling asleep, and along with Norwegian youths reported the highest level of sleepiness in the daytime hours. It was further found that Israeli adolescents had the shortest sleep duration. In addition, factors such as use of tobacco and alcohol, exposure to media, and lack of physical activity influence the sleeping difficulties (Tynjala, Kannas, & Valimaa, 1993).

A number of research studies found that in the past decades children and adolescents in Western cultures sleep less and later (Dollman, Ridley, Olds, & Lowe,

2007; Iglowstein, Jenni, Molinari, & Largo, 2003). However, recently a survey article was published that showed that not all the findings are commensurate and there is evidence that the duration of the sleep did not change and even rose in different countries in the world (Matricciani, Olds, & Williams, 2011). Thus, in an intercultural research that included 23 states in which more than 90,000 adolescents participated it was found that in Australia and Europe the duration of sleep was the longest and then in North America and Asia. In addition, it was found that in Asia people tend to sleep during the day and these patterns are maintained on weekdays and on weekends. The researchers hypothesized that the difference can be because of the cultural conditions (Olds et al., 2010).

In Israel the cultural differences between Jews and Arabs in the sleep patterns and concomitant behaviors were examined. The research found that there were different sleep patterns between Arab and Jewish adolescents. Arab adolescents went to sleep earlier on weekdays and on weekends, in comparison to their Jewish peers. Although a difference in the total time of sleep was not found, the Arab adolescents needed more time to fall asleep, they woke up early on weekdays, and generally they were sleepier during the day (Shochat, 2013).

The present research study addresses this issue and broadens it to the field of habits of exposure to the electronic media among Arab adolescents.

## **Chapter 4: Parental Involvement for the Promotion of Adolescent Health**

### **4.1 Parenting Styles**

The emotional and social world of the young child forms primarily through the interaction built between him and his parents (Youngblade & Belsky, 1992). Many research studies emphasized the critical influence of the parents on their children's behavior, personality, and cognitive development (Holden & Edwards, 1989; Maccoby, 1984).

Socialization is a process that lasts as long as life does. However, it is generally divided into two parts, primary socialization and secondary socialization. Primary socialization is the process of socialization that occurs at the start of life, in which the child and the adolescent learn the codes and behavior of the society in which they are found. Secondary socialization is the process of socialization that occurs throughout the person's entire life, when he joins different social groups during his life. Whether in the kindergarten or in the organization where the person works as an adult, more specific changes occur later, as a response to the acquisition of new roles or socialization in new groups or encounter with other structured social situations. The need for additional later socialization may derive from the increasing complexity of society, along with the corresponding increase of the roles and accountability. Three points in which these two processes of socialization are different from one another are content, context, and response.

1. Content. The socialization in childhood is associated with the regulation of biological drives. In adolescence, the socialization is in the field of the development of broad values and self-identity. In adulthood, the socialization engages in more specific norms and behaviors, such as those related to the position at work and more superficial personality characteristics.
2. Context. At earlier ages, the person who is experiencing socialization is found at the status of the "learner" in the context of the family, the school, or the friends. In addition, the interpersonal relations at these ages are more emotional. In adulthood, although sometimes the person who is undergoing socialization receives the role of the learner, for the most part he is already in the role of the responsible adult. There is also the higher chance of more official relationships because of the contexts (for instance, the work environment), and therefore the emotional component is smaller.
3. Response. It is easier to shape the child and the adolescent than the adult. In addition, most of the process of the adult's socialization is voluntary and he himself initiates it. Adults can begin or end the process at any given moment.

During the person's life, there is a change of the agents of socialization that influence the individual. The strength of some agents of socialization declines, while the

strength of others increases. Accordingly, the tendency is to divide the agents of socialization according to earlier and later ones. The first agents are those who influence the person in his childhood and youth. During childhood, the main influence belongs to these agents of socialization – parents, teachers, and family. With adolescence, there is an increase in the influence of additional agents of socialization, later ones, who are the friends and the media. In this stage, the influence of the initial agents declines in favor of the later ones. Beginning in this period in the person's life, the media become main providers of information. The part of the parents in the supply and analysis of information and in the drawing of conclusions about its impact on the processes of socialization steadily decline until it disappears totally. For the adult person, the parents are no longer authorities. When new information reaches the adult person, he seeks professional advice and turns to friends whose knowledge he appreciates specifically for the relevant information and for the most part to the media, which becomes the main agent.

In recent years, the media has been accorded a high status in the topics of knowledge and education, and its impact on the adolescents is very great. The traditional values (values of education from childhood) remain inherent in the person, but new information and current events come from the media. The media, therefore, is a later agent of socialization with almost absolute impact in new and unfamiliar topics or in topics in which the person was not educated. Contemporary re-socialization is the change of values carried out by the media (Andersen & Taylor, 2010).

The family is the main agent of socialization since it is the center of the child's world. Small children are completely dependent on others, and the responsibility to provide their needs falls almost always on the shoulders of their parents and other family members. At least until the beginning of the studies in the school, the family is the factor that instills in them its values, attitudes, opinions, and prejudices of the culture towards themselves and others. In addition, the family gives children the social attitudes. In other words, the parents bring their children not only into the material world but also place them in society in terms of race, ethnicity, religion, and class. When the time comes, these elements will become a part of the child's self-image. The things considered moral

or socially acceptable depend on the cultural context, and therefore it is necessary to learn them during the development. The individuals in society take part in the social structures and institutions, and thus they learn the rules of behavior and the values relevant to the society. Through the reciprocal activity with others, the individual forms his individual identity. The process can lead to the acceptance of social norms which can be part of the dominant culture (and then a person is “socialized”) or the norms of a type of subculture which can be a deviation of dominant culture norms. It is also possible that there are some disturbances in the process of socialization that lead to some psychosocial problems experienced by the person. The process of socialization in the condition of anomie<sup>1</sup> is the state described by Durkheim and Merton as the contradictions between different social norms. According to Durkheim (1895), the state of anomie appears as the result of rapid social changes leading to the abandonment of the traditional, old social order when the new social order has not yet been constituted. Consequently, the individuals, adolescents, cannot orient themselves on the old, traditional social order (social norms) and are uncertain regarding the norms they should follow. Hence, they do not orient themselves on the norms represented by the older generation, but rather on the norms of their fellows (Durkheim, 1895). This is what is happening in Arab society in Israel. The rapid changes that society is experiencing following the process of modernization is influencing the lives of the Arab adolescents, and they cannot orient themselves in the old and traditional social order (social norms) and are not certain about the norms that they should uphold.

The process of socialization represents two complementary processes of the instilment of the social and cultural heritage on the one hand and the development of the personality on the other hand. From the functional aspect, it is possible to say that the process of socialization fills functions such as the inculcation of the basic rules of practice and discipline relevant to the culture in which the individual lives, the instilment of aspirations, and the creation of a family, group, and sexual identity. From the conflictual aspect, it is possible to see that the process of socialization teaches the individual the patterns that exist in society and thus it perpetuates, in most cases, stereotypes and social and gender stratification and even prevents in some cases social

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<sup>1</sup> <https://www.britannica.com/topic/anomie>

mobility and change of the social situation. In addition, there can be a situation in which society will convey conflicting messages, and this is a situation that can create confusion and break the social values (Rueda, Checa, & Rothbart, 2010).

In the context of the intensive sociocultural changes, the parents as the agents of socialization must meet many challenges. The parenting style was defined by Darling and Steinberg (1993) as a collection of parental attitudes towards the child about the child's care and was found to have greater influence on the child's personality than a specific action of the parents during the care (Mikulincer, Orbach, & Iavnieli, 1998). The research works of Diana Baumrind over three decades are considered the most comprehensive studies in the field of the parenting style and made a significant change in the field. Baumrind performed a series of longitudinal studies on children and parents, during which she performed structured interviews, observation of interaction between parents and children in natural conditions and in laboratory conditions, and standard psychological tests. Baumrind (1967) showed a relationship between the different educational approaches of parents and the behavior patterns of children.

From the results of her research studies, she constructed a model that included three parenting styles: authoritarian, authoritative, and permissive (Baumrind, 1971). Later, Maccoby and Martin (1983) and Baumrind (1991, 199b), who developed a similar version in her more recent works, defined parenting styles according to two primary dimensions of parenting: parental demanding/control and parental responsiveness or supportiveness. The first dimension, parental demanding/control, is associated with the level of control that the parent exerts over the children's activities and behaviors so as to maintain respect of laws and respond to expectations and standards determined in the family. The second dimension, parental responsiveness or supportiveness, addresses the emotional relationships created between the parent and his children and is determined according to the degree to which the parents intentionally cultivate the child individually and the child's standing on his rights, through the way in which the parents direct, support, and are attentive to their children's unique needs and demands (Baumrind, 1991). From the combination of the two dimensions of demanding and responsiveness, Baumrind created a new model that included the three main parenting styles she defined

previously as well as a fourth parenting style: the uninvolved/rejecting-neglecting parenting style.

To summarize, during the person's life the agents of socialization change. During adolescence, the influence of the parents, who are the first agents of socialization, wanes, and there is increasing influence of later agents of socialization, the friends and the media. In recent years, the media has been granted a high status in the topic of knowledge and education. Therefore, in the present research study an intervention was held for the parents to increase their awareness about the influence of the different media outlets on the health of their children in general and on their sleep patterns in particular and the negative influence of the excessive use of and addiction to the Internet, to the mobile devices, and to social media. It is important to strengthen and increase the parents' influence in their adolescent children's life, since the parents are the main agents of socialization in their children's lives.

#### **4.1.1 Authoritarian Parenting Style**

These parents are high in demanding but low in responsiveness. They tend to direct and guide their children to a great extent and to even control their behaviors. They do not encourage independence and they demand discipline and complete obedience to their authority. These parents are emotionally distant and are less warm. They do not encourage verbal negotiations with their children and use means of punishment to control their children's behaviors. These parents see themselves as the only authority, and frequently they impede the child's personal will when he objects to their thoughts or attitudes (Baumrind, 1991).

Some research studies on children whose parents have an authoritarian parenting style found that these children receive high rankings in the measures of obedience and conformity and are characterized by a low self-confidence (Mantizicopoulos & Oh-Hwang, 1998). In addition, they do not depend on themselves and on their social and academic abilities, although they have good achievements in the school and although they are not involved in delinquent activities or behavior problems (Aunola et al., 2000; Lamborn et al., 1991; McClun & Merrell, 1998; Steinberg, Lamborn, Darling, Mounts, &

Dornbusch, 1994). In addition, this type of parenting is associated with less openness to experiences and with high anxiety (Weiss & Schwartz, 1996; Wolfradt et al., 2002), high internal distress and lower psycho-social adjustment (Fletcher, Darling, Steinberg & Dornbusch, 1995). A research recently conducted in Jamaica (Smith & Moore, 2012) found that the authoritarian parenting style was related to low physical and psychological adjustment. In addition, the research study found that when the parents have an authoritarian parenting style and the children do not agree with the parents' behavior they have a chance of suffering from psychological problems. Respondents from six countries in three continents (Africa, Asia, and Europe) participated in a research study conducted by Gershoff et al. (2010). The research found that the authoritarian parenting style led to low adjustment of the children. This finding was true for all countries and for all continents.

#### **4.1.2 Authoritative Parenting Style**

Authoritative parents are parents who are high in responsiveness and demanding. They explain the importance of the laws at home and are open to their children's point of view. They are parents who are characterized by satisfaction, clear and strong instruction to their children, consistent discipline, and standards and demands for maturity. However, the discipline and authority are moderated by warmth, logic, flexibility, and verbal negotiations. An authoritative parent attempts to direct the child's actions in a rational manner through encouragement, negotiations, and involving the child in the reason or rationale behind his policy. He can often conduct a discussion with the child about issues of discipline. This parent acknowledges his own rights as an adult as well as the child's rights (Baumrind, 1991). Researchers and professionals agree between them that children of authoritative parents have a more secure attachment style (Karavasilis et al., 2003) and better mental health and adjustment than do other children and adolescents, whose parents have other parenting styles (Steinberg, 2001; McKinney, Donnelly, & Renk, 2008). In addition, these children are less involved than other children in behavior problems and delinquent activities (McClun & Merrell, 1998; Shucksmith et al., 1995). They displayed relatively high academic performance ability (Lamborn et al., 1991; Steinberg et al., 1994; Weiss & Schwartz, 1996) and effectively used achievement

strategies (Aunola et al., 2000) and were very involved in the school (Grolnick & Ryan, 1989). In addition, they had higher social abilities than did children whose parents had other parenting styles (Allen, Boykin, & Bell, 2000). It was also found that children whose parents had an authoritative parenting style adjusted better at a later age to training than did children of authoritarian parents (Mayseless et al., 2003).

Steinberg (2001) noted advantages to the authoritative parenting style in comparison to other parenting styles. First, the parental involvement and support influence the child and enable him to have more effective socialization. Second, the combination of support and structure contribute to the development of abilities of self-regulation in the child and allow him to be responsible and to express his abilities. Third, the processes of negotiations between the parent and the child cultivate in the child social and cognitive ability and reinforce his functioning outside of the family. In addition, the authoritative parenting style was found to positively influence behaviors that promote health among adolescents, such as encouragement of healthy eating habits and physical activity and reduction of risk behaviors, such as the use of cigarettes and the use of alcohol (Baumrind, 1994; Karavasilis et al, 2003), extreme diets, and early sexual activity (Arredondo et al., 2006; Cox, 2006).

#### **4.1.3 Permissive Parenting Style**

Permissive parents are parents who do not demand but who are responsive. They are parents who tend to set fewer demands of their children than other parents and who enable them to regulate themselves their activity as they see fit. They have relatively less control and supervision of their children and tend to punish them less. This parenting style combines high parental support, low control, and few demands for maturity (Baumrind, 1991).

Researchers saw that children of permissive parents had high ranks in the measures of self-confidence and social ability and low levels in the field of anxiety and psychological distress (Wolfradt et al., 2002). In addition, higher attributions of self-promotion were found relative to children of authoritarian parents (Aunola et al., 2000). These children were absent from school, participated little in school activities, and were

involved in delinquent activities such as use of drugs and alcohol. They were characterized by more impulsivity (Barber, 1996), low achievement (Onatsu-Arvilommi & Nurmi, 1997), and high levels of aggression and independence and evinced a higher level of intimacy in different friendships in comparison with children of authoritative parents (Lamborn et al., 1991).

#### **4.1.4 Uninvolved Parenting Style**

The uninvolved parenting style characterizes parents who are low in responsiveness to and in demands of their children. These parents do not provide support for their children, reject and neglect them, and avoid taking parental responsibility over their behaviors. This style generally characterizes pathological parenting, and therefore in the present research we do not address this style (Buri, 1991). The research literature shows that children who grew up among parents with different parenting styles develop different patterns of behavior. Researchers who studied different cultures reached similar findings to researchers who conducted their research studies in the United States – in Germany (Wolfradt et al., 2002), in Sweden (Aunola, Stttin, & Nurmi, 2000), and in Israel (Mayseless, Scharf, & Sholt, 2003). The population of respondents in these research studies for the most part consisted of adolescents aged fourteen to eighteen.

#### **4.2 Parenting Styles in Arab Society**

The parenting style is closely related to the cultural background (Smith & Moore, 2012). The research findings of Dwairy (2006) show that the typology of Baumrind is not totally commensurate with the parenting styles in Arab countries, which are characterized as countries with a traditional, authoritarian regime. In the Arab countries, the authoritarian style appears accepted and even normal when it is exerted by the parents and the teachers towards the children (Dwairy, 1997). It was found that the authoritarian style does not negatively influence the mental health of the Arab youth (Dwairy, 2004; Dwairy & Menshar, 2006). Some research studies show that Arab children and youths are satisfied with this style and do not complain about violent or abusive behavior on the part of their parents (Dwairy, 1998).

Regarding the Palestinian Arabs in the Occupied Territories, it was found that they tend to reject the parenting styles accepted in the West, because of their opposition to the West in general. In addition, they cannot afford to be parents with an authoritative or permissive parenting style since they live under occupation and therefore they are characterized more and tend more to use the authoritarian parenting style (Dwairy, 2004). In contrast, the Israeli Arabs conduct a complex lifestyle: on the one hand, they identify with the traditional collective Palestinian people and culture and on the other hand, as Israeli citizens they are influenced by and adopt values from the Israeli Western culture. This complexity causes an inconsistent style in parenting and sometimes even contradicting styles.

A research study among Israeli Arab adolescents showed that the authoritative parenting style is associated with better self-image and self-esteem and with less anxiety, depression, behavior disorders, and identity confusion. Conversely, as previously noted, negative influences of the authoritative parenting style on the mental health of Israeli Arab adolescents were not found (Dwairy, 2004). In this context following question can be put forward: Do the negative consequences of authoritarian parenting style appear when this parenting style is in contradiction with cultural norms, and when there is no such contradiction, are there no consequences for the mental health? This question can inspire further studies in the field of sociology of family.

Innovative research studies on the topic indicate a trend of change in attitudes towards parent-child relations. Haj Yahia (2006) found significant differences between women from three generations (grandmother, mother, and granddaughter), so that as the generation is younger, it is less characterized by traditionalism and presented a more positive attitude towards an authoritative parenting style. Other research studies performed in recent years among groups of adolescents support the argument that the characteristics of Arab society change gradually and that Arab society in Israel is found in a period of transition and is influenced by what is happening around it. It is exposed to Western values and norms following its encounter with Jewish society, satellite television, Internet, and many other factors, thus leading to the adoption of a more authoritative parenting style than the authoritarian or permissive parenting styles

(Anabusi, 2007; Hakim, 2006; Perach, 2002; Sharabany, Eshel, & Hakim, 2006). In addition, society is influenced by the expectations accepted in Western society, according to which good parenting means clear and firm guidance for children moderated by warmth, flexibility, and verbal negotiations (Dwairy, 2004).

Research studies performed in the field of parent-child relationships in Arab society indicate a difference in the reporting of adolescent girls and the reporting of adolescent boys. The girls reported a more positive relationship with their parents and a more authoritative parenting style in comparison to the boys. In parallel, the boys reported a more authoritarian parenting style. (Anabusi, 2007; Dwairy, 2004; Dwairy & Menshar, 2006; Sharabany, Eshel, & Hakim, 2006). This finding is not commensurate with the expectations accepted in traditional society, according to which good parenting is to display especially strong firmness towards girls (Dwairy, 1997, 1998). In addition, there is lack of accord with another research study in which parents of Arab children reported strict discipline towards the social behavior of girls more than towards that of boys and stricter educational approaches towards girls (Dwairy, 1997). It is possible that the explanation of this discrepancy is that in the period of tradition that the society is experiencing parents are behaving differently with their children. It appears that the parents' way of coping with girls regarding the way of education and rules of behavior and family laws is different from the perception of traditional education, which addresses girls more strictly. Parents hold negotiations with girls and adopt with them logical ways of speaking and persuasion alongside support and encouragement so as to keep them safe (Dwairy, 2004).

In addition, it appears that while Arab society is exposed to new and different values and life style, which often contradict existing traditional values and are not yet accepted by the parents, the parents are more worried about and supervise the boys and are strict with them, since the boys are more exposed to permissiveness that characterizes Jewish adolescents and that is expressed in modern leisure time activities that may be accompanied by many dangers. This exposure derives from the considerable freedom and few restrictions imposed on them relative to girls according to traditional education. Therefore, during adolescence, when the adolescent seeks greater autonomy and

independence and concurrently is more exposed, especially the son, will suffer from more supervision and punishment (Absoy, 1999).

One explanation of the phenomenon arises in the research studies of the characteristics of modern society, which are still not accepted in a society that is fundamentally traditional. Among adolescents in a traditional society, girls are less daring than boys and more avoid the display of rebelliousness against their parents (Dwairy, 1997, 1998). Another explanation of the discrepancy between the expectations accepted in traditional society for the reports found in these research studies is that it is possible that, in this situation of lack of fit between the expectation for freedom among boys and the supervision of the parents, boys experience the parents' disciplinary efforts as more severe and stricter than do girls, who from the beginning do not have such expectations (Perach, 2002).

Hence, in the present research study we intend to examine the latter explanation, which to the best of our knowledge, has not yet been investigated. Assuming that in our research study the adolescent girls will also report a more authoritative parenting style in comparison to the boys, we will compare between the boys' expectations and the girls' expectations regarding the parenting style they want. For this purpose, we will use the 'expectations questionnaire' that we composed for the present research study, when its aim is to examine the respondents' preference for a certain parenting style. We will hypothesize that boys will prefer a more authoritative or permissive style and a less authoritarian parenting style. In contrast, we expect that girls will prefer a more authoritative parenting style than permissive or authoritarian. This will be a possible explanation for the gap in the reports of the boys in comparison to the girls regarding the parenting style they experience.

To conclude, in Western culture the parenting style was found to influence the behavior and functioning, including health practices among children and adolescents. Until now the relationship between the parenting style and sleep practices and patterns of exposure to media has not been examined. The present research study will examine these

relationships among Arab adolescents and will examine an intervention program so as to promote an authoritative parenting style.

### **4.3 Parental Intervention for the Promotion of Adolescent Health**

Research studies found that coaching and parental instruction have considerable influence on the variety of aspects in the child's development (Hallberg & Hakansson, 2003; Weisner, 2001) and that parents need instruction through techniques and tools for parenting along with awareness, alertness, and encouragement, to believe in their abilities to function as parents (Lindquist & Watkins, 2014). Intervention and parental guidance may be effective for the reduction of parental tension and for normal parental functioning (Kazdin & Whitley, 2003; Moshe-Cohen, 2015). A research study that examined types of interventions for parents found that the type of intervention of the psychosocial group is intervention with great influence on the parents and their children (Hallberg & Hakansson, 2003).

An intervention program for parents attempts to help with different goals, including the development among the parents greater self-awareness, the use of effective methods of discipline, the improvement of the communication between the parent and the child, and the transformation of the family life into a more enjoyable one, along with the transfer of useful and vital information on the child's development (Mageau, Joussemet, & Koestner, 2014).

A research study that reviewed 21 different educational intervention programs for parents found that the type of psycho-educational intervention is a modern intervention and has great influence on the parents and their children. These groups are found to be meaningful to the learning of the parents who are interested in a change in their educational approach and in the interaction with their children, so as to create a positive change in their behavior and in their everyday family lives (Lara et al., 2004; Nelson et al., 2013).

Taking into consideration that the parents are directly responsible for the health and wellbeing of their children in physical and mental terms, and since it was found that

the parents have influence on the adolescents' health behaviors, experts from the field of developmental psychology emphasized the importance of the empowerment of the ability and skills of parents in topics related to the development and health of their children during adolescence (Steinberg & Duncan, 2002). They maintain that it is necessary to provide parents with information regarding the developmental changes and correct health behaviors during adolescence, information that will help them to identify their children's health situation and to teach them how they can help their children develop in a healthy manner. They assert that the parents' involvement is a necessary condition to succeed in improving the adolescents' health and quality of life (Steinberg & Duncan, 2002).

#### **4.3.1 Intervention for the Change of Sleep Patterns among Adolescents**

Few research studies have examined the influence of the parents' intervention on their adolescent children's sleep patterns. In most of the research studies, the agents of change were the adolescents themselves. In this subchapter, we review the researches in the field.

In an intervention research performed in a school in Australia (Cain, Gradisar, & Moseley, 2011), which had the goal of evaluating and developing the motivation to improve sleep problems among adolescents, the average age was sixteen years. A total of 104 adolescents participated in the research, and they were the agents of change. The adolescents participated in four workshops, when the workshops provided information on the importance of sleep and the factors that influence the amount and quality of sleep and tips to help the students improve their sleep patterns. The research found an improvement in the students' knowledge about the importance of sleep in the experimental group but did not find changes in most of the measures of sleep in actuality. The motivation of the students in the experimental group to get up every morning at the same time rose during the program. The researchers concluded that the change in the knowledge does not lead to change in behavior and that it is necessary to help the students overcome obstacles on the way to change, including to provide knowledge to the students' parents as well.

A total of 61 girls, aged thirteen to fifteen, participated in an intervention research conducted in a private school for girls in Melbourne Australia (Bei et al., 2012). The girls

participated in six sessions that addressed sleep hygiene, sleep times, sleep practices, and tools for coping with concerns when going to sleep and building a correct approach towards sleep. The researchers measured changes in the sleep practices and measure of anxiety. The girls filled out questionnaires and wore an actigraph for seven days before the intervention and after the intervention. The respondents showed significant positive changes in subjective measures of sleep, such as latency time, sleep effectiveness, and sleep duration. In addition, the respondents showed significant positive changes in an objective measure (actigraph), such as earlier sleep time and smaller differences in the time of going to sleep over the week. Changes were not found in indices of anxiety (Bei et al., 2012).

To the best of my knowledge, research studies were not performed on the parental intervention and its influence on the adolescents' sleep patterns. The sole research work performed in Israel focused only on Jewish adolescents. The research was performed in Israel (Flint-Bretler, 2013), and 70 dyads of parents (primarily mothers) and adolescents participated in it. The mean age of the adolescents was 10.7 years, Control group and experimental group consisted of equal number of child-parent dyads which was 35. The data were collected before the intervention, after the intervention, and in a follow up of three months. The parents and the adolescents reported an improvement in the sleep patterns after the intervention program (bedtime became earlier and the percentages of sleep, which address the net sleep time from the time spent in bed, rose).

#### **4.3.2 Intervention for the Reduction of the Consumption of Electronic Media among Adolescents**

Few research studies have addressed the intervention for the reduction of the uncontrolled exposure to media. A qualitative research study performed in the United States intended to examine how parents and children implement the recommendations for the intelligent use of the media and evaluated the obstacles experienced by the parents when they go to change the home environment (Jordan, Hersey, MeDivitt, & Heitzler, 2006). The researchers concluded that there is confusion among the parents regarding the ways of implementation and that it is necessary to provide exact instructions in a gradual

manner. On the basis of the trans-theoretical model for the change in stages (Prochaska & DiClemente, 1983), the researchers proposed a number of strategies that will help the parents. (1) The parents must note the amount of media consumption of their children. (2) The parents must remove televisions and computers from the children's bedrooms. (3) The television must be turned off when people are not watching it. (4) Watching must be restricted on school days. (5) Other joint activities, aside from watching television, should be found and physical activity should be encouraged. (6) The television should be removed from the dining room and there should be no eating in front of the television and computer screens (Jordan et al., 2006).

To summarize, few research studies have been performed for the improvement of sleep patterns and the reduction of media consumption among adolescents. No research studies have been performed on the influence of the media on the sleep patterns of adolescents in the Arab sector in Israel. Therefore, the present research study will examine the influence of the parental intervention and the instruction provided to the parents of Arab adolescents on their patterns of sleep, the reduction of the consumption of electronic media, and the improvement in the quality of life.

#### **4.4 The Conceptual Model for Parental Intervention**

According to the System Theory, the family is perceived as a complex system whose components are interrelated. In other words, the behavior of each one of the family members depends on the behavior of the others in the family. The theory emphasizes that the influences between the family members acts in two directions and not only in one direction. The parents' characteristics help in the determination of their children's behavior, and the children's characteristics influence their parents' behavior (Minuchin, 1985).

According to the Social Learning Theory of Bandura (1977), most of our behaviors are learned through the observation of others and through the imitation of them, and not only through personal experience. The social learning theory is not a passive and technical process, but an active process, in which cognitive processes of drawing conclusions are involved. The activity of this process is expressed in the process

of imitation. In these processes we learn rules, which we implement not only in a specific situation but also in additional situations. According to the theory, we tend to repeat the behaviors for which we were rewarded and which enabled us to avoid unpleasant outcomes. In addition, we tend to stop behaviors that do not lead to one of these results (Bandura, 1977).

The conceptual model for parental intervention, which relies on the theory of the systems and the theory of social learning, was developed in the context of the promotion of health practices from the field of eating among children and adolescents. The model addresses the parent as the agent of change and focuses on the change of cognitions and parental behaviors and on the change of the home environment, from the assumption that these two elements will cause a change in the children's behavior through the personal example (Golan et al., 2006).

### **Parameters for Parental Intervention according to the Conceptual Model**

#### Environmental Change

##### *Supportive Health Environment*

Remove the media devices from the bedrooms, including the television and computer.

Turn off the cellular phones before going to sleep and take them out of the bedroom.

Avoid drinking caffeinated drinks before bed.

Avoid exciting activities before bed.

Sleep only in the bedroom.

Sleep in a quiet and dark bedroom.

Open the blinds in the morning to let the daylight in.

#### **Parental Cognitions and Behaviors**

##### Increase of Knowledge, Skills of Implementation regarding the Normal Sleep Practices

**Knowledge:** Physiological, psychological, and social changes during adolescence, including changes in the sleep patterns, sleep practices, adequate amount of sleep, timing

and importance of ‘dream sleep’, environmental factors that influence the sleep habits including the relationship between sleep and unwise use of media

**Skills:** Maintain healthy sleep hygiene, regular sleep hours in the middle and end of the week, skip afternoon sleep, avoid exciting activities before sleep, and limit exposure to the media.

**Eleven Rules Exercise:** Sleep only in the bedroom, sleep in a quiet and dark room, avoid drinking caffeinated drinks in the evening (including tea, cola, coffee, and cocoa), go to sleep between 22:00-23:00 at night on study days, go to sleep at a regular hour, do not sleep in the afternoon, do not watch television, and do not work on the computer about an hour or two before going to sleep, do not engage in sport activity up to an hour or two before going to sleep, turn off or silence the cellular phone before sleep, open the blinds in the morning to let the daylight in, on the weekend and vacations go to sleep and get up at the same time as the schooldays and not ‘make up sleep hours’. It is preferable not to allow extreme gaps in the sleep patterns on the weekend and holidays.

### **Increase of the Parental Skills**

The adoption of the authoritative parenting style that includes the setting of requirements and boundaries, with the avoidance of the entry into conflicts, the explanation of the rationale behind every requirement, the reminder of the home rules as many times as possible, through the enforcement of the laws, and the imposing of sanctions if necessary.

### **4.5 Project Importance**

The proposed research study will contribute to the theoretical knowledge in the field:

- It will evaluate the degree of use of electronic media among Arab adolescents in Israel and the degree of the influence of the excessive use of media on their sleep patterns and behaviors.

- It will evaluate and compare sleep patterns and electronic media use patterns in the cultural context, namely, in secular Jewish society and in Arab society, which is characterized as a conservative society that is undergoing processes of modernization.

The proposed research study will contribute to the practical knowledge in the field: It will build and hold an intervention program for the parent of the Arab adolescents that engages in the raising of the awareness of the developmental changes that characterize adolescence, so as to promote healthy behaviors that include normal sleep patterns and controlled exposure to electronic media among normative adolescents.

**Part 2: Exposure to Electronic Media among Arab  
Adolescents in Israel, Their Sleep Patterns and the Changes  
in This Area as a Result of the Parent Intervention Program:  
Analysis Based on Empirical Research**

**Chapter 5: Methodology and Research Plan**

**5.1 Introduction**

The main research objective is to compare patterns of sleep and electronic media use in a cultural context in secular Jewish society and in Arab society, which is characterized as a conservative society that is undergoing processes of modernization. In addition, since in the traditional Arab population there are prominent differences in education of boys versus girls, in contrast to modern Jewish society, in which the differences are less prominent, another objective is to examine whether the gender is a variable that moderates the relationship between culture and patterns of sleep and media use.

In order to explore these aims, a "two stage" study has been applied. The first stage – the survey - is considered as a preliminary one and was conducted in a deductive logic manner on Arab and Jewish adolescents, to examine the cultural context and to compare between the two populations of adolescents in Israel, Jewish and Arab. The aim at this stage was defined as gathering information and insights upon the investigated phenomena. Henceforth, the quantitative research method for the collection of the information has been used based mainly on questionnaires that included closed-ended questions to both populations.

Then, the second stage research was performed, aiming at exploring changes in behavior and patterns of sleep and electronic media use as influenced by experimental intervention. At this phase, premises were given, and valid conclusions were sought in relation to the study objectives through workshops that were held for the parents of Arab adolescents (experimental group) in comparison with parents who did not receive any

intervention (control group). By examining the influence of the intervention and evaluate the advantages and effectiveness of the program based on the conceptual model in which the parents are agents of change, a very important gap in knowledge possibly will be proposed.

## **5.2 An Overview of the Methodology**

In order to capture information about changes in behavior and patterns of sleep and electronic media use, the research was designed as a mixed methods study, combining the survey methods as quantitative approach and the experimental methods within which qualitative parts were integrated. The findings of the quantitative research, which was performed first, constituted the starting point for the experimental stage research. While the quantitative methods were in prime use as the main and foremost implementation for inquiry, at later phases of analysis a qualitative method was applied as less dominant, combining open-ended questions, so as to collect more data and to understand in a more in-depth manner the phenomenon and the changes in Arab society.

In dominant/less dominant planning, the researcher adopts an approach anchored in the framework of one dominant paradigm, and a small component from the overall research is taken from a competing paradigm. This approach not only does add complexity to the planning of the research but also enables the researcher to utilize the advantages that every research methodology offers and perhaps reflects more faithfully the accepted research (Creswell, 1994).

There are two primary reasons for the interaction of research methods. First, it is possible that the use of one method does not allow the researcher to engage in all the aspects of the research question. Second, many researchers (like, Marsh & Stoker, 2005; Teddlie & Tashakkori, 2009) maintain that the integration of methods increases the research validity, since one method serves as a test of the other method. This assumption is discussed. For example Sale, Lohfeld and Brasil (2002) claim that different research methods rooted in different paradigms enable us to examine different phenomena (or different aspects of an phenomenon). For example quantitative methods do not give access to live experience and socially constructed meanings, whereas qualitative methods

do not guarantee statistical representativeness. “Because the two paradigms do not study the same phenomena, quantitative and qualitative methods cannot be combined for cross-validation or triangulation purposes. However, they can be combined for complementary purposes” (Sale, Lohfeld, Brasil 2002: 43).

The goal in the integration of the methods is to address the same aspects of the research question that one method or the other method cannot cover. The integration of the methods may add to the knowledge and understanding of the relationships between social phenomena (Marsh & Stoker, 2005; Teddlie & Tashakkori, 2009). Each one of the methods has been considered as to the relative contribution to the extension of our understanding of the researched subject (Teddlie & Tashakkori, 2009).

The recognition of the need to integrate the methods derives from the understanding that this is the best way to learn about the phenomena and to observe them from two different angles. In the survey methods, the goal is to measure the phenomenon for the purpose of the verification and validation of the hypotheses, while the aspiration in the experimental methods is to describe phenomena and to understand them through exploration and learning of the processes in the context in which they occur. In addition, the survey collects data primarily through structured and closed instruments of measurement, while the experimental method does this also through in-depth analysis of behavioral inference and influences. The main objective of the use of both methods in combination in this research was the expansion that is obtained, since the integration of the two methods enabled focus on the research questions from different perspectives. The connection of the information obtained from experimental research with the information obtained from survey research facilitates the delineation of a rich picture relevant to the researched populations (Dowling & Brown, 2009).

The first stage of study was conducted on Arab and Jewish adolescents whereas applying quantitative methods for the collection of the data, so as to collect more data and to compare between two groups, the Arab adolescents and the Jewish adolescents. The researcher in a research of this type believes in the laws of human events and seeks to apply empirical processes to social phenomena. The Arab and Jewish adolescents were

asked to fill out questionnaires that include closed-ended questions by targeting on the attempt to confirm or refute special relationships between variables (Sabar Ben Yehoshua, 1995). The research questions were derived from the hypotheses, which are built beforehand, while the study can predict future behavior. Such a study posits hypotheses, measures the relationship between variables, focuses on products, and relies on the statistical analysis of data. Researchers who engage in this form of inquiry have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings (Creswell, 2014).

For the most part, the systems of relationships between the researcher and the research respondents were limited in time, demarcated for predefined objectives, and did not develop into intimate closeness. The quantitative researcher attempts to be as objective as he can and argues to achieve objectivity through statistical or mathematical means (Shkedi, 2007).

After collecting the data in the first stage of research, workshops were constructed aiming at promoting the adolescents' parents' awareness to their adolescent children's development and to the importance of sleep and the degree of influence of using electronic media on their sleep and their behavior. To examine the degree of influence of the workshops, whether they indeed caused an increase in the awareness among the parents who participated in the workshops versus the parents who did not receive any guidance, a questionnaire was distributed to the parents before the workshop and three months from the holding of the workshop. At this point of time, open-ended questions were integrated within the questionnaires, enabled more in-depth qualitative inquiry.

### **5.3 Research Design**

In choosing the methodology and the paradigms, as well as the underlying assumptions, we determined choices concerning the design and methods utilized. The research is performed in two separate stages – the first stage designed as a **survey** followed by a second stage - an **experiment**. Hence, the findings of the quantitative research, which is performed first, constitute the starting point for the experimental

research. Although this study applies the quantitative methods implemented as a dominant one, there is a small qualitative part that was used as much less dominant (Creswell, 2014). In the quantitative methods, the goal is to measure the phenomenon for the purpose of the verification and validation of the hypotheses, while collecting data primarily through structured and closed instruments of measurement. The qualitative method, on the other hand, that was combined at the later phases of inquiry does this through in-depth analysis of texts. The recognition of the need to integrate qualitative methods derives from the understanding that this is another fruitful way to learn about the phenomena and to observe it from different angles.

The main characteristics of the design are as follows:

1. Based upon Lincoln and Guba (1985), the research design began as a narrow outline of contingency. Later phases of inquiry will implement a wider outline in order to enrich our knowledge and understanding.
2. A systematic and structured approach, according to Miles and Huberman, (1984) was taken in data analysis at all phases of inquiry.
3. As this study combines mix methods, the researcher should combine deductive and inductive methods, while 'mediating structures' (Ragin, 1994). On one hand, the researcher uses data deduced from general ideas that are focused on the topic of the research, while, on the other hand, he uses data inductively constructed from the evidence. The researcher mediates these two structures in a process called 'abduction'.
4. The focus and the broad research questions were initially set.
5. As the settings of the social study become more complex, we are wise to consider employing a variety of research methodologies and data collection techniques that will properly capture the types of information and data needed to address these educational settings. This strategy allows cross checking between different categories of data. In other words, this is a method of **triangulation**, which permits similar issues to be explored through different methodologies aiming at providing richer appreciation of the evidence (Denzin, 1997). As the investigation proceeds through five phases, one can witness how similar patterns of data appear in the evidence.

## **5.4 The Research Paradigm**

The present research study seeks to understand the influence of modernization and the social changes that occurred in Arab society in Israel following its exposure to the culture of the West and Jewish society through the exposure to the electronic media and the use of the media, its influence of the sleeping and behavior patterns of Arab adolescents and how the parents can cope with these changes. In order to capture this complex phenomenon and profoundly exploring its attributes and essence, one should hold a holistic and general, broad perspective on it, namely a paradigm.

A paradigm is an outlook that explains the phenomenon in a comprehensive manner, with a certain degree of simplification and observation on the specific details. It provides the broader framework, in which the research occurs (Shkedi, 2007).

The present research paradigm is the **post-positivist paradigm** that is characterized by its holistic approach to phenomena. The post-positivists, like the positivists, believe that there is a reality independent of our thinking that can be studied through the scientific method. However, it recognizes that observations may involve error and that theories can be modified (Trochim, 2006). Post-positivists agree that reality does exist but maintain that it can be known only imperfectly because of the researcher's human limitations (known as critical realism). The researcher can discover reality within a certain realm of probability (Mertens, 2009; Ponterotto, 2005). In other words, reality cannot be known with certainty. Observations are theory laden and influenced by the observer's biases and worldview.

As post-positivistic, it holds a deterministic philosophy in which causes (probably) determine effects or outcomes. Therefore, the problems studied by post-positivists reflect the need to identify and evaluate the causes that influence outcomes, such as found in the current experimental study. It is also reductionist in that the intent is to reduce the ideas into a small discrete set to test, such as the variables that comprise hypotheses and research questions. The knowledge that develops through a post-positivist lens is based on careful observation and measurement of the objective reality that exists "out there" in the world. Hence, developing numeric measures of observations and

studying the behavior of individuals becomes paramount for a post-positivist. Finally, there are laws or theories that govern the world, and these need to be tested or verified and refined so that we can understand the world. Therefore, in the scientific method – the accepted approach to research by post-positivists – a researcher begins with a theory, collects data that either supports or refutes the theory, and then makes necessary revisions and conducts additional tests (Creswell, 2014).

The post-positivist paradigm represents the beliefs and values in a discipline and that guides how problems are solved (Schwandt, 2001). Accordingly, there are some basic beliefs and values that the current research embraces:

1. Knowledge is conjectural (and anti-foundational). Absolute truth can never be found. Hence evidence established in research is always imperfect and fallible and therefore researchers say they do not prove a hypothesis and rather note a failure to refute the hypothesis.
2. Research is the process of positing arguments and then refining or abandoning some of them for other, stronger arguments. Most quantitative research, for instance, begins with the testing of a theory.
3. Data, evidence, and rational considerations shape knowledge. In practice, the researcher gathers information about instruments based on measures filled by the participants or observations recorded by the researcher.
4. Research strives to develop relevant and true statements that can explain the situation of concern or can describe the causal relationships of interest. In quantitative research, researchers promote the relationship among variables, putting this in terms of questions or hypotheses.
5. Objectivity is an essential aspect of competent inquiry. Hence, researchers must examine methods and conclusions for bias and partiality. For instance, standards of validity and reliability are important in quantitative research (Creswell, 2014).

A positivistic paradigm typically assumes a **quantitative methodology**. As such, it perceives a theory as a scientific prediction or explanation for what the researcher expects

to find<sup>2</sup>. For example, Kerlinger (1979) proposed a definition of a theory that still seems valid today: “a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena” (p. 64). In this definition, a theory in quantitative research is an interrelated set of variables formed into propositions, or hypotheses, which specify the relationship among variables (typically in terms of magnitude or direction). A theory might appear in a research study as an argument, a discussion, a figure, or a rationale, and it helps to explain (or predict) phenomena that happen in the world. Labovitz and Hagedorn (1971) added to this definition the idea of a theoretical rationale, which they defined as “specifying how and why the variables and relational statements are interrelated” (p. 17). Why would an independent variable, X, influence or affect a dependent variable, Y? The theory would provide the explanation for this expectation or prediction.

In quantitative research, theory is used deductively and placed towards the start of the study. The aim is to test or verify a theory and not to develop one, so the researcher posits a theory, gathers data to test it, and reflects on its confirmation or disconfirmation according to the results. The theory becomes a framework for the entire research, an organizing model for the research questions or hypotheses and for the data collection procedure. The researcher tests or verifies a theory by examining hypotheses or questions derived from it. These hypotheses or questions contain variables (or constructs) that the researcher must define. The researcher identifies an instrument to use in the measurement or observation of attitudes or behaviors of research participants. Then the researcher collects information on these instruments to confirm or disconfirm the theory (Creswell, 2014).

For a general law to have a scientific explanation, it needs to meet two requirements (Hempel, 1966, in Tanzer, 2010): the requirement of relevance and the requirement of testability.

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<sup>2</sup> Different ways of conceptualizing theories and how they might constrain thought can be found in Thomas (1997).

1. Requirement of relevance. From the information that explains, it must be possible to predict the explained event. If we can explain something through the linkage between phenomena observed in the past, without predicting similar phenomena in the future, then this is not a scientific explanation. From a statistical perspective, there must be a statistical correlation between the variables (a correlation: it is possible to predict the value of one variable more accurately when the value of the second variable is known, than if this value is not known). Not every scientific explanation is a causal explanation, it is enough that there is a correlation that enables prediction.
2. Requirement of testability. There must be the possibility to have the claim undergo the test of experience, otherwise this is not a scientific explanation (connects to empirical measurement ability).

The law or the scientific explanation is phrased as a relationship between variables. The variables are categories, in which different values can be noted. In every scientific explanation there is an explaining factor and an explained factor. The variable that addresses the explanatory factor is the independent variable, while the variable that addresses the explained factor is the dependent variable. According to the values of the independent variable, an attempt is made to predict the values of the dependent variable (Tanzer, 2010). In the present research study, we examined the relationship between the use of the media (independent variable) and sleep patterns (dependent variable) of Arab and Jewish adolescents.

To conclude, the question of the scientific-quantitative research is a question that describes the relationship between variables – independent variable and dependent variable. The question attempts to clarify whether the independent variable influences the dependent variable and to what extent. If such a relationship is indeed found, then the question becomes a general rule – that can be generalized to the relevant population and that can be predicted. The general rule formulates the relationship between the variables. For every variable in the research question there are at least two different possible values and it needs to be measurable, so that it is possible to define it in the operational

definition that describes a possible method of measurement. The variable can receive quantitative values.

## **5.5 Research Methods**

The quantitative research is an approach for testing objective **theories** by examining the relationship among variables. These variables, in turn, can be measured, usually with instruments, so that numbered data can be analyzed using statistical procedures. Embracing this school of thought, quantitative researchers have assumptions about the deductive testing of theories, the guarding against bias, the controlling for other explanations, and the generalization and replication of the findings (Shkedi, 2007).

As soon as the research strategy was designed and primary questions to be explored were specified, it was possible to finalize its appropriate tactics of data collection. Depending on the purpose of inquiry, what information would be most useful and what information would have the most credibility, a post-positivistic paradigm was chosen as a dominant preference. Hence, a design of quantitative methods was naturally selected (as dominant) against which the qualitative methods were less dominant choice. Yet, the procedures for both quantitative and qualitative data collection and analysis need to be conducted rigorously (e.g., adequate sampling, sources of information, data analysis steps). Only then, all forms of data can be integrated in the design analysis through merging the data, connecting the data, or embedding the data. At a procedural level, it is a useful strategy to have a more complete understanding of research questions first, in order to develop better measurement instruments and then administrating the instruments to a sample. Specifically, having first a deep understanding about the need for and the impact of an intervention program in the design, impacts all procedures of collecting both quantitative and qualitative data over time (Creswell, 2014).

Two main methods led the investigation in the current research: the **survey** and the **experimental**.

### 5.5.1 The Survey Methods - Introduction

A survey is a research strategy in which quantitative information is systematically collected from a relatively large sample taken from a population. The first step in the survey process is to determine the research objectives. The researchers must agree on a well-defined set of research objectives. These are then translated into a set of key research questions. For each research question one or more survey questions are then formulated, depending on the goal of the study.

When thinking about the process that leads from theoretical constructs to survey questions, it is useful to distinguish between **conceptualization** and **operationalization**. Before questions can be formulated, researchers must decide which concepts they wish to measure. They must define what they intend to measure by naming the concept, describing its properties and its scope, and defining important subdomains of its meaning. The subsequent process of operationalization involves choosing empirical indicators for each concept or each subdomain.

Yet, there is always a gap between theory and measurement. Hence, in order to bridge this gap, the current research advocated a strategy that is called a theory driven or top down strategy - a strategy that corresponds with the underpinning post-positivist paradigm. Explicitly, it starts with constructs and works toward observable variables. It is distinctly different from a data driven or bottom up strategy, which starts with observations and works towards theoretical constructs (Hox & De Jong-Gierveld, 1990).

### 5.5.2 The Survey Methods - Variables

Before quantitative theories are addressed, the variables are used in forming theories should be understood. In a quantitative research, variables are related to answer a research question or to make predictions about what results the researcher expects. These predictions are called *hypotheses*.

A **variable** addresses a characteristic or attribute of an individual that can be measured or observed and that varies among the researched people. This variance means that scores in each situation can be found in at least two mutually exclusive categories

(Thompson, 2006). Psychologists prefer the term *construct* (and not *variable*), which connote more of an abstract idea than a specifically defined term. Social scientists, on the other hand, generally use the term *variable*, and thus this paper uses this term. For instance, regarding the variables of sleep patterns and media influence, in the research it was argued that as long as the exposure to the electronic media rises, the sleep duration is shortened and the time of sleep becomes later.

Two characteristics of variables are **temporal order** and **measurement** (or observation). Temporal order is that one variable precedes another in time. The time ordering leads to the statement that one variable affects or causes another variable, although a more accurate statement is that one variable probably causes another. In research in the natural setting and with people, researchers cannot absolutely prove cause and effect (Rosenthal & Rosnow, 1991) and thus, social scientists now state that there is “probable causation”. Temporal order means that quantitative researchers think about variables in an order from “left to right” (Punch, 2005) and order the variables in purpose statements, research questions, and visual models into left-to-right, cause-and effect type presentations. Therefore, we have the following:

- *Independent variables* are variables that (probably) cause, influence, or affect outcomes. They are also called *treatment*, *manipulated*, *antecedent*, or *predictor* variables. The independent variables in the present research study are exposure to electronic media, gender (boys/girls), and sector (Arabs/Jews).
- *Dependent variables* are variables that depend on the independent variables. They are the outcomes or results of the influence of the independent variables. Dependent variables are also called *criterion*, *outcome*, *effect*, and *response* variables. The dependent variables in the present research study are sleep patterns (sleep duration, bedtime, wake-up time, and sleep latency).
- *Intervening or mediating variables* are between the independent and dependent variables and mediate the effects of the independent variable on the dependent variable. For instance, if students do well on a research methods test (dependent variable), results may be due to (1) their study preparation (independent variable) and/or (2) their organization of study ideas into a framework (intervening

variable) that influenced their performance on the test. The mediating variable, the organization of study, is between the independent and dependent variables in the probable causal link. For instance, relationships will be found between the sleep patterns and patterns of electronic media exposure: as the exposure to electronic media increases, the duration of sleep decreases and the bedtime becomes later. Another example is that differences will be found in the sleep patterns and exposure to electronic media among Arab and Jewish adolescents. It is expected that (1) the sleep patterns among Arab adolescents are more normal (longer sleep duration and earlier bedtime) in comparison to the sleep patterns among Jewish adolescents and (2) the electronic media exposure is higher among Jewish adolescents.

- *Moderating variables* are independent variables that affect the direction and/or the strength of the relationship between the independent and dependent variables (Thompson, 2006). These moderating variables are new variables built by a researcher by taking one variable and multiplying it by another to determine the combined impact of both on the dependent variables. These variables are typically found in experiments. In the experimental research performed, the independent variable is the intervention program for the Arab parents according to the conceptual model and the dependent variables are the increase of the awareness and knowledge about the developmental changes during adolescence, reinforcement of the authoritative parenting style, promotion of healthy behaviors, including the improvement of sleep patterns, the limitation of the media exposure, and the improvement in the quality of life among adolescents.
- Two other types of variables are control variables and confounding variables. *Control variables* have an active role in quantitative studies. These are a type of independent variable measured by researchers because of their potential influence on the dependent variable. Researchers use analysis of covariance [ANCOVA] to control for these variables. Control variables may be demographic or personal variables (for example, age or gender) that need to be “controlled” so that the true influence of the independent variable on the dependent variable can be determined. A *confounding (or spurious) variable* is not actually measured or

observed in a study. It exists, but its influence cannot be directly detected. Researchers discuss the influence of confounding variables after the end of the study has, because these variables may have acted to explain the relationship between the independent variable and dependent variable, but they were not or could not be easily assessed (for example, a confounding variable such as discriminatory attitudes).

### **5.5.3 The Comparative Survey Methods**

Discussions of comparative survey research often remark that all social science research is comparative, and researchers have often debated whether there was anything particular or different about cross-national research (Lynn, Lyberg & Japac, 2006; Øyen, 1990; Teune, 1990; Lipset, 1986; Grimshaw, 1973). Acknowledging that social science research is based on comparison does not resolve the question whether different methods are needed for different forms of this research. As Johnson notes: “A major source of the criticism directed at cross-cultural research, in fact, has been the uncritical adaptation of the highly successful techniques developed for monocultural surveys.” (1998, p. 1). Multinational survey research has much in common with other survey research and researchers entering the field should therefore have a solid understanding of general survey research methods and the principles of research in their respective discipline.

Nonetheless, it is suggested here, that the methods and the perspectives required for comparative research differ in some respects from those of non-comparative research. In mono-cultural research, for example, questions mirroring the culture, containing culturally tailored language and content and possibly tapping culture-specific concepts, are likely to be the successful items. In comparative research, such questions would count as culturally biased and would require to be modified or accommodated or possibly excluded in the analysis.

In non-comparative research, valid and reliable data are critical. In comparative research, data must be valid and reliable for the given national context but must also be comparable across contexts. At the same time, one can design and analyze comparative research without deciding whether the differences are truly qualitative or not. Grimshaw,

for example, bridges the divide as follows: “My argument is that while the problems involved are no different in kind from those involved in domestic research, they are of such great magnitude as to constitute an almost qualitative difference for comparative, as compared to non-comparative research.” (Grimshaw, 1973, p. 4).

#### **5.5.4 The Experimental Methods**

Experimental research is a program in which the researcher meets three criteria that constitute essential conditions for the proof of causality:

- Proof of shared variance of the variables (high correlation – with variance of the values of one variable the values of the other variable change)
- The independent variable precedes the dependent variable – establishment of the order of time between the variables
- Refutation of alternative explanations to the findings obtained (Ellis, 2001).

To ensure the existence of the three conditions, the researcher must adopt a research design that enables the utmost control of the research variables: the researcher determines the variables, manipulates the independent variable, and then measures the dependent variable and thus controls the order of time, decides upon the conditions under which the independent variable will be manipulated as well as the division into groups and decides how many groups there will be (the research design). The researcher attempts to ensure that only the influence of the independent variable is what is implemented in the experiment and no other variables that may intervene in the experiment (refute alternative explanations). The most important trait of the experiment (as a research method) is “supervision of the variables”. Only in this way can the researcher examine accurately the influence of different factors on the behavior and ensure the order of times and refutation of alternative explanations (Beyt-Marom, 2001).

Operationally, in applying experimental methods, the researcher uses an independent variable and thus changes the conditions of the experiment and observes the results of the change. The researcher creates differences between the respondents in the values of the explanatory variable and looks at the differences created between them in the values of the explained variable. The explanatory variable in the experiment is called

the independent variable, and in parallel the explained variable is called the dependent variable. In the experimental research the researcher is interested in the relationship between the two variables, but the way in which they attempt to discover the relationship is different from the way adopted in the correlative research design (such as in the survey methods). This relationship will be discovered only if there is a difference between the two experiment groups in the dependent variable.

From this research design it is possible to conclude a causal relationship, and the researcher controls the order of the appearance of the variables. The researcher manipulates the independent variable, and this is supposed to influence the dependent variable. The research design enables also the examination of whether additional factors are involved in the relationship, when this examination is undertaken through control of the experiment. The research design is identified with laboratory researches, when this type of research is sterile and narrow. The experimental research designs in the field of psychology are primarily performed on topics of perception, learning, and recall (Ellis, 2001; Tanzer, 2010).

### **The Experimental Methods – Control Group**

The control group is one of the prominent advantages of the experimental research design. The aim of the control group is to ascertain that the experimental effect was caused clearly and unequivocally only by the independent variable and not by other variables. The researcher must make certain that the groups will be equal in as many variables as possible before the implementation of the independent variable. The equality needs to be preserved throughout the entire experiment. This equality will be assured with the probabilistic allocation into two groups (Ellis, 2001).

Operationally, the researcher divides the respondents into two groups and is interested in the differences created between them, as a result of the manipulation. Namely, he examines the impact of the independent variable on another variable (dependent). The experimental group receives “treatment” – upon which the independent variable is manipulated – and the control group does not receive the “treatment”.

The differences in every group are the interpersonal differences that exist naturally; in this case they only make it difficult for the researcher since as they are greater, it is harder to discover the differences between the groups (which are those that interest the researcher). Therefore, he is interested in reducing to a minimum the differences in the group. In the correlative design the researchers are interested in the interpersonal differences, they are essential to the holding of the research. The similarity between the experimental and the correlative designs – both focus on the relationship between two or more variables (Tanzer, 2010). The random division of the respondents into two groups (experimental and control) enables the researcher to assume that the two groups are identical in all aside for the independent variable that the researcher himself implemented only in the experimental group. In the control group, like in the experimental group, it is not likely that there is a variable that differentiates between the experimental group and the control group, aside from the independent variable (Ellis, 2001).

The experiment is intended for the drawing of a causal relationship between variables with preservation of the high level of the generalization of the findings. The conclusion of causality dictates a high level of control over the research situations – thus ensuring internal validity. However, the ability of generalization – external validity – depends on the representativeness of the sample of respondents and on the representativeness of the research conditions to the situations of life, the reality. The prominent disadvantage of the experiment is its degree of representativeness of reality, since reality is different from the laboratory. The images of the experiment are research designs that come to surmount the problem of the representativeness at the cost of supervision over the variables and research conditions. Despite the clear advantages of the experimental research design, it is not always possible to perform an experiment to answer a question in the social sciences. Not every variable can be manipulated, for example level of income, level of intelligence, sex, and growth conditions in childhood.

It is also important to emphasize that a controlled experiment (which enables more accurate conclusions) conducted in a laboratory in which the researcher has complete control over the variables sometimes is not corresponding to what occurs in

reality. The correlative research is closer to the conditions of reality. In the social sciences there is sometimes preference to examine hypotheses in the natural environment in which the behavior is conducted – at the expense of the control of the variables.

To sum up, the advantages of the experimental group lie in the control of the experiment conditions. The control of the research variables gives the researcher four advantages: exclusivity, reliable repetition and methodical variations, sensitivity and power, and direction of the causality.

### **5.5.5 The Research Phases of Inquiry**

The quantitative research gives emphasis to the process of collating data that is gathered by phases of examination. In the current study the collation of data was carried out through five phases along 20 months of fieldwork, incorporating deductive methodologies. The first period was from October 2015- June 2016, in order to primarily establish a 'conceptual framework' to guide this research. The second period, October 2016- April 2017, was used to verify the 'conceptual framework' by gathering data and information in different contexts and to deeply understand the cultural influence of modernization and the social changes that occurred in Arab society in Israel.

Since this research is mainly involved in theory examination, then structured methods of inquiry will be used at first in order to check out the extent to which the picture that emerged is recognizable. Only then, it would be fair to use low-structured or semi-structured methods in the later phase (4). Stronger generalization claims can be made then. The five phases, which were focused upon the same research phenomenon, provide robustness and coherence to the study; the evidence of each phase has a bearing on the investigation in the subsequent phase.

The study conducted data collection by employing one prevailing method associated with quantitative inquiry: a) **questionnaires**, while employing one prevailing method associated with qualitative inquiry: b) **content analysis**.

The methods and tools used here all point in the same direction. Employing different methods can bring into the study a variation of data and information, offering windows into the research topics.

These various research methods can be used to extend one another while triangulated and, subsequently, can be analyzed by their joint interaction. Hence, the strength of the design, along with the credibility of the study is increased through the use of triangulation. The information gathered is corroborated in at least two ways: **data triangulation** using different data sources, and **methodological triangulation** using multiple methods to gather data (Guba and Lincoln, 1994; Miles and Huberman, 1984; Patton, 1990). Thus, the methods chosen were designed to contribute toward a depth and width of the insights related to the research questions.

Hereinafter are the research phases:

<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Phase 5</b>
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The Research Period: October 2015-March 2016.

<p><b>Phase 1: Literature search</b></p> <p><b>The aim: Using literature to develop theoretical sensitivity to the area.</b></p> <p><b>Establishing preliminary variables.</b></p>
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The first phase was conducted as a continuous mode throughout the research period. The starting point, when the first draft of the proposal was written, is well remembered, and since then, searching for literature and reading have grown to be second nature. However, it is clear that in conducting a deductive mode, the literature and library materials develop into a very important and inseparable part of a long process.

Quantitative research is deductive in nature and the references from the literature will be used to frame it and to show the importance of the findings.

The research has chosen to differentiate this phase, since a theoretical sensitivity is especially necessary during fieldwork, be it survey activity or experimental. However, searching the literature or seeking other written texts can lead to insights and help develop more focused research questions by setting a structure within data. Hence, literature is not used here to direct the study. Rather, a theoretical sensitivity, followed by a structured approach to the research field, is required before proceeding to other phases of inquiry.

<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Phase 5</b>
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The Research Period: October 2015-March 2016.

<p><b>Phase 2: survey, using different questionnaires</b></p> <p><b>The aim: To study whether differences would be found in the patterns of sleep and media exposure between cultures (Jewish/Arab).</b></p> <p><b>To study whether the differences in the patterns of sleep and media-use are also related to gender.</b></p>
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At this phase of inquiry, the research study is conducted by a comparative cross-sectional method that includes closed questionnaires. The **sample** included 229 adolescents, male and female, Arab and Jewish, who learn in middle schools and high schools and who were recruited using cluster sampling.

For the research study, four schools in the northern region were chosen, two schools in the Arab sector and two schools in the Jewish sector. In each school, a class was chosen from each grade from the eighth grades to the eleventh grades. I entered the homeroom social lesson with the homeroom teacher and distributed the questionnaires. As the questionnaires were filled out I was present in the classroom and I explained about the objective of the questionnaire and I answered if there were any unclear questions.

The **research instruments** used in the research study included:

### **1. Sleep Survey (Appendix Number 1)**

The School Sleep Habits Survey (SSHS) is intended for adolescent students (aged nine to eighteen) (Wolfson & Carskadon, 1998). The questionnaire includes patterns and behaviors associated with sleep. The questionnaire was translated into Hebrew (Shochat et al., 2010) and translated into Arabic for research purposes (Shochat, 2013). The questionnaire examines sleep patterns during the week and on the weekends, including the hour at which the respondent goes to bed, the time it takes the respondent to fall asleep (in minutes), the time the respondent wakes up, on the basis of the adolescents' self-reporting, and the total sleep time (TST, in hours). In our research study the time of going to bed on weekdays was not examined, since the question by accident was omitted from the questionnaire. In addition to the sleep patterns, the questionnaire examines the adolescent's type – evening/morning, behaviors related to sleep, mood, and sleepiness during the day.

The questionnaire addresses the scope of the behavior problems related to sleep, including ten items in different situations (for instance, being late to class because of excessive sleep). All the questions were ranked on a scale of five points (points range from 10-50, Cronbach's alpha is  $\alpha=0.75$ ), when higher scores indicate a higher frequency of problematic behavior. Item 10 on driving was removed from the research, since in Israel at this age they do not drive. The Cronbach's alpha is  $\alpha=0.70$  in the Jewish sample and  $\alpha=0.75$  in the Arab sample.

The measure of depressive mood includes six items, which address the frequency of emotions of hopelessness, sadness, etc. The items were ranked on a scale of three levels, and the total scores range from 7 to 18, when the high scores indicate a more depressed mood (reliability in the Jewish sample is  $\alpha=0.79$  and in the Arab sample is  $\alpha=0.84$ ).

The questions related to evening/morning type include nine items that address everyday preferences (such as the preferred time to get up in the morning, the preferred time to go to school, the preferred time to begin physical activity, etc.) Six items are scored from 1 to 4 and three items are scores from 1 to 5. Three items are reversed, and they are all summed by scores that range from 9 to 39. High scores indicate an increase preference for an evening type.

## **2. Questionnaire for Exposure to Electronic Media Means (Appendix Number 2)**

The questionnaire was authored by the researcher and the adviser. The questionnaire is divided into six parts. The first part examines the presence (yes, no) of a television and/or computer in the home and/or bedroom. The second part examines the electronic exposure media practices, which include (1) watching television, (2) use of computer, (3) use of mobile phone, and (4) use of a tablet during the week at four points of time: (1) before the studies, (2) during the studies, (3) after the studies before sleep, and (4) at night after lights out. Thus we obtained 16 scores for the duration of exposure (in hours) according to dates of use in every device of the media devices. The third part examines the exposure time to these devices at the end of the week at three points in time: (1) during the day, (2) in the evening after eight o'clock until they go to sleep, and (3) at night after lights out. Thus, the questionnaire creates twelve scores for exposure to media in the weekend (in hours). The total of the scores in the middle of the week and on the weekend is 28.

The reliability of the questionnaire was less than  $\alpha=0.30$ . Therefore, some of the questions were removed (use of television before the studies, use of the tablet before the studies, use of the computer, television, mobile phone, and tablet during the studies, use of the tablet after the studies). After these items were removed, items of use of the

computer and mobile phone before the studies, use of television, computer, and mobile phone after the studies, use of television, computer, mobile phone, and tablet at night after lights out, and the reliability rose to  $\alpha=0.65$ .

The questionnaires were distributed to the adolescents in the middle school in the eighth and ninth grades and in the high school in the tenth and eleventh grades in the Arab and Jewish state schools in the north of the country, after the approval from the Chief Scientist in the Ministry of Education and the agreement of the school principals were received.

The result variables and the background variables were presented using measures of descriptive statistics (means and standard deviations or percentages). To examine the relationship between the use of electronic mode and the sleep patterns we used the Pearson test. To compare the measures of sleep and media use according to groups (Jews/Arabs), gender, and group\*gender interaction, use was made of multivariate variance of analysis (MANOVA).

<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Phase 5</b>
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The Research Period: January 2017-March 2017  
(after 3 months) June 2017

**Phase 3: Intervention Program.**

**The aim: Evaluate the advantages and effectiveness of parental intervention program**

**To examine promotion of health behaviors**

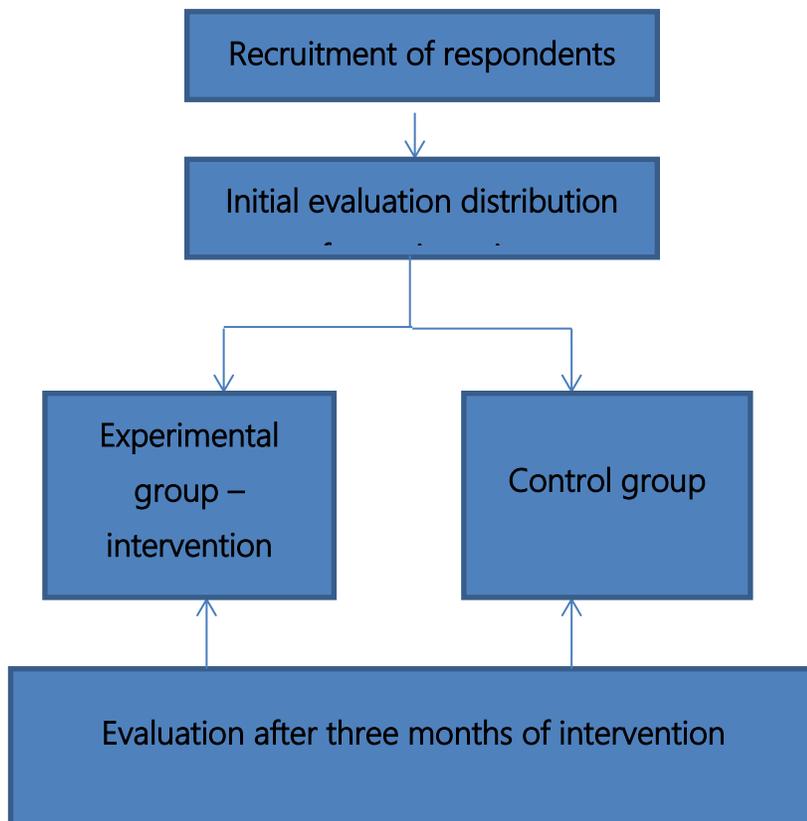
The main **research objective** at this phase was to evaluate the advantages and effectiveness of the parental intervention program based on the conceptual model, in which the parents are agents of change in the raising of the awareness and the increase of

the knowledge about the developmental changes during adolescence and the reinforcement of the authoritative parenting style, and to examine whether the proposed parental intervention will lead to the promotion of health behaviors, including the improvement of sleep patterns, the limitation of the exposure to media, and the improvement of the quality of life among Arab adolescents.

To recruit the parents to the intervention program, the researcher turned to community centers in the Arab villages and towns in the north region. An announcement was sent that details the workshops and lectures on the topic. The parents who are interested were given a mobile phone number for contact purposes, invited to a session, and explained about the research study. Another group was the control group, which filled out questionnaires before and after, without participating in the intervention program.

The following figure presents the flow of the research design at this third phase.

Figure Number 1: Research Design



The research is a comparative experimental design with a convenience sample for the experimental group that participated in a parenting intervention workshop, when the control group did not participate in the intervention program. The **sample** consists of one hundred respondents, when fifty are in the experimental group and participated in the intervention and fifty are in the control group and did not participate in the intervention program. All the respondents who participated in the research were mothers (100%), when their average age is 38.7 years.

The criteria for the inclusion of the parents – Arab parents of adolescents aged nine to eleven, who report discomfort and/or concern about their children’s sleep habits and consumption of media and are interested in participating in workshops and intervention programs of six sessions. The workshops were held for the parents in the community center in the north of the State of Israel from January to March 2017. Then, three months after the end of the workshops, in the months of June and July, the questionnaires were again distributed to the two groups, the experimental group and the control group.

The questionnaire for the parents used by the research at this phase has a number of parts (see Appendix Number 2). The questionnaires were translated into Arabic and distributed to the parents in the experimental group and in the control group, in the northern region before the intervention and three months after the intervention.

### **1. Demographic Questionnaire**

This questionnaire collects information about the parents, including age, sex, family situation, number of children at home and their ages, area of occupation, level of income, and health situation.

## **2. School Sleep Habits Survey (SSHS)**

This questionnaire, which is based on the questionnaire of Wolfson and Carskadon (1998), was described in the part of the adolescents' questionnaires in the first chapter. The questionnaire was reduced to a number of questions that address the parent's reporting regarding the sleep patterns, the hours of wakefulness and waking of the adolescents in the middle of the week and on the weekend and during vacations.

## **3. Media Questionnaire**

The viewing media habits questionnaire, which is based on the questionnaire of Van Den Bulck (2004), was described in the part of the adolescents' questionnaires in the first chapter. The questionnaire was reduced to a number of questions that address the parent's reporting regarding the consumption of media – television, mobile phone, tablet, and computer – of the adolescents in the middle of the week and on the weekend and during vacations.

## **4. Questionnaire on Knowledge on Topics of Sleep and Media**

This is a short knowledge questionnaire, in which the parents need to choose one answer from three proposed answers, the goal of which is to determine the level of knowledge of the parents on topics of sleep and the influence of the electronic media on sleep. The coding of the questionnaires will be performed by counting the number of correct answers. Through this questionnaire, it will be possible to compare the level of parenting knowledge before and after the intervention.

The variable of knowledge is measured through statements 69-76 and question 21 on the questionnaire. The answers were coded with values 0-1, so that the value of 0 addresses an incorrect response and the value of 1 addresses a correct response. The variable was composed of the summation of the responses, so that as the score is higher, the level of knowledge is higher (in a range of 0-9). In the examination of the reliability according to Cronbach's alpha, the reliability of the variable was found to be  $\alpha=0.77$  in the present research study.

## **5. Pediatric Quality of Life Inventory (PedsQL – Short Form 25)**

The questionnaire (Chen et al., 2007; Varni et al., 1999) evaluates the quality of life in a subjective manner and addresses the dimensions of physical ability, emotional ability, social ability, psychosocial ability, functioning in the school, and general quality of life. The internal reliability in the Israeli survey (Zischinsky & Shochat, 2011) is  $\alpha=0.85$ . The scores range from 0-100, when a high score indicates high quality of life. The questionnaire is adjusted to the evaluation of the parents, who are asked to fill out the questionnaire regarding their child.

The variable of quality of life is measured using statements 24-37 of the questionnaire, which examined the degree of difficulties in a variety of areas. The answers are on a Likert scale of 0-4, when 1 is never and 4 is always. The variable was composed of the mean of the answers, so that as the score is higher the degree of difficulty in the field is higher (in other words, the quality of life is lower). Examination of the reliability according to Cronbach's alpha found that the reliability of the variable is  $\alpha=0.80$  in the present research study. The following table presents the statements and the level of reliability of the sub-measures of quality of life as examined in the present research study.

## **6. Parental Authority Questionnaire**

This questionnaire (Buri, 1991) examines the authoritative, authoritarian, and permissive parenting styles. The questionnaire includes thirty items, which are intended for the parent to fill out and are clustered into three categories: authoritative parenting style, authoritative parenting style, and permissive parenting style. The items address beliefs and parental approach. The items are presented on a Likert scale from 1 to 5 ( $\alpha=0.87$  on the Israeli survey). The range of scores for every parenting style ranges from 10 to 30, when a high score indicates considerable use of the same style. The permissive style, which reflects a relatively warm parenting style in which the parent does not control, does not demand, and is permissive was examined in the questionnaire using items 1, 6, 10, 13, 14, 17, 19, 21, 24, 28. The authoritarian style, which represents parents who attribute value to obedience and attempt to control their children's behavior, through

discipline and punishment, was examined using items 2, 3, 7, 9, 12, 16, 18, 25, 26, 29. The authoritative style, which represents parents with a strong and clear style who are flexible and rational, was examined using items 4, 5, 8, 11, 15, 20, 22, 23, 27, 30. The variable of parenting style was measured using statements 39-76. The answers are presented on a Likert scale from 1 to 5, when 1 does not agree at all and 5 is greatly agree. The variable was composed of a mean of responses, so that as the score is higher the parenting style characterizes the parent more.

The following table presents the statements and the level of reliability of the three parenting styles. It should be noted that regarding the permissive parenting style a relatively low level of reliability was found (even after statement 51 was removed from the analysis).

To evaluate the relationships between the parenting style and the patterns of sleep and media use, Pearson correlations were conducted between the SSHS measure (bedtime, wake-up time) and the media measure (exposure time to television, computer, mobile phone, and tablet). To evaluate the changes that occurred among the parents following the parental intervention: the data of the knowledge questionnaire and the scores of the parenting questionnaire (henceforth: the parental measure), two factor variance analysis was performed at two points in time, before the intervention and three months after the intervention in the experimental group and in the control group. To evaluate the changes that occurred in the adolescents following the parental intervention, the SSHS measure (sleep patterns – bedtime, wake-up time), the media measure, and the quality of life measure, two factor variance analysis was performed before the intervention and three months after the intervention in the experimental group and in the control group.

### **5.5.6 Intervention Workshop Process**

The parents who expressed an interest and agreed to participate in the workshops were invited for a first session, workshop 1, in a community center in the north region in Israel. They received information about the research and the research objective and were given questionnaires before the intervention. They took the questionnaires home to fill

out and to return at the start of the second workshop. The group was large, fifty people, and therefore for the workshop to be effective and to achieve the research objective, the parents were divided into two groups. The interval between one workshop and the next was a week.

Workshops 2 and 3 addressed the importance of sleep in the development of adolescents, changes in the patterns of sleep during adolescence, sleep problems and deficient sleep patterns, and the relationship between exposure to the media and sleep. In the workshop, a film was shown to the parents on the degree of the adolescents' exposure to electronic media and its harm to sleep. A discussion was held, and the parents cooperated and presented many examples from everyday life and told of the experiences with their adolescent children.

The knowledge that the parents acquired and the skills they learned in workshops 2 and 3 included:

- Knowledge. Physiological, psychological, and social changes during adolescence, including changes in the sleep patterns, sleep habits, adequate amount of sleep, and environmental factors that influence the sleep habits, including the relationship between sleep and unintelligent use of the media.
- Skills. Maintenance of healthy sleep hygiene, regular sleep hours in the middle of the week and on the weekend, skipping afternoon nap, avoidance of awakening activities before sleeping, and the limitation of the exposure to the media.

Workshops 4 and 5 were held by a professional who is an expert in holding workshops for parents and a coordinator of a parent authority program. The two workshops engaged in learning about the importance of the authoritative parenting style: understanding the importance of maintaining consistency and setting boundaries, through cooperation and understanding of the adolescent's needs and providing tools for the implementation of the authoritative parenting style: coping with objections and creating motivation for behavioral and environmental change. The researcher proposed ways of coping with problems related to the use of media and sleep, with emphasis on the principles of the authoritative parenting style, which includes setting reasonable

boundaries suited to the adolescent's needs. The guidelines were given in a clear and operative manner.

Workshop 6 is the summary of the principles of the authoritative parenting style and repetition of the importance of sleep to the adolescent's health, the importance of the maintenance of a healthy home environment, and environmental changes for the improvement of the sleep patterns and habits of electronic media use.

Three months after the intervention, the parents who participated in the workshops were called on the phone. Questionnaires were distributed to them, and the parents filled them out and returned them to the researchers. In addition, questionnaires were distributed to the parents of the control group.

In order to analyze the data, the questionnaires were coded and evaluated using SPSS program. The level of significance was examined: 0.05. The following statistical analyses were performed:

Descriptive statistics. The demographic data of the respondents were described. The means and standard deviations of the sleep questionnaire (henceforth: SSHS) were calculated: bed time, wake-up time, and total sleep duration. In addition, the means and standard deviations of the media questionnaire were calculated: durations of exposure to media, television, computer, mobile phone, and tablet during the day.

Pearson correlations were performed between the SSHS measure (bed time, wake-up time, and total sleep duration) and the media measure (time of exposure to television, computer, mobile phone, and tablet) (to evaluate the relationships between the parenting style and the patterns of sleep and media use).

Two-factor variance test was performed at two points of time, before the intervention and three months after the intervention in the experimental and control groups, to evaluate the changes among the parents following the parent intervention.

Two-factor variance test was performed at two points of time, before the intervention and three months after the intervention in the experimental and control

groups, to evaluate the changes among the adolescents following the parental intervention in the SSHS measure (sleep patterns: bed time, wake-up time, and total sleep duration), the media measure ,and the quality of life measure.

<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Phase 5</b>
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The Research Period: June 2017-August 2017.

**Phase 4: Qualitative Analysis of open-ended questions.**

**The aim: Evaluate the information about the changes undertaken in the family following the intervention that they participated in for three months.**

The parents' questionnaires included two open-ended questions to obtain information about the changes undertaken in the family following the intervention that they participated in for three months. Their responses were subjected to content analysis.

- **The first question was: Following the intervention, were there changes at home on the topics related to sleep? If so, then note the changes.**
- **The second question was: Following the intervention, were there changes at home on topics related to the media? If so, note the changes.**

All the answers and written responses are considered as methods by which parents retrospectively conceptualize their experience of learning and explosion to new behaviors. In other words, they actually reflect on their experience as learners, while adopting a 'second order' report (Marton, 1978). When learners retain an accurate record of their relevant mental activity, their accounts are likely to depend, at least in part, on inferences and re-constructions derived from their own subjective and implicit theories of the process involved (Richardson, 2001; Nisbett and Wilson, 1977; White, 1989).

Undoubtedly, the type of the content that was gathered at this phase is characterized much by its subjectivity. In such case, it becomes evident that interpretive skill is needed in order to analyze this content, since meaning is not self-evident and the context of production is significant.

Considering these disadvantages, the content collated here is considered as raw material for gaining understanding. As such, it provides important insight into the influence of the experimental program, especially upon triangulation with other data.

<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>	<b>Phase 4</b>	<b>Phase 5</b>
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The Research Period: August 2017-August 2019

**Phase 5: Literature search.**

**The aim: Using literature in a deductive mode as a means of comparing existing theories and of partially validating the findings.**

In this fifth phase, a review of appropriate literature is given after the presentation of the study outcomes, in order to show the place where these research findings fit into the overall understanding in this field. Literature, applied in this phase, serves to compare and contrast the findings and the theories of the outcome of this research.

### **5.5.7 Validity**

The validity of the experiment findings is evaluated according to the following two questions:

1. To what extent is it possible to rely on the conclusions of the experiment in the context of a causal relationship between variables?
2. To what extent is it possible to rely on the findings so that they can be generalized to the researched population?

The “internal validity” and “external validity” of the research study are discussed in the following paragraphs.

### **Internal Validity**

Internal validity addresses the question of whether the experimental “handling” is what caused differences in the findings between the experimental group and the control group. In other words, is there no alternative explanation of the findings? (question 1)

Campbell and Stanley in 1966 (in Beyt-Marom & Sporta, 2001; Ellis, 2001) listed seven threats to the internal validity of the experiment: history, maturation, instrumentation, measurement, dropping out, statistical regression, and selection.

*History* refers to all the events that occur during the experiment, between the measurement of the dependent variable before the manipulation of the independent variable and afterwards. Many experimental research studies implement a test that measures the dependent variable before the implementation of the ‘treatment’ (independent variable) and afterwards, to see the influence of the handling on the dependent variable. In this way the first measurement constitutes a “control group” for the second measurement. In these research studies, it is important to ascertain that in the period of time that passes between one measurement (“before”) and another (“after”) an event did not occur that might have influenced the dependent variable. As the period of time that passes between the two measurements is greater, the likelihood of the factor of “history” is greater. For example, in the present research study a questionnaire was distributed three months after the end of the parental intervention.

*Maturation.* The process that the research respondents undergo during the experiment as a function of the passage of time. The influence of time is on development, tiredness, hunger, etc. For example, the development experienced by the mothers who participate in the workshops and the knowledge they obtained during the workshops is what influenced the results and not only the duration of time, since the control group, despite the time that had passed from when they had completed the questionnaire the first

time, did not have a change in their knowledge since they did not participate in an intervention.

*Instrumentation.* Changes in the measurement instrument between one test and another, low reliability of the measurement instrument will harm the internal validity of the experiment. In the research study the same measurement device was used – the questionnaires, which have high reliability.

*Measurement.* The first measurement may influence the second measurement. The first exposure to the questionnaire can influence the way in which the questionnaire is answered the second time (in the case in which the researcher examines the influence of the independent variable) in a repeat test in comparison to the test held before the implementation of the independent variable. In the research study the same measurement device was used, before and after the intervention, but we had a control group that received the same questionnaire. The use of the control group proved that the change occurred in the group because of the intervention and not because they saw or filled out the questionnaire beforehand.

*Dropping out.* The dropping out of the subjects from the experiment, especially if the experiment takes a long time. The dropping out harms the equality between the experimental group and the control group.

*Statistical regression.* If the experimental group includes those with very high or very low scores, a group that represents extremism (on any measure) and this group is given “treatment” that is supposed to influence the measured trait, it can be assumed that in the measurement after the “treatment” the extreme scores will move to the middle. Naturally the high scores move to the middle in the second measurement, even without treatment. In the research study we saw that the scores in knowledge, for example, rose considerably, from low to very high in the intervention group when in parallel there was no change in the knowledge and awareness of the parents who were in the control group.

*Selection.* When it is possible to attribute the results of the experiment to the differences existing ahead of time between the control group and the experimental group

and not to the deployment of the independent variable. In the research study, we chose two groups, the intervention group and the control group, which are similar in terms of their conditions, for instance, they have similar socioeconomic status, all participants are mothers of young adolescents, and all participants are from Arab villages in the north of Israel.

It is possible to overcome all these threats using the control group and the random allocation of respondents to these groups (Beyt-Marom & Sporta, 2001; Ellis, 2001).

### **External Validity**

This is the ability to generalize the findings of the experiment on different populations, situations, and times. Until now the conditions that contribute to the internal validity of the research have been discussed. What promotes the representativeness of the research?

Many research studies use volunteers, students, children etc. Is it possible to generalize from them about the population? In addition, if the results of the experiment are influenced by the place or timing of the research, then it will not be possible to generalize the results. Because of the control in the laboratory over the research variables and research conditions, it is possible to say also that the laboratory research distances further from the regular life situations and therefore it will be hard to generalize from the controlled laboratory research to life itself. Therefore, experimental research studies were found that are distanced from the laboratory and draw close to the natural environment, at the expense of the ability to isolate variables (field experiments). It is possible to say that it is impossible to defend simultaneously against all the threats that endanger the research validity. It is important to determine priorities according to the research goals and the research topic and accordingly to decide what is the validity most relevant to the research and with it to cope (at the expense of others) (Beyt-Marom & Sporta, 2001). In the present research study, we can generalize that the intervention program conducted for parents in the Arab sector contributed greatly to the increase of the awareness among the mothers of the importance of sleep and of the influence of the electronic media on the sleep patterns and health of their adolescent children. The increase of the awareness in

this subject will cause better quality of life and more normal sleep patterns among the adolescents.

## **Chapter 6: The First Stage Study: Exposure to Electronic Media and Its Influence on Sleep among Jewish and Arab Adolescents**

Research studies show that cultural factors have influence on the situation of health in general and sleep patterns in particular of adolescents (Vidal, 2014; Tzischinsky, Lufi, & Shochat, 2008). Arab society in Israel is experiencing an extensive modernization. It is possible to assume that youths are most influenced by these changes. However, little has been researched regarding the influence of the process on the measures of health and functioning among the Arab adolescents. Research studies show that the exposure to electronic media has a significant impact on the adolescents' sleep patterns (Shochat, 2012; Flint-Bretler, 2013). In addition, sleep patterns constitute an important measure of the health situation and the functioning in the general population and among adolescents in particular. Therefore, the present research study intends to examine whether there is a difference in the consumption of electronic media and in sleep patterns between Arab adolescents and Jewish adolescents.

### **6.1 Research Problem**

The main research problem boils down to the following question. What variables affect the patterns of electronic media consumption of contemporary adolescents in Israel, and how do these patterns relate to sleep patterns?

Then, the detailed research problems boil down to the following research questions:

1. What are the relations between sleep patterns and exposure to electronic media?
2. Does cultural background influence the consumption of electronic media and the sleep patterns? Is there a difference in the consumption of electronic media and in sleep patterns between Arab adolescents and Jewish adolescents?
3. Does gender influence the consumption of electronic media and the sleep patterns? Is there a difference in the consumption of electronic media and in sleep patterns between boys and girls?

## **6.2 Research Hypotheses**

- A correlation will be found between the sleep patterns and exposure to electronic media: as the exposure to the electronic media increases, the duration of sleep is shortened and the time of sleep becomes later.
- Differences will be found in the sleep patterns and exposure to electronic media among Arab and Jewish adolescents. We expect that (1) the sleep patterns among Arab adolescents are more normal (long duration of sleep and early sleep time) in comparison to sleep patterns among Jewish adolescents and (2) the exposure to the media is higher among Jewish adolescents.
- Differences in gender will be found in the sleep patterns. We expect to see that among girls the duration of sleep is longer and the time of sleep is earlier, in comparison to the boys.
- A correlation between culture and gender will be found in their influence on the sleep patterns. We expect to see that among Jews there will be no significant gender differences in the sleep patterns but among Arabs the boys will go to sleep later and sleep less than the girls.

## **6.3 Research Results**

### **6.3.1 Research Participants**

A total of 229 adolescents participated in the research study, 118 from the Arab sector and 111 from the Jewish sector. The adolescents are from the eighth, ninth, tenth, and eleventh grades. The mean age in the entire sample is  $14.9 \pm 1.2$  years, in the Arab sector the mean age is  $15.11 \pm 1.70$  years, and in the Jewish sector  $14.70 \pm 1.20$  years. The gender division in the entire sample was 97 boys and 128 girls. The percentage of male participants in the Arab sector was 48.7% and girl participants 51.3%, in contrast to 37% and 63%, respectively, in the Jewish sector. A significant difference was found in sex, so that the percentage of girls in the research is greater than the percentage of boys. This gap is especially significant in the Jewish population. Differences were not found between the groups in the variables of age, height, and weight. A difference was found in the degree

of religiosity, so that most of the participants in the group of Jews are secular (64.9%), while in the group of Arabs most are traditional (49.2%) and religious (35.6%).

All the adolescents who participated in the research study learn in the state schools in the northern region. The weekly days off in the Arab sector are Saturday and Sunday, and in the Jewish sector only Saturday. In both sectors the school day in the schools begins at 8:00 in the morning.

Table Number 1: Description of Demographic Variables according to Sector, Arabs and Jews (N=229)

Variable		Arabs n=118	Jews n=111
Age (Years)		15.11±1.20	14.7±1.20
Sex	Girls	51.30%	63.00%
	Boys	48.70%	37.00%
Height (Meters)		1.66±0.91	1.64±0.09
Weight (Kilograms)		57.90	54.80
Grade	8	24.5%	23.4%
	9	24.5%	24.3%
	10	27%	27.9%
	11	24%	24.4%

Table Number 2: Description of Religiosity according to Sector, Arabs and Jews (N=229)

Variable		Arabs n=118	Jews n=111
Degree of Religiosity	Religious	35.60%	2.70%
	Traditional	49.20%	29.70%
	Secular	5.90%	64.90%

$\chi^2 = 94.14^{***}$

\*  $p < .05$ , \*\*\*  $p < .001$

### 6.3.2 Relationship between Adolescents' Sleep Patterns in the Middle of the Week and on the Weekend and the Exposure to Electronic Media

To examine the hypothesis that there is a relationship between patterns of exposure to electronic media and sleep patterns, Pearson test was performed, which examined the relation between the degree of exposure to electronic media in the middle of the week and at the end of the week and the adolescents' sleep duration and bed time (tables 2 and 3). Weak but significant correlations were found between the use of electronic media at night after lights out and the adolescents' sleep duration in the middle of the week, so that a rise in the exposure to television ( $r=-0.17$ ,  $p=.01$ ), to the mobile phone ( $r=-0.21$ ,  $p=.002$ ), and the tablet ( $r=-0.14$ ,  $p=.02$ ) is related to a shorter sleep duration. In addition, a significant relation was found between sleep latency and wake hour in the middle of the week and the degree of media exposure, so that a long sleep latency was related to an increase in the mobile phone use at night after lights out ( $r=0.26$ ,  $p=.01$ ) and a late wake hour was related to increased use of the mobile phone after lights out ( $r=-0.14$ ,  $p=.04$ ).

Table Number 3: Pearson Correlations between Sleep Latency, Sleep Duration, and Waking Time of Adolescents in the Middle of the Week and Exposure to Media (N=229)

	Sleep Latency	Sleep Duration – Middle of the Week	Waking Time
	<i>R</i>	<i>r</i>	<i>R</i>
<b>Media before the Studies</b>			
- Mobile Phone	0.07	0.02	-0.09
- Computer	-0.03	0.09	-0.03
<b>Media in the Evening</b>			
- Mobile Phone	0.04	0.002	-0.07
- Computer	0.01	0.001	0.00
<b>Media at Night</b>			
- Mobile Phone	0.26**	-0.21**	-0.14*
- Tablet	-0.06	-0.14*	0.08
- Television	0.12	-0.17*	-0.02
- Computer	0.08	-0.06	0.01

\*  $p < .05$ ; \*\*  $p < .01$

On the weekends, a significant relationship was found between the adolescents' sleep duration and use of a mobile phone in the evening ( $r=-0.17$ ,  $p=.009$ ) and at night ( $r=-0.13$ ,  $p=.04$ ). On the weekend, the short sleep duration is related to the increased use of electronic media. In addition, a significant relationship was found between the bed time and the use of the mobile phone during the day, so that the late bed time is related to the increased use of the mobile phone during the day ( $r=-0.13$ ,  $p=.05$ ). Furthermore, a relationship was found between the wake time on the weekend and the use of the tablet during the day time ( $r=-0.15$ ,  $p=.02$ ) and at night after lights out ( $r=-0.14$ ,  $p=.03$ ).

Table Number 4: Pearson Correlations between Bed Time, Sleep Latency, Sleep Duration, and Wake Time of Adolescents in the End of the Week and Exposure to Media (N=229)

	<b>Bed Time – Weekend <i>R</i></b>	<b>Sleep Latency – Weekend <i>R</i></b>	<b>Sleep Duration - Weekend <i>r</i></b>	<b>Wake Time - Weekend <i>r</i></b>
<b>Media during the Day</b>				
- Mobile Phone	-0.13*	-0.07	0.03	-0.03
- Tablet	0.09	0.05	-0.03	-0.15*
- Television	0.06	-0.09	0.02	-0.09
- Computer	0.04	-0.06	0.05	0.06
<b>Media in the Evening</b>				
- Mobile Phone	0.001	-0.03	-0.17**	-0.02
- Tablet	-0.01	0.01	-0.05	-0.01
- Television	0.03	-0.09	-0.04	0.01
- Computer	0.02	-0.03	0.06	-0.00
<b>Media at Night</b>				
- Mobile Phone	-0.03	0.06	-0.13*	0.04
- Tablet	0.07	0.02	0.06	-0.14*
- Television	0.08	-0.00	0.13	0.12
- Computer	0.07	0.05	-0.03	0.12

\*  $p < .05$ ; \*\*  $p < .01$

### **6.3.3 Differences in the Sleep Patterns between Arab Adolescents and Jewish Adolescents**

In the research study we examined whether there are differences in the sleep patterns according to the SHSS measure of sleep patterns: bed time, sleep latency, wake time, and total sleep duration in the middle of the week and on the weekend and measures of daily functioning: sleepiness, behaviors that harm sleep, mood, and type, between Arab adolescents and Jewish adolescents and whether there are differences between boys and girls in every sector, using two-way MANOVA test.

The following table describes the findings of the univariate variance analyses for effects of group, gender, and group\*gender interaction, which were performed separately for sleep patterns on the school days, sleep patterns on the weekend, and measures of daily functioning.

Table Number 5: Means and Standard Deviations of Sleep Patterns according to SHSS  
Measures: Sleep Patterns: Bed Time, Sleep Latency, Wake Time, and Total Sleep  
Duration and Daily Functioning Measures: Sleepiness, Sleep-Harming Behaviors, Mood,  
and Type (N=229)

		Gender	Total	Arabs	Jewish	F Group	F Gender	F Interaction
Mid- Week	Sleep Latency (Minutes)	Total		±36.60 37.02	±25.14 29.10			
		Boys	±.29.78 30.33	30.03±30.1 0	±29.58 30.82	2.71	1.52	3.32
		Girls	±33.51 35.55	±41.07 43.66	±22.67 28.2			
		Wake Time	Total	6:47±0:22	6:39±0:29			
			Boys	6:49±0:29	6:55±0:21	4.93*	5.05*	3.07
			Girls	6:39±0:23	6:40±0:21			
		Sleep Duration (hours)	Total	7.43±1.55	7.22±0.99			
			Boys	7.63±1.14	7.65±1.239	0.48	7.36**	0.19
			Girls	7.12±1.41	7.23±1.79			
Week end	Bed Time	Total		23:51±1:21	±1:26 24:34	12.99*	0.61	0.01
		Boys	24:12±1:30	23:55±1:24	24:41±1:33			
		Girls	24:09±1:23	23:47±1:18	±1:24 24:30			
		Sleep Latency (Minutes)	Total	±24.48 27.76	±18.72 21.54			
			Boys	±23.23 25.51	±24.50 26.87	3.29*	0.01	0.44
			Girls	±21.63 24.62	±24.64 28.60			
		Wake Time	Total	10:10±1:321	10:26±1:42			
			Boys	10:05±1:39	10:03±1:38	0.79	2.11	0.17
			Girls	10:26±1:34	10:17±1:24			
		Sleep Duration	Total	9.25±1.69	9.27±1.62			
			Boys	9.33±1.50	9.44±1.59			
			Girls		±1:42 24:35			

		Gender	Total	Arabs	Jewish	F Group	F Gender	F Interaction
	(hours)	Girls	7.20±1.77	9.08±1.79	9.34±1.76	0.004	0.11	1.32
Functional Measures	Sleepiness	Total		14.59±3.60	12.67±3.12	** 19.12	1.49	0.25
		Boys	13.49±3.62	14.42±3.55	12.17±3.33			
		Girls	13.80±3.42	14.75±3.66	±2.98 12.97			
	Behavior Problems	Total		23.79±6.25	±5.67 20.91	** 12.01	0.001	0.14
		Boys	±6.40 22.60	23.64±6.02	21.12±6.74			
		Girls	±5.94 22.26	23.93±6.51	±4.99 20.79			
	Mood	Total		9.80±2.66	9.80±2.47	0.18	** 12.97	0.19
		Boys	9.12±2.55	9.12±2.67	9.12±2.35			
		Girls	10.34±2.46	10.50±2.46	10.2±2.47			
	Type	Total		±4.08 26.46	±5.30 27.94	4.56*	0.04	0.88
		Boys	27.02±4.96	26.70±4.10	±5.97 27.47			
		Girls	27.28±4.66	26.20±4.05	±4.98 28.22			

\*  $p < .05$ ; \*\*  $p < .01$

### **Sleep Patterns in the Middle of the Week**

The multivariate analysis of variance (MANOVA) found a significant main effect of the group (Jewish/Arab) ( $F_{(3,208)}=3.43$ ,  $p=.02$ ) and a significant main effect of the gender (boys/girls) ( $F_{(3,208)}=3.87$ ,  $p=.01$ ) regarding the variables of sleep patterns in the middle of the week. An effect of the interaction between group and gender was not found ( $F_{(3,208)}=2.31$ ,  $p=.08$ ).

In the univariate analysis significant differences were found between Arab and Jewish adolescents in the wake time in the middle of the week, so that Jewish adolescents awaken earlier ( $M=6:39\pm 0:23$ ) than do Arab adolescents ( $M=6:47\pm 0:22$ ). In addition, statistical differences were found between boys and girls in the wake time and in the sleep duration in the middle of the week, so that girls ( $M=6:39\pm 0:23$ ) awaken earlier than do boys ( $M=6:49\pm 0:29$ ) and the sleep duration of boys is longer ( $M=7.63\pm 1.14$ ) than that of girls ( $M=7.12\pm 1.41$ ).

### **Sleep Patterns on the Weekends**

In the multivariate analysis of variance (MANOVA), in the variables of sleep patterns at the end of the week a significant main effect of group was found ( $F_{(4,198)}=3.83$ ,  $p=.01$ ). However, a significant main effect of gender was not found ( $F_{(4,198)}=1.33$ ,  $p=.26$ ) and interaction between group and gender was not found ( $F_{(4,198)}=1.03$ ,  $p=.24$ ).

In univariate analysis significant differences were found between Arab adolescents and Jewish adolescents in the bed time on the weekend: Arab adolescents go to sleep earlier ( $M=23:51\pm 1:21$ ) than do Jewish adolescents ( $M=24:34\pm 1:26$ ). A significant difference was found between Arab adolescents and Jewish adolescents in sleep latency on the weekend: Jewish adolescents fall asleep faster ( $M=21.54\pm 18.72$ ) than do Arab adolescents ( $M=27.76\pm 24.48$ ).

### **Measures of Everyday Functioning**

Regarding measures of everyday functioning (sleepiness, behavior problems, mood, and type), in multivariate analysis a significant primary effect of group

( $F_{(4,218)}=4.5$ ,  $p=.01$ ) was found, but a significant primary effect of gender ( $F_{(4,218)}=.56$ ,  $p=.92$ ) and interaction between group and gender ( $F_{(4,218)}=0.46$ ,  $p=.89$ ) were not found.

Significant differences were found between Arab adolescents and Jewish adolescents in the degree of sleepiness: Arab adolescents are sleepier ( $M=14.59\pm3.60$ ) than are Jewish adolescents ( $M=12.67\pm3.12$ ). In the measures of behaviors that harm sleep it was found that Arab adolescents have more behavior problems related to sleep ( $M=23.79\pm6.25$ ) than do Jewish adolescents ( $M=20.91\pm5.67$ ). Regarding type, it was found that Arab adolescents are more morning types ( $M=26.46\pm4.08$ ) than are Jewish adolescents ( $M=27.94\pm5.30$ ). A significant primary effect of gender on mood was found, so that girls have a depressed mood ( $M=10.34\pm2.46$ ) more than do boys ( $M=9.10\pm2.55$ ). An effect of interaction between group (Arabs/Jews) and gender (boys/girls) was not found.

#### **6.3.4 Differences between Arab Adolescents and Jewish Adolescents and between Boys and Girls in the Consumption of Electronic Media**

Regarding the presence of media devices among adolescents, it was found that all the respondents, both in the Arab sector and in the Jewish sector, have a television and a computer at home. However, the percentage of Arab students with a television in their room (96.9%) is similar ( $\chi^2=1.06$ ,  $p=.300$ ) to the percentage of Jewish students with a television in their room (99.0%), while the percentage of Arab students who have a computer in their room (78.0%) is lower ( $\chi^2=7.80$ ,  $p=.020$ ) than the percentage among Jewish students (92.6%). Moreover, 89.5% of the students in the Arab sector have a mobile phone, a high percentage but lower significantly ( $\chi^2=9.50$ ,  $p=.002$ ) than the percentage in the Jewish sector (99.1%). The percentage of adolescent students who have a tablet is similar ( $\chi^2=.310$ ,  $p=.480$ ) in both sectors (Arab – 64.7%, Jewish – 65.8%).

To examine the differences between Arab adolescents and Jewish adolescents and between boys and girls, MANOVA test for variables of use of electronic media in the middle of the week and on the weekend was performed. Tables 5 and 6 describe the findings of the multivariate and univariate variance analysis performed for the effects of

the exposure to electronic media in the middle of the week and on the weekend in both groups (Arab/Jewish).

Table Number 6: Multivariate Variance Analysis (MANOVA) for Use of Electronic Media among Jewish and Arab Adolescents in the Middle of the Week (Hours) (N=229)

	Gender	Total	Arabs	Jews	F Group	F Gender	F Interaction
Use of computer before studies (hours)	Total		0.13±0.95	0.15±0.95			
	Boys	0.21±1.23	0.21±1.30	0.21±1.10			
	Girls	0.09±0.65	0.05±0.29	0.12±0.80	0.06	0.85	0.06
Use of mobile phone before studies (hours)	Total		0.48±1.23	0.47±1.02			
	Boys	0.48±1.20	0.49±1.21	0.48±1.19			
	Girls	0.47±1.09	0.48±1.26	0.46±0.92	0.004	0.008	0.002
Use of television after studies (hours)	Total		1.60±1.50	1.7±1.70			
	Boys	1.50±1.50	1.60±1.70	1.40±1.30			
	Girls	1.70±1.60	1.60±1.30	1.8±1.90	0.009	0.95	0.51
Use of computer after studies (hours)	Total		1.25±1.40	1.69±2.06			
	Boys	1.66±1.90	1.4±1.50	1.99±2.20			
	Girls	1.30±1.65	1.09±1.20	1.5±1.90	4.26*	2.89*	0.09
Use of mobile phone after studies (hours)	Total		2.33±2.70	2.37±2.88			
	Boys	2.20±2.80	2.60±2.90	1.70±2.60			
	Girls	2.42±2.77	2.06±2.40	2.70±2.99	0.07	0.34	4.2
Use of television after lights out (hours)	Total		0.28±0.70	0.52±0.72			
	Boys	0.36±0.63	0.26±0.64	0.50±0.58			
	Girls	0.43±0.83	0.31±0.86	0.53±0.79	5.28*	0.15	0.009
Use of computer at night after	Total		0.2±0.78	0.24±0.82			
	Boys	0.38±1.11	0.28±1.01	0.52±1.23			
	Girls	0.10±0.41	0.13±0.47	0.08±0.36	0.72	7.5***	1.88

	Gender	Total	Arabs	Jews	F Group	F Gender	F Interaction
lights out (hours)							
Use of mobile phone at night after lights out (hours)	Total		0.69±1.4	0.70±1.30			
	Boys	0.79±1.70	0.81±1.50	0.77±1.90	0.03	0.71	0.13
	Girls	0.63±1.10	0.57±1.46	0.68±0.90			
Use of tablet at night after lights out (hours)	Total		0.04±0.2	0.02±0.14			
	Boys	0.02±0.12	0.03±0.15	0.006±0.03	0.45	0.79	0.21
	Girls	0.04±0.21	0.04±0.26	0.04±0.17			

\*  $p < .05$ ; \*\*  $p < .01$

Multivariate analysis of variance (MANOVA) on the use of electronic media before the studies did not find a significant primary effect of group ( $F_{(2,220)}=0.11$ ,  $p=.91$ ), gender ( $F_{(2,220)}=0.79$ ,  $p=.45$ ), and interaction between group and gender ( $F_{(2,220)}=0.08$ ,  $p=.91$ ). In the univariate analysis significant differences were not found between Arab adolescents and Jewish adolescents in the use of computer and mobile phone before the studies. In addition, significant differences were not found between boys and girls in the use of computer and mobile phone before the studies.

Regarding the use of electronic media after the studies, significant primary effect of group ( $F_{(3,219)}=4.26$ ,  $p=.03$ ) and of gender ( $F_{(3,219)}=2.89$ ,  $p=.01$ ) was found. But a significant effect of the interaction was not found ( $F_{(3,219)}=0.01$ ,  $p=.13$ ).

Univariate analysis found significant differences between Arab adolescents and Jewish adolescents in the use of the computer after the studies, so that Jewish adolescents use a computer longer ( $M=1.69\pm 2.06$ ) than do Arab adolescents ( $M=1.25\pm 1.40$ ). In

addition, significant differences were found between boys and girls in the use of the computer after the studies, so that boys use the computer longer ( $M=1.66\pm 1.90$ ) than do girls ( $M=1.30\pm 1.65$ ).

Regarding the use of electronic media at night after lights out, multivariate MANOVA analysis found a significant primary effect of group ( $F_{(4,218)}=5.28$ ,  $p=.02$ ) and a significant primary effect of gender ( $F_{(4,218)}=.75$ ,  $p=.001$ ) and did not find significant effect of interaction ( $F_{(4,218)}=0.01$ ,  $p=.12$ ).

Univariate analysis found significant differences between Arab adolescents and Jewish adolescents in the use of television after lights out: the Jewish adolescents watch television for a longer time ( $M=0.52\pm 0.72$ ) than do Arab adolescents ( $M=0.28\pm 0.70$ ). Significant differences were not found in the level of use of other media. Significant differences were found between boys and girls in the use of the computer after lights out: boys use the computer for longer ( $M=0.38\pm 1.11$ ) than do girls ( $M=0.10\pm 0.41$ ).

Table Number 7: Multiple Variance Analysis (MANOVA) for the Use of Electronic Media among Jewish and Arab Adolescents at the End of the Week (Hours) (N=229)

Variable	Gender	Total	Arabs	Jews	F Group	F Gender	F Interaction
Use of mobile phone during the day (hours)	Total		3.74±4.50	2.97±4.33	1.9	1.42	0.00
	Boys	3.02±3.70	3.36±3.10	2.53 ±4.30			
	Girls	3.64±4.90	4.09±5.40	3.24±4.30			
Use of tablet during the day (hours)	Total		0.74±2.55	0.54±1.80	0.42	1.09	0.82
	Boys	0.47±1.10	0.44±1.20	0.52±1.04			
	Girls	0.78±2.70	1.03±3.30	0.56±2.10			
Use of mobile phone in the evening after 8 (hours)	Total		1.61±2.66	1.79±3.08	1.96	1.4	0.00
	Boys	1.06±2.80	1.44±1.50	1.86±4.00			
	Girls	1.76±2.90	1.77±3.40	1.75±2.40			
Use of tablet in the evening after 8 (hours)	Total			0.16±0.46	0.42	1.09	0.82
	Boys	0.28±0.59	0.24±0.56	0.33±0.62			
	Girls	0.17±0.7	0.29±1.03	0.07±0.28			
Use of mobile phone at night after lights out (hours)	Total		0.77±2.54	0.86±2.44	0.21	0.006	1.6
	Boys	0.8±2.50	0.56±1.16	1.15±3.70			
	Girls	0.82±2.40	0.97±3.30	0.69±1.03			
Use of tablet at night after lights out (hours)	Total		0.09±0.43	0.10±0.35	0.1	2.6	0.49
	Boys	0.14±0.50	0.15±0.59	0.13±0.33			
	Girls	0.06±0.28	0.03±0.15	0.09±0.36			

According to the MANOVA analysis, no significant primary effect was found for the group between Arab adolescents and Jewish adolescents concerning the use of electronic media on the weekend. Primary effects of gender and interaction in the use of media on the weekend were also not found.

## **6.4 Discussion**

### **6.4.1 Demographic Data**

The research sample consisted of adolescents in regular education of the Jewish and Arab populations in the State of Israel. To supervise the intervening factors that may harm the results, healthy adolescents who study in the state schools in regular classes (not special education) were recruited: boys and girls of normal weight and a similar range of ages in both groups.

In the comparison of the demographic characteristics, a higher percentage of girls was found in the group of Jews in comparison to the Arabs. A difference was found in the level of religiosity, but it should be emphasized that in Arab society there is no parallel to significantly secular society accepted in Jewish society. It was found that Jewish adolescents are more secular than Arab adolescents, who are more traditional and religious. This finding strengthens the assumption according to which Arab society is fundamentally a conservative and traditional society and includes characteristics of a collectivist and authoritarian culture (Shala, 2012; Suleiman-Dehalala, 2013).

### **6.4.2 Relationship between Electronic Media and Sleep Patterns**

The technological advancement and the exposure to a large number of media devices have caused changes in the cultural and social lifestyle, and steadily accumulating evidence indicates the influence of this development on the health and performance, through their detrimental influence on the quality of sleep, duration of sleep, and timing of sleep (Shochat, 2012). These changes characterize not only the young people in Israel but also most of the population in Israel and around the world (Almog & Almog, 2014).

The research findings support the hypothesis that the increased exposure to electronic media is related to a later bed time and shorter sleep duration. It was found that Arab and Jewish adolescents who used electronic media to an increased extent during the day and at night and primarily in the later hours of the night went to sleep later and slept for less, both during the week and on the weekend. This finding is commensurate with

the professional literature: it was found that adolescents who slept enough hours at night (eight to ten hours) used media devices less, in contrast to adolescents who slept too little (less than eight hours), and as the use of the media devices included more devices the likelihood of difficulties with falling asleep at night in the middle of week increased (Calamaro et al., 2000).

In another research study, which was conducted in Israel and examined the adolescents' exposure to electronic systems (television and computer), it was found that on the average adolescents went to sleep at 11:45 in the middle of the week and slept less than seven and a half hours. Increased exposure to electronic media was related to a later hour of sleep, a shorter sleep duration, and a higher level of tiredness (Shochat et al., 2010).

The present research study adds to the existing literature in that it examined the use of electronic media and compared for the first time between the Arab sector and the Jewish sector in Israel. Previous research studies examined the relationship between the media and sleep patterns solely in the Jewish population (Shochat, Flint-Bretler, & Tzischinsky, 2010). In addition, while the past research studies examined only two types of media, television and computer (Shochat et al., 2010; Van den Bulck, 2004), the present research study examined four types of electronic media that adolescents tend to use: television, computer, mobile phone, and tablet. The findings indicated that in both sectors there is a television at home (Arabs about 97%, similar to Jews, 99%), as well as a computer (Arabs about 78%, less than Jews, about 93%). These data indicate a considerable increase in the presence of media devices among adolescents in comparison, for example, to a previous survey, according to which only about two-third of the youths had a television in their room and about one-third had a computer (Calamaro, Mason, & Ratcliffe, 2009). In addition, there was a considerable increase in the presence of a mobile phone among adolescents (89% in the Arab sector and 99% in the Jewish sector). It should be noted that the present research study examined the use of every type of media in the middle of the week at four points of time: before the studies, during the studies, in the evening until 8PM, and at night, at late hours.

The reports of the adolescents found that in the middle of the week the increased use of the mobile phone and the tablet at the late hours of the night was related to the short sleep duration, and the use of the mobile phone at the late hours of the night was related to long sleep latency and late wake time. A significant impact was not found for the exposure to the television and the computer on the sleep duration, sleep latency, and wake time, in contrast to the previous research (Shochat, Flint-Bretler, & Tzischinsky, 2010). It is possible that the presence of mobile and more accessible media devices among adolescents, such as the mobile phone and tablet, which they can use in their room and at a late hour of night, reduces the use of computer and television. In addition, it is possible to explain this difference in the development of the technology. In the year 2010, the use of television and Internet content on handheld devices (such as mobile phones and tablets) was not widespread, while today the applications on every smartphone and tablet make these devices into a computer and screen for all purposes (Almog & Almog, 2014).

The present research study indicated that on the weekends Jewish and Arab adolescents who used the mobile phone during the day went to sleep late and the use of the mobile phone in the evening and at night till late is related to a shorter sleep duration. In addition, the use of a tablet during the day and at night, after lights out, was related to a late wake time. Additional relations were not found between the different media types and measures of sleep on the weekends.

To conclude, the research findings support most of the previous research works that found that the increased use and increased exposure to electronic media are related to a later bed time and shorter sleep duration. In addition, today the use of mobile media means (phone, tablet) is taking the place of the use of stationary media (television, computer) in the context of sleep patterns.

### **6.4.3 Differences in Sleep Patterns in the Middle of the Week and on the Weekend according to Group and Gender**

#### **Bed Time**

At every age, sleep and quality of sleep are very important, expressed in the quality of functioning during the waking hours (Brand & Kirov, 2011). One of the indicators of adolescence is the transition to a later bed time (Hagenauer, Perryman, Lee, & Carskadon, 2009). These changes in the sleep patterns are attributed to biological changes in the system of sleep / wakefulness by environmental factors related to lifestyle (Crowley et al., 2007).

The findings of the present research study, which focus on the weekends<sup>3</sup>, support what Arab adolescents have reported, that they went to bed on the weekends at 23:51 and Jewish adolescents at 24:34. The findings that Arab adolescents go to bed earlier than do Jewish adolescents is related apparently to the Arab lifestyle and culture, in which the parental authority and supervision of earlier sleep hours are greater. These findings are commensurate with the research findings (Shochat, 2013), according to which Arab adolescents reported an earlier bed time than did Jewish adolescents in the middle of the week and on the weekend.

Although in both research studies indicate that Arab adolescents go to sleep earlier than do Jewish adolescents, in the present research study the adolescents from both sectors reported an earlier bed time on the weekends compared to the research conducted in the year 2013 (in the present research study the Arab adolescents go to sleep at 23:51 and the Jewish adolescents go to sleep at 24:34 on the weekends, in contrast to the research of Shochat, which found that Arab adolescents go to sleep at 24:13 and Jewish adolescents go to sleep at 0:37).

There are a number of possible reasons for differences in the bed times between the two research studies. One reason is the adolescents' age – research studies indicate a

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<sup>3</sup> We do not have data regarding the timing of the sleep in the middle of the week, since the question was erased by mistake from the questionnaire.

relation between age and bed time: adolescents at the beginning of adolescence go to sleep earlier than do adolescents in late adolescence (Garmy e al., 2012; Liu et al., 2005). Hence, we examined the average age in both research studies, but a difference in age was not found. It was found in the present research study that the average age was 14.9 years, while in the previous research study the mean age of the adolescents who participated in the research was 14.7 years. Another reason can be related to the season of the year when the data were collected. A research study that examined the impact of the season of the year on the adolescents' bed time found that in the spring adolescents go to sleep later than in the winter, because of the influence of daylight on the excretion of the hormone melatonin in the body (Figueiro & Rea, 2010). While in both research studies (the present research study and the study of Shochat), the data were collected in the spring, in the present research study the data were collected at the end of this season, in the period when the adolescents study in school and were worried about the end of the year tests and the in-school pre-matriculation examinations. Therefore, it is possible that the reason for the early bed time was the fact that the adolescents spent their days preparing for the tests and thus went out less and were careful to go to sleep earlier.

In the present research study, differences were not found in the bed times of boys and girls. However, other research works indicate the existence of differences in the bed time according to gender. For instance, a research conducted in Israel among Arab and Jewish adolescents found that girls in both sectors went to sleep earlier than did boys (Shochat, 2013). We expected to see that Arab adolescent girls go to bed earlier than do Arab adolescent boys and Jewish adolescent girls, since in traditional Arab culture the attitude towards girls is more authoritarian, which is expressed in the supervision of their bed times, while the attitude towards boys is more permissive. However, it appears that in the Arab sector today there is a change in the parental authority and the attitude towards the girls has changed, so that the approach towards both sexes is more permissive (Suleiman Dehalala, 2013; Shahala, 2012). This finding perhaps hints at the influence of modernization on the more equal attitude towards boys and girls in the Arab sector.

## **Waking Hour**

In the present research study differences were found between the groups (Arabs/Jews) and between the genders (boys/girls) in the waking time. Jewish adolescents awaken earlier than do Arab adolescents (a difference of eight minutes), in contrast to the findings of a prior research study that found that Arab adolescents awaken earlier (Shochat, 2013). A number of reasons, as follows, for the different results are possible:

- The start time of school. It is possible that Jewish adolescents begin at the zero hour or have extra-curricular courses in the morning. However, all the adolescents reported that the studies begin at eight in the morning.
- Difference in the environment of the school. The research study in the Jewish sector was conducted in urban schools, as opposed to the village schools in the Arab sector. There are differences between the urban environment and the village environment, in terms of the schedules of public transportation and the heavier traffic in the urban setting as opposed to the village setting. In addition, in the village the distances to the school are relatively small and most students come on foot to school.
- The Arab schools do not have an electronic ‘feedback’ system that monitors the students’ tardiness. Therefore, it is possible that the Arab adolescents are less pressured than the Jewish adolescents, whose schools meticulously and consistently track tardiness.

It is possible to reveal additional possible reasons for differences in the wake time between the two sectors through research studies performed using different methods, such as qualitative research. In addition, a difference was found between the genders in the wake time: girls in both sectors awaken ten minutes earlier than do boys. This finding is commensurate with a previous study that compared sleep patterns between boys and girls (Johnson, Roth, Schultz, & Breslau, 2006). It is possible that the reason for the difference is that during adolescence the girls consider their outside appearance to be important and take care of themselves and therefore they rise earlier than the boys so as to prepare themselves to leave the home.

## **Sleep Latency**

In the present research study, significant differences were not found between the sectors in sleep latency in the middle of the week but differences were found in sleep latency on the weekend. On the weekends, sleep latency of the Arab adolescents (mean 27.76 minutes) was found to be longer by six minutes than that of the Jewish adolescents (mean of 21.54 minutes). This finding supported the research conducted in Israel, which found that Arab adolescents took more time to fall asleep than did Jewish adolescents (Shochat, 2013). However, in the present research study, in comparison to the research of Shochat, sleep latency of Arab adolescents was found to be shorter – both in the middle of the week and on the weekend. In the middle of the week, the sleep latency of adolescents in the present research was found to be shorter by ten minutes than that of the adolescents in Shochat's work, and on the weekend, a difference of nearly half an hour (27.26 minutes in the present research study versus 56.27 minutes in Shochat's study). These findings can constitute evidence that supports the trend of changes in social norms in Arab society following the impact of modernization and exposure to the West, when the main characteristics include the abandonment of traditionalism in favor of a more open and modern life (Al-Haj, 1995; Laves & Katz, 2002; Shapira, 2011). It appears that Arab adolescents less hold to the traditional cultural norms about an early and regular sleep hour – a sleep hour that is relatively early for the biological mechanism of adolescence that causes a longer sleep latency (Shochat, 2013). Support of this explanation arises from the fact that in the present research study all the adolescents reported in parallel a later bed time, a factor that contributes to their shorter sleep latency since they fell asleep more quickly.

The findings of the present research study, of a longer sleep latency among Arab adolescents than among Jewish adolescents, in the middle of the week and on the weekend (on the weekend the difference was significant), contradict the findings of another research study conducted in Israel in Ultra-Orthodox society. This research study found that Ultra-Orthodox adolescents fall asleep after a lower number of minutes (in other words, shorter sleep latency) than do secular adolescents, both in the middle of the week and on the weekend. This difference is attributed to the cultural conditions,

according to which in Ultra-Orthodox society a regular evening routine is customary, in which a sleep ritual is performed for the children (Vidal, 2014). In contrast, in the present research study the sleep latency in the group of Arab adolescents, who are more traditional and conservative than secular Jewish, was longer. It is possible that the reason for the difference between Arab society and Ultra-Orthodox Jewish society in Israel lies in the fact that while Arab society is more traditional, it is influenced more by secular society in Israel and the Arab countries than the Ultra-Orthodox Jewish society, which is closed to the culture of the West, which is more traditional and religious, and holds to social norms and traditions, a factors that influences the lifestyle and the social norms. Therefore, today, in comparison to the past, Arab adolescents report a later bed time and shorter sleep latency.

From this discussion and on the background of the findings in the review of the research literature, which are not unequivocal, the need arises for continued research in a larger sample that includes Jewish and Arab adolescents, boys and girls, who can be defined clearly as having different levels of religious tendency (even Ultra-Orthodox), traditional and religious.

### **Sleep Duration**

It is possible to see that already in early adolescence almost 30% of the adolescents do not sleep as much as they need – between eight and nine hours in the middle of the week, according to the recommended guideline for adolescents (National Sleep Foundation, 2011). In the surveys that measured sleep duration time among adolescents aged thirteen to eighteen, it is possible to see that 61% do not receive the optimal sleep duration (National Sleep Foundation, 2011). A survey conducted in the year 2010 among Israeli adolescents aged fourteen (Shochat et al., 2010) showed that the adolescents sleep an average of seven hours and 22 minutes. In the present research study a significant difference was not found in the sleep duration between Arab adolescents and Jewish adolescents in the middle of the week. The adolescents in both sector slept an average of 7.5 hours in the middle of the week, according to the findings of the previous research (Shochat, 2013) that Arab and Jewish adolescents sleep an average of 7.5 hours

in the middle of the week – a similar sleep duration although the Arab adolescents reported that they went to sleep earlier.

The present research study further found that there is no difference between Arab adolescents and Jewish adolescents in the sleep duration on the weekend: all the adolescents slept two hours more on the weekends in comparison to the middle of the week – an average of 9.5 hours on the weekends. This finding is also commensurate with the findings of the prior research study (Shochat, 2013), in which it was explained that the meaning of the longer sleep of adolescents on the weekends indicates the need to make up sleep hours among adolescents and indicates the vital need for adequate sleeping hours as an explanation of why all the adolescents tend to extend their sleep by two hours on the weekends. This finding is commensurate with the research findings according to which in Western society in general adolescents tend to extend their sleep by two to three hours on the weekend in comparison to the study days held in the middle of the week (Garmy, Nyberg, & Jacksossion, 2012).

Another finding that arises in the present research study is that boys sleep more than do girls in the middle of the week in both sectors but on the weekends Jewish girls sleep half an hour more than do Jewish boys (this difference is not statistically significant). In contrast, Arab boys sleep an average of two hours more than do Arab girls (this difference is statistically significant). In contrast, it is reported in the literature that in the middle of the week and on the weekends girls tend to sleep more hours than do boys (of the same age), a difference ascribed to the sexual development (Laberge, Petit, Simard, Vitoro, & Tremblay, 2010; Olds et al., 2010).

#### **6.4.4 Measures of Everyday Functioning**

In the following discussion, we address four main measures of everyday functioning: tendency to sleepiness during the day, behaviors accompanying sleep, mood, and morning/evening type.

## **Sleepiness during the Day**

Tiredness and sleepiness during the day are widespread among normative adolescents (Gradisar, Gardner, & Dohnt, 2011). 94% of adolescents who participated in this survey declared that they do not sleep enough and 22% reported a feeling of tiredness during the day (National Sleep Foundation, 2011). The present research study found that the level of sleepiness among Arab adolescents is greater than among Jewish adolescents, similar to the findings in Shochat's research, according to which Arab adolescents are sleepier during the day although there was no difference between the sectors in the sleep duration (Shochat, 2013).

It is possible to explain this on the background of the difference found in the present research study in the duration of the sleep latency, according to which the Arab adolescents took more time to fall asleep, since long sleep latency causes tiredness and sleepiness during the day. It is possible that there are other reasons that influence the sleepiness during the day, such as poor sleep quality. Therefore, the finding about higher levels of sleepiness among Arab adolescents necessitates investigation and further empirical examination, since independent reports on sleepiness may reflect basic tiredness associated with insomnia, which in the past was proved to be culturally influenced (Liu et al., 2005). According to this possible explanation, increased sleepiness and sleep difficulties can also indicate psycho-physiological distress, related to life in a culture of transition and exposure to another culture (Latzer, Witztum, & Stein, 2008). The researchers explain that Arab society is found in a period of transition and is influenced by the culture of the West and by Jewish society in Israel and that the exposure to other cultures and the process of modernization in Arab society cause a conflict between traditional social norms and Western ones. In other words, it is possible that this is a possible reason for high levels of sleepiness, but it is necessary to preform a comprehensive research study that will examine the influence of modernization on the quality of sleep and health.

## **Behaviors Accompanying Sleep**

The present research study found a difference between the groups of behaviors accompanying sleep, but differences between the gender or interaction between the group and the gender were not found. It was found that Arab adolescents have more problems of behavior associated with sleep than do Jewish adolescents, like in the research of Shochat (2013). This finding is commensurate with the findings of a prior survey, according to which sleeping problems are associated with different problems (attention deficit disorder, anxiety, and depression) (Coulombe et al., 2011). In the present research, high levels of behavior problems associated with sleep among Arab adolescents were found commensurate with the findings of sleep latency and sleepiness, according to which Arab adolescents take more time to fall asleep (long sleep latency) than do Jewish adolescents and their daily sleepiness is higher. It appears that the different lifestyle in every culture has a possible influence of behaviors associated with sleep, and it is possible the lifestyle in the Arab sector invites more daily behavior problems related to sleep. However, it is necessary to examine in a continuation research this possible explanation.

This research study did not find a difference between boys and girls in behavior problems related to sleep and did not find an interaction between sector and gender, a finding that reinforces the results of the previous research study performed in Israel (Shochat, 2013) but different from the findings of the research performed in the Ultra-Orthodox population (Vidal, 2014), which compared the sleep patterns and accompanying behaviors of Ultra-Orthodox and secular adolescents. In the research of Vidal (2014), significant differences were found in the everyday behaviors related to sleep and in the interaction between gender and level of religiosity; in the Ultra-Orthodox sector more behavior problems were found among girls than among boys, and in the secular sector more problems were found among boys than among girls. However, although Arab society in Israel is more traditional and religious and tends to examine social norms, it is more open and influenced by the societies of the West than is Ultra-Orthodox society. As said above, here it is possible to assume that Arab society is found in a period of transition and is influenced by modernization – it is shifting from a

traditional religious society to a more modern society with a different quality of life. Therefore, it is possible that these changes in Arab society also influence the adolescents' behaviors and reduce the differences between boys and girls among both Arab and Jewish adolescents. Hence, it is desired to examine in-depth a variety of environmental factors related to the behaviors accompany sleep and the impact on the functioning (Shochat, Cohen-Zion, & Tzischinsky, 2014).

## **Mood**

The present research study found a difference between genders in the mood but differences were not found between the groups or in the interaction between group and gender. It was found that Jewish and Arab adolescent girls reported a depressive mood more often than adolescent boys in both sectors. This finding is commensurate with a prior research that found a difference in mood between boys and girls in both sectors (Shochat, 2013), although Arab society is more traditional and religious and has greater belief in God. A research study that examined the relation between spirituality and symptoms of depression among adolescents found that spirituality, which characterizes religious belief, may contribute to the preservation of lower levels of symptoms of depression among adolescent girls (Pe'rez, Little, & Henrich, 2008). In contrast, since Arab society in Israel is undergoing rapid social changes and is influenced more by the Western societies and modernization, among adolescent boys and girls, who are more exposed to these social changes, spirituality has a low influence on their life. Modernization and exposure to the West have a greater influence on the lifestyle of Arab society in comparison to Jewish society (Anabosi, 2007; Perach, 2002; Sharabany et al., 2006). Therefore, in the present research study we did not find differences in the mood between Arab and Jewish adolescent girls.

These findings contradict the findings of Vidal (2014), who found an influence of religion on the mood of adolescents, in which the Ultra-Orthodox adolescents reported a less depressive mood than did secular adolescents. This finding can be explained in that closed Ultra-Orthodox society is traditional and religious and is less influenced by the Western societies in the world. Since Ultra-Orthodox society believes that all that

happens to the person is as God's will and thus it educates the children, when adolescents experience changes, it is easier for them to overcome them through prayer and faith, and thus their fluctuations in mood are fewer.

### **Morning / Evening Type**

An indication of adolescence is the transition to a later bed time (Hagenauer, Perryman, Lee, & Carskadon, 2009). These changes in the sleep patterns are attributed to biological changes in the sleep/wake system and to environmental factors related to life style (Crowley et al., 2007). There is evidence that the environment and culture also influence the morning/evening type. The evening type characterizes the Jewish population, which is a Western population, while the conservative lifestyle in the Arab population may explain earlier bed times and morning type, in comparison to the Jewish population (Shochat, 2013). The present research study and the study of Shochat found that Arab adolescents (boys and girls) report themselves as having morning types, in comparison to Jewish adolescents, who tend to be more evening types.

### **6.4.5 Exposure to Electronic Media**

Today, adolescents live in a world where there is the incessant growth of the media (Brown & Witherspoon, 2002). Adolescents and children use the computer and computer games during the day, and there is an increased use of electronic devices among adolescents (Smith et al., 2009). Many research studies have examined the influence of the media on adolescents, but the present research study examined for the first time the degree of the exposure of Arab adolescents to electronic media in comparison to Jewish adolescents and for the first time examined the exposure to different types of electronic media (television, computer, mobile phone, and tablet) at a number of different points in time. In the middle of the week we examined the degree of exposure of Arab and Jewish adolescents before the studies, during the studies, after the studies, in the evening hours, and at night after lights out. It was found that Jewish adolescents use the computer for a longer period of time after the studies and watch more television after lights out in the middle of the week than do Arab adolescents. This finding confirms the hypothesis that the exposure to electronic media is higher among

Jewish adolescents. The survey of the World Health Organization (WHO) on health behaviors in the school, which included 41 European countries and Israel, found that Israel is one of the countries in which adolescents spend the most time watching television (WHO, 2008). It was further found that boys use the computer after the studies significantly longer than do girls. It is possible that the reason is that girls help with housework after the studies more than do boys and therefore they had less time to use the computer than did boys. It is suggested to examine in-depth additional possible reasons for differences between boys and girls in the use of electronic media during the week, so as to understand whether these differences are associated with differences in gender, religion, and culture.

Regarding the use of electronic media on the weekend, during the day, in the evening until eight, and at night after lights out, differences were not found according to gender and sector. These findings were surprising, since we expected that adolescent boys and girls in the Jewish sector would report greater use of electronic media than would Arab adolescents. It is possible that the reason why differences were not found between the sectors is that the Arab population is undergoing rapid changes following its exposure to Western society, which influences all adolescents and the lifestyle of Arab society.

#### **6.4.6 Summary of the Findings and the Discussion**

The present research study examined for the first time the influence of the sector, Jewish/Arab, on the sleep patterns and exposure to electronic media during the weekdays and on the weekend. It was hypothesized that there is a relation between the sleep patterns and patterns of exposure to electronic media: as the exposure to electronic media increases, the duration of sleep decreases and the bed time becomes later. The research findings confirm the hypothesis fully. In the present research study a significant relation was found between the sleep patterns and the increase use of electronic media during the day and at night after lights out: a late bed time, and a short sleep duration were related to the increase use of electronic media.

The second hypothesis, according to which differences would be found in the sleep patterns and exposure to electronic media among Arab and Jewish adolescents, was partially confirmed. It was hypothesized that the sleep patterns among Arab adolescents are more correct (long sleep duration and early bed time) in comparison to the sleep patterns among Jewish adolescents. According to the findings, Arab adolescents went to sleep earlier than did Jewish adolescents at the end of the week, but their sleep duration was not longer. In addition, a significant difference in the sleep duration of Arab and Jewish adolescents was not found in the middle of the week and on the weekend. It was further hypothesized that the exposure to media is greater among Jewish adolescents. The present research study found a difference between Arab adolescents and Jewish adolescents in the use of the computer after the studies, according to which the Jewish adolescents use a computer for a longer period of time than do the Arab adolescents. In addition, greater watching of television after lights out was reported: Arab adolescents watch television for less time than do Jewish adolescents in the middle of the week after lights out. This finding confirms the hypothesis that the exposure to electronic media is higher among Jewish adolescents.

The hypothesis according to which gender differences would be found in the sleep patterns was partially refuted and its findings contradict the professional literature. The present research study found differences between adolescent boys and girls in the sleep duration, so that boys sleep on the average longer than do girls on the week days (a difference of almost an hour) but differences were not found between boys and girls on the weekends.

Regarding the influence of the sector on the sleep patterns, it was hypothesized that an interaction would be found between the sector and gender in their influence on the sleep patterns. In other words, among Jewish adolescents there would not be significant differences in the sleep patterns between boys and girls, but in the Arab sector the boys go to sleep latter and sleep less than do the girls. This hypothesis was refuted. A significant interaction between culture (sector) and gender was not found.

The discussion of the above findings was based on the prevailing trend in recent years according to which the Arab population is undergoing rapid changes following its exposure to Western society, which influences all the adolescents and the lifestyle of Arab society, both in relation to sleep patterns and in relation to patterns of use of electronic media. These changes are related to and influence the culture (sector), the religious perceptions, and the personal psychological characteristics of adolescents, such as tendency to sleep latency and patterns of falling asleep and waking.

## **Chapter 7: The Second Stage Study – Parental Intervention**

### **7.1 Research Objectives**

On the basis of the data of the preliminary research conducted on the Arab adolescents (chapter 4), an intervention program was built for the parents of young Arab adolescents, aged nine to eleven.

The objective of the research study was to examine the effectiveness of an intervention program for the parents of Arab adolescents, based on the conceptual model (Golan et al., 1998) and addressing the promotion of the awareness about changes in the health behaviors that characterize adolescence, the development of an authoritative parenting style, and the change of the home environment, so as to promote health behaviors that include correct sleep patterns and controlled exposure to media among normative Arab adolescents, aged nine to eleven.

The secondary objective of the research study was to evaluate the relationships between health behaviors and parenting style on the one hand and the quality of life on the other hand.

Objective 1: To evaluate the advantages and effectiveness of the parent intervention program based on the conceptual model, in which the parents are the agents of change in the increase of the awareness and knowledge about the developmental changes in adolescence and the reinforcement of the authoritative parenting style.

Objective 2: To examine whether the proposed parent intervention will lead to the promotion of health behaviors, including the improvement of the sleep patterns, the limitation of exposure to the media, and the improvement of the quality of life among Arab adolescents.

## **7.2 Research Rationale and Importance**

As I proved in the previous part of the work, sleep is important to the health, the quality of life, and the daily functioning. The social and environmental changes that Arab society is experiencing following the process of modernization and exposure to the culture of the West and Jewish society, the use of electronic media, and the decline in the parental authority are all factors causing harm to the amount and quality of sleep. This harm was found to be common and have significant implications on the normal development of adolescents, and until now no interventions were found to be effective for the coping with the phenomenon. The home environment and parenting style were found to influence the health practices of the children. Arab society in Israel is a traditional and conservative society, and today it is experiencing a process of modernization that influences the values and quality of life and change in the parenting style. To the best of my knowledge, the relationship between the parenting style and the patterns of sleep and exposure to media in the Arab sector was not examined so far. Previous research studies examined the influence of the intervention programs on the sleep patterns in the Western world (Bei et al., 2012; Cain, Gradisar, & Moseley, 2011) and the influence of the intervention programs on the media use among adolescents (Jordan, Hersey, MeDivitt, & Heitzler, 2006). The influence of the parenting styles on the sleep patterns and media use was examined only in Jewish society in Israel, without Arab society (Flint-Bretler, 2013). In addition, the question of whether the patterns of sleep and media consumption are related to the adolescents' quality of life was not examined. These data constitute the rationale for the present research study, which will examine the relationships between the parental authority, the sleep patterns, the use of media, and the quality of life among Arab adolescents in Israel. The effectiveness of the intervention program based on the conceptual model that sees the parents to be the exclusive agents of change in their children's health practices will be examined.

The present research study intends to answer a number of questions that still remain unanswered, despite the scientific progress and the process of modernization that Arab society is undergoing.

Lack of awareness and lack of knowledge among the Arab parents about the importance of sleep cause the harm to the sleep patterns and have implications on the lack of sleep among adolescents.

The authoritative parenting style was found to be related to a healthy lifestyle among adolescents in a number of areas. The conceptual model of the parents as agents of change, based on the increase of the knowledge and the parental awareness, the promotion of the authoritative parenting style, and the change in the home environment were not researched in Arab society.

The increased exposure to the media was found related to the poor sleep patterns, however relationships between these measures and the parenting style (Baumrind, 1978) or the quality of life are not yet known.

Previous research studies show that as the adolescent is younger, there is greater chance of creating behavioral change and influencing the patterns of behavior. Thus, it is important to examine the effectiveness of the intervention program among parents of young adolescents aged nine to eleven.

### **7.3 Research Hypotheses**

The following research hypotheses are posited:

- The proposed intervention program according to the conceptual model will lead to the increase of the awareness and knowledge about developmental changes during adolescence.
- The proposed intervention program will lead to the reinforcement of the authoritative parenting style.

- The proposed intervention program will lead to the promotion of health behaviors including the improvement of sleep patterns and the limitation of the exposure to the media among young adolescents.
- The proposed intervention program will lead to the improvement in the quality of life among adolescents.

## **7.4 Research Results**

### **7.4.1 Participants**

A total of one hundred respondents participated in the research study, fifty in the experimental group that participated in the intervention and fifty in the control group that did not participate in the intervention. All the respondents who participated in the research study were mothers (100%), their average age was 38.37 years (SD=5.5.3), and on the average they had studied 12.63 years (SD=2.32). The parents who participated in the research study were healthy. The age of their children was an average of 10.4, the mean of the family income is 3523.8 Israeli shekels (862.2 Euro), (SD=3577.6 shekels= 875.6 Euro). All had a television and a computer at home.

The number of participants in the workshop was large, fifty mothers. Therefore two workshops were held, each with 25 mothers. In the present research study, every parent received three scores, one for each parenting style. The mean score of the authoritative parenting style was 4.10 (SD=0.74), the authoritarian parenting style 3.01 (SD=0.72), and the permissive parenting style 2.76 (SD=0.54).

Table Number 8: Description of the Demographic Variables according to Group:  
Experimental Group and Control Group (N=100)

	Experimental Group	Control Group
Number of Participants	N=50	N=50
Mean Age	38.37	37.4
Number of Years of Study	12.63	12.6
Age of Their Adolescent Children	10.4	10.5
Mean Monthly Income	3,523 Shekels (862.2 Euro)	3,530 Shekels (864.03 Euro)

### 7.4.2 First Hypothesis - Knowledge and Awareness of the Parents about the Developmental Changes in Adolescence

In the research study, we hypothesized that the knowledge of the parents who are participating in the workshops will increase regarding the development during adolescence and the importance of sleep at this age. To examine the hypothesis, two-factor variance test was performed beyond the examination of the parents' scores in the knowledge questionnaire, at two points in time, before the intervention and three months after the intervention, for the two groups, the experimental group and the control group. The findings are presented in the following table.

Table Number 9: Mean and Standard Deviation of the Knowledge Questionnaire of the Experimental Group and the Control Group (n=100)

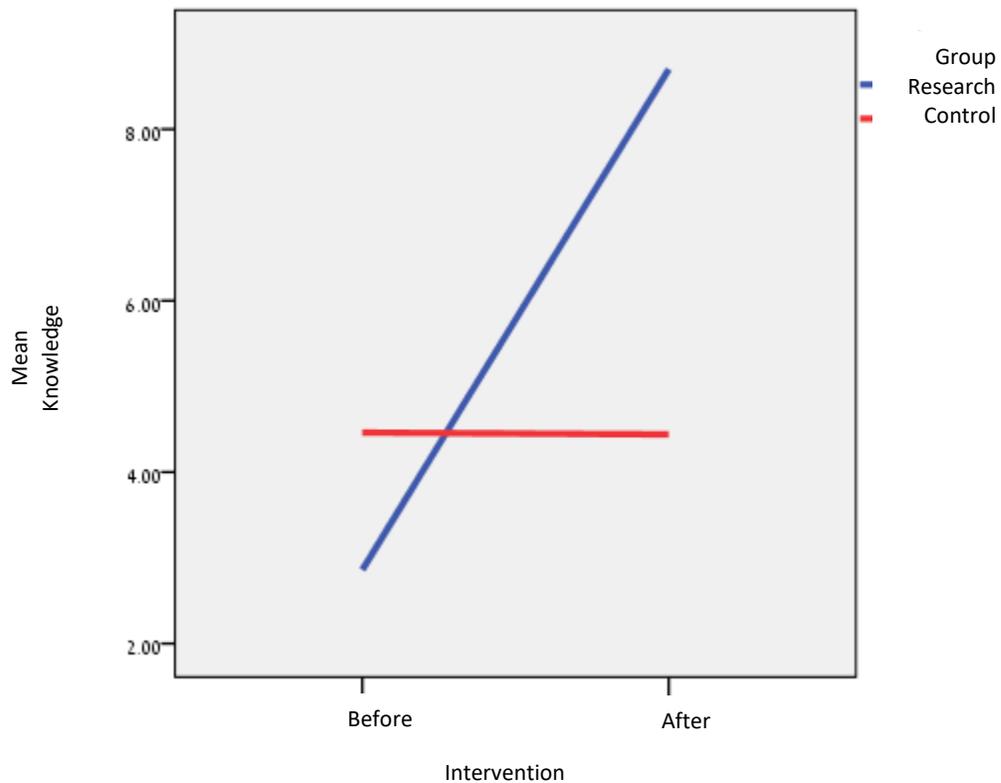
	<b>Before the Intervention n=50 M (SD)</b>	<b>Three Months after the Intervention n=50 M (SD)</b>	<b>Total</b>
<b>Experimental Group n=50</b>	2.86 (1.56)	8.70 (0.54)	5.78 (3.15)
<b>Control Group n=50</b>	4.46 (1.45)	4.44 (1.51)	4.45 (1.47)
<b>Total</b>	3.36 (1.70)	6.57 (2.42)	5.11 (2.54)

The two-way variance analysis found a significant effect for the research group on the level of knowledge regarding the importance of sleep  $F(1,196)=49.35$ ,  $p<0.01$ . The level of knowledge among the experimental group was found to be significantly higher in comparison to the control group.

In addition, a significant effect of the intervention on the level of knowledge regarding the importance of sleep was found ( $F(1,196)=236.25$ ,  $p<0.01$ ). The level of knowledge after the intervention was found higher significantly in comparison to before the intervention.

Furthermore, a significant interaction between the intervention on the level of knowledge regarding the importance of sleep was found in the research group ( $F(1,196)=239.51, p<0.01$ ). It is possible to see that in the experimental group the gap in the level of knowledge before and after the intervention is significantly higher in comparison to the control group, for which the change in the level of knowledge is negligible. These findings are illustrated in the following figure and indicate that the research hypothesis was confirmed.

Figure Number 2: Differences in the Level of Knowledge according to Control and Intervention Groups



### 7.4.3 Second Hypothesis - Parenting Style

In the present research study, we hypothesized that the intervention program will reinforce the authoritative parenting style among the parents who are participating in the

workshop. To examine this hypothesis, we perform a two-factor variance analysis for the measures of the parenting style questionnaire (authoritative, authoritarian, and permissive) before the intervention and three months after the end of the intervention for the experimental group and the control group.

Table Number 10: Mean and Standard Deviation of the Measures of the Questionnaire of Parenting Style (n=100)

	Participated in a Workshop		Did Not Participate in a Workshop	
	Before the Intervention n=50 M (SD)	Three Months after the Intervention n=50 M (SD)	Before the Intervention n=50 M (SD)	Three Months after the Intervention n=50 M (SD)
<b>Authoritative Parenting Style</b>	3.95 (0.90)	4.17 (0.75)	4.14 (0.65)	4.18 (0.64)
<b>Authoritarian Parenting Style</b>	3.02 (0.76)	3.04 (0.75)	2.98 (0.68)	2.98 (0.68)
<b>Permissive Parenting Style</b>	2.76 (0.58)	2.74 (0.63)	2.77 (0.48)	2.77 (0.48)

In the two-way variance analysis regarding the authoritative parenting style, a significant effect was not found for the experimental group on the authoritative parenting style ( $F(1,196)=0.62, p>0.05$ ). In addition, a significant effect was not found for the intervention on the authoritative parenting style ( $F(1,196)=1.02, p>0.05$ ). A significant interaction for the intervention and the research group on the authoritative parenting style was also not found ( $F(1,196)=1.02, p>0.05$ ).

In the two-way variance analysis regarding the authoritarian parenting style, a significant effect was not found for the experimental group on the authoritarian parenting style ( $F(1,196)=0.22, p>0.05$ ). In addition, a significant effect was not found for the intervention on the authoritarian parenting style ( $F(1,196)=0.01, p>0.05$ ). A significant interaction for the intervention and the research group on the authoritarian parenting style was also not found ( $F(1,196)=0.01, p>0.05$ ).

In addition, two-way variance analysis regarding the permissive parenting style did not find a significant effect for the research group on the permissive parenting style ( $F(1,196)=0.08, p>0.05$ ). In addition, a significant effect was not found for the intervention on the permissive parenting style ( $F(1,196)=0.02, p>0.05$ ). A significant

interaction was also not found for the intervention and research group on the permissive parenting style ( $F(1,196)=0.02$ ,  $p>0.05$ ). These findings indicate that the research hypothesis on the topic was not confirmed.

#### 7.4.4 Third Hypothesis - Sleep Patterns and Media

##### Sleep Patterns

In the present research study, we hypothesized that the intervention program would lead to the improvement in the sleep patterns of the adolescents according to the measure of the SSHS questionnaire (bedtime and wake-up time) in the middle and at the end of the week. To examine this hypothesis, two-factor variance analysis was conducted for the measures of the sleep questionnaire SSHS for adolescents before the intervention and three months after the end of the intervention for the experimental group and the control group. First, the descriptive characteristics of these measures are presented in the entire sample.

Table Number 11: Descriptive Characteristics of the Sleep Patterns in the Entire Sample (N=100)

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
<b>Bedtime in the middle of the week</b>	21:02	00:43	19:00	23:00
<b>Wake-up time in the middle of the week</b>	06:43	00:25	06:00	08:00
<b>Bedtime on the weekend</b>	21:35	02:04	03:00	24:00
<b>Wake-up time on the weekend</b>	08:33	1:09	06:30	13:00

According to the data presented in the table, it is possible to see according to the parents' reports that in the middle of the week the bedtime is around 9 at night on the weekend around 9:30 at night. In terms of wake-up time, in the middle of the week the average time is about 6:45 in the morning and on the weekend around 8:30 in the morning.

Table Number 12: Means and Standard Deviations of the School Sleep Habits Survey (SSHS) in Hours for the Experimental Group and the Control Group (n=100)

	Participated in a Workshop		Did Not Participate in a Workshop	
	Before the Intervention n=50 M (SD)	Three Months after the Intervention n=50 M (SD)	Before the Intervention n=50 M (SD)	Three Months after the Intervention n=50 M (SD)
<b>Bedtime middle of the week</b>	21:10 (0:46)	20:54 (0:38)	21:03 (0:44)	21:13 (0:44)
<b>Bedtime end of the week</b>	21:46 (0:49)	21:16 (0:36)	21:39 (2:51)	21:50 (2:51)
<b>Wake-up time middle of the week</b>	06:45 (0:24)	06:41 (0:22)	06:42 (0:27)	06:40 (0:27)
<b>Wake-up time end of the week</b>	08:45 (1:07)	07:59 (0:43)	08:45 (1:15)	08:50 (1:15)

In the two-way variance analysis regarding the bedtime in the middle of the week, a significant effect was not found for the research group on the bedtime ( $F(1,196)=0.01$ ,  $p>0.05$ ). In addition, a significant effect of the intervention on the bedtime in the middle of the week was not found ( $F(1,196)=1.58$ ,  $p>0.05$ ). A significant interaction for the intervention and research group on the bedtime in the middle of the week was also not found ( $F(1,196)=1.58$ ,  $p>0.05$ ).

With regard to the bedtime on the weekend, the research did not find a significant effect for the research group on the bedtime ( $F(1,194)=0.18$ ,  $p>0.05$ ). In addition, a significant effect of the intervention on the bedtime on the weekend was not found ( $F(1,194)=0.754$ ,  $p>0.05$ ). A significant interaction for the intervention and research group on the bedtime on the weekend was also not found ( $F(1,194)=0.74$ ,  $p>0.05$ ).

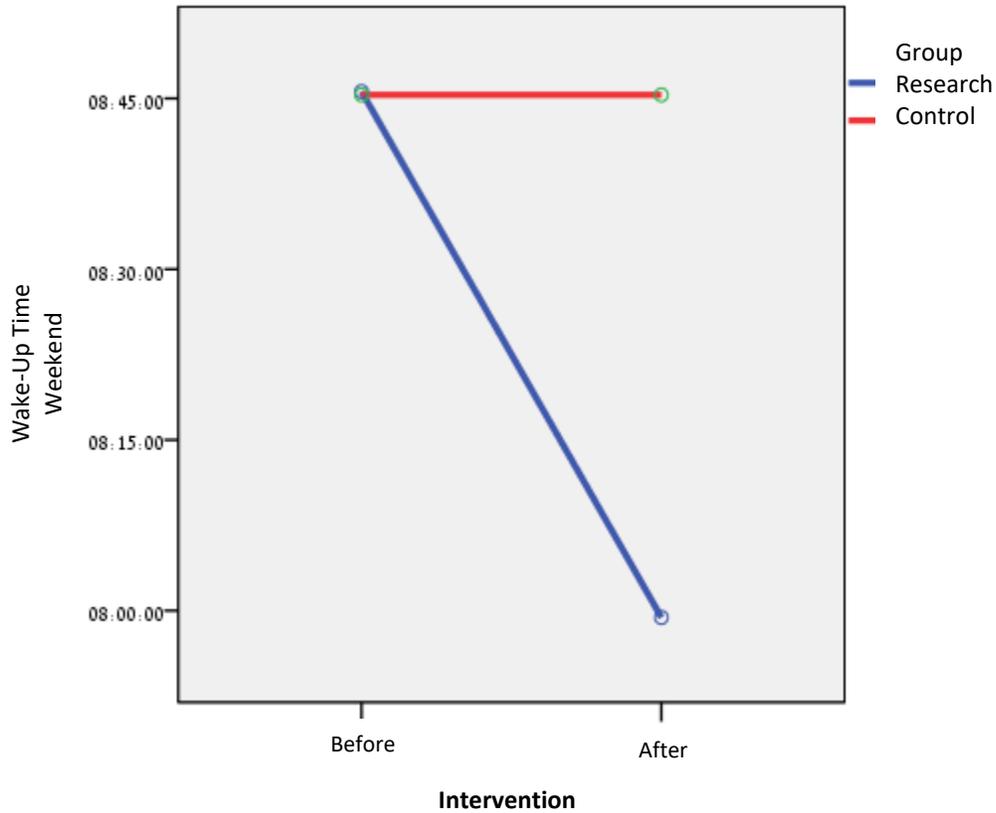
Regarding the wake-up time in the **middle of the week**, a significant effect of the research group on the wake-up time was not found ( $F(1,196)=0.05$ ,  $p>0.05$ ). In addition, a significant effect of the intervention on the wake-up time in the middle of the week was not found ( $F(1,196)=0.26$ ,  $p>0.05$ ). A significant interaction of the intervention and the

research group on the wake-up time in the middle of the week was also not found ( $F(1,196)=0.26, p>0.05$ ).

The research study did not find a significant effect of the research group on the wake-up time **on the weekend** in comparison to the control group ( $F(1,194)=5.80, p<0.05$ ). In the research group, the wake-up time on the weekend is significantly earlier in comparison to the control group. In addition, a significant effect of the intervention on the wake-up time on the weekend was found ( $F(1,194)=5.95, p<0.05$ ). The wake-up time on the weekend before the intervention was significantly later than the wake-up time after the intervention. Last, a significant interaction of the intervention and control group on the wake-up time on the weekend was found ( $F(1,194)=5.95, p<0.05$ ).

It is possible to see that while in the control group no change occurred in the wake-up times before and after the intervention, in the research group the wake-up time on the weekend was earlier after the intervention. These findings are illustrated in the following figure.

Figure Number 3: Differences in the Sleep Measures according to Control and Intervention Groups



## Media

We hypothesized that the intervention program would lead to a decline in the measures of the media. To examine the research hypothesis, two-factor variance analysis was performed for the measures of the media questionnaire (television, computer, mobile phone/tablet) before the intervention and three months after the end of the intervention program, for the experimental group and the control group. First, descriptive characteristics of these messages in the entire sample are presented in the following table.

Table Number 13: Descriptive Characteristics of the Use of Media in the Entire Sample  
(N=100)

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Watching television in the middle of the week	1.89	1.05	0.50	6.00
Watching television on the weekend	2.63	1.49	1.00	8.00
Using the computer in the middle of the week	2.03	1.04	0.50	6.00
Using the computer on the weekend	2.38	1.33	0.50	6.00
Using a mobile phone/tablet in the middle of the week	2.28	1.39	1.00	8.00
Using a mobile phone/tablet on the weekend	2.51	1.57	0.50	10.00

According to the data presented in the table, it can be seen that due to the parents' reports, in the middle of the week the average viewing time of television is nearly two hours and on the weekend about two and a half hours. In the middle of the week, the average duration of use of the computer is about two hours and on the weekend about two and a half hours. In the middle of the week, the average duration of use of the mobile phone/tablet is about two hours and on the weekend nearly two and a half hours.

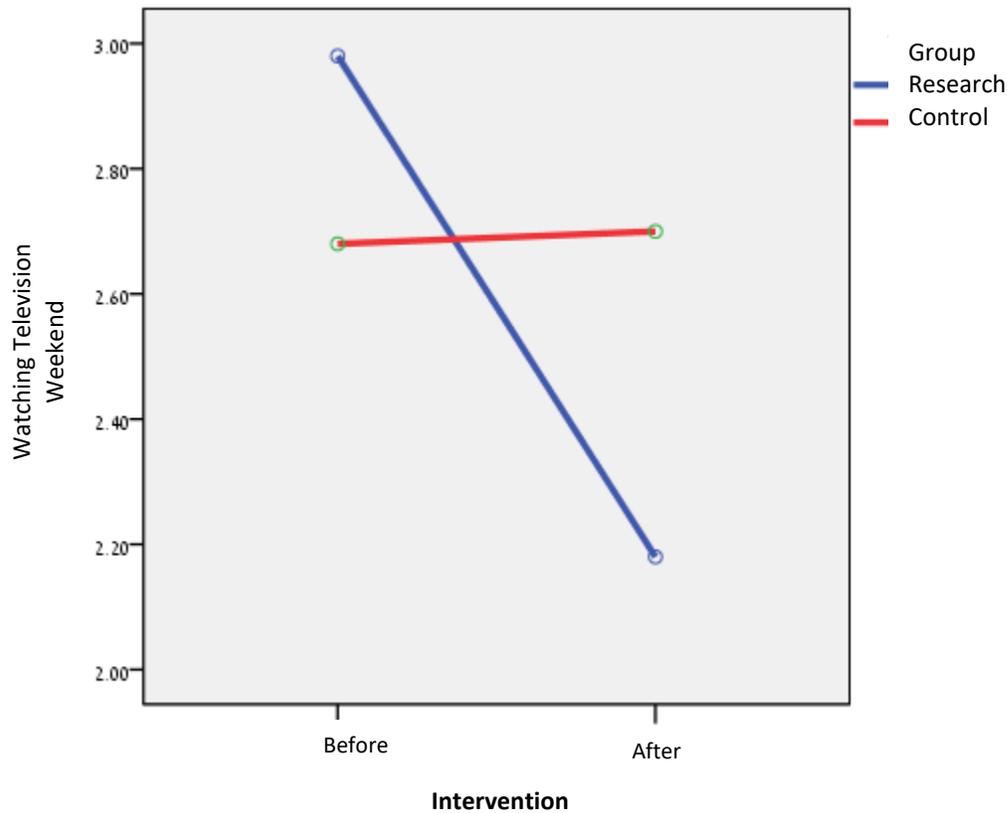
Table Number 14: Means and Standard Deviation (in hours) of the Media Measures in the Middle of the Week and the End of the Week for the Experimental Group and the Control Group (n=100)

	<b>Participated in a Workshop</b>		<b>Did not Participate in a Workshop</b>	
	<b>Before the Intervention n=50 M (SD)</b>	<b>Three Months after the Intervention n=50 M (SD)</b>	<b>Before the Intervention n=50 M (SD)</b>	<b>Three Months after the Intervention n=50 M (SD)</b>
Watching television in the middle of the week	2.15 (1.07)	1.64 (0.72)	1.89 (1.16)	1.91 (1.15)
Watching television on the weekend	2.98 (1.60)	2.18 (0.83)	2.68 (1.65)	2.70 (1.65)
Using the computer in the middle of the week	2.32 (1.16)	1.66 (0.81)	2.07 (1.03)	2.08 (1.05)
Using the computer on the weekend	2.66 (1.39)	1.84 (0.87)	2.52 (1.43)	2.58 (1.43)
Using a mobile phone/tablet in the middle of the week	2.81 (1.54)	1.85 (0.88)	2.24 (1.46)	2.30 (1.46)
Using a mobile phone/tablet on the weekend	3.05 (1.82)	2.04 (0.91)	2.46 (1.63)	2.59 (1.63)

In the two-way variance analysis regarding the hours of viewing television in the middle of the week, a significant effect was not found for the research group on the television viewing hours in the middle of the week ( $F(1,196)=0.01, p>0.05$ ). In addition, a significant effect of the intervention on the hours of television viewing in the middle of the week was not found ( $F(1,196)=2.73, p>0.05$ ). A significant interaction of the intervention and the research group on the television viewing hours in the middle of the week was also not found ( $F(1,196)=3.19, p>0.05$ ). It is important to note that the interaction was on the border of statistical significance ( $p=0.07$ ). Thus, it can be said that there is a trend of decline in the viewing hours on the television in the middle of the week in the experimental group before/after the intervention, while in the control group a change was not apparent.

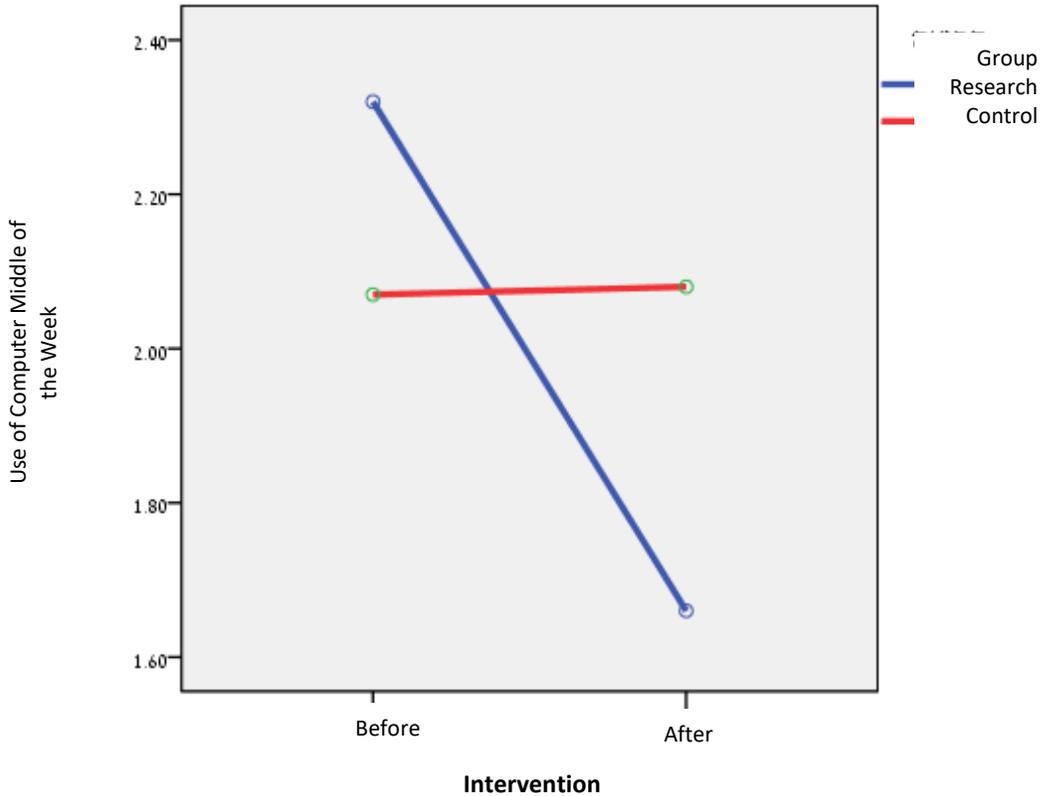
Regarding the television viewing hours on the weekend, a significant effect was not found of the research group on the television viewing hours on the weekend ( $F(1,196)=0.27, p>0.05$ ). The effect of the intervention on the television viewing hours on the weekend was on the border of statistical significance ( $F(1,196)=03.46, p=0.06$ ). In other words, the average duration of the television viewing time on the weekend was higher in general before the intervention in comparison to after the intervention. In addition a significant interaction of the intervention and the research group on the television viewing hours on the weekend was found ( $F(1,196)=3.82, p<0.05$ ), so that in the experimental group there was a relatively significant decline in the television viewing hours on the weekend before/after the intervention, while in the control group a change was not apparent. The data are illustrated in the following figure.

Figure Number 4: Differences in the Watching of Television on the Weekend according to Control and Intervention Groups



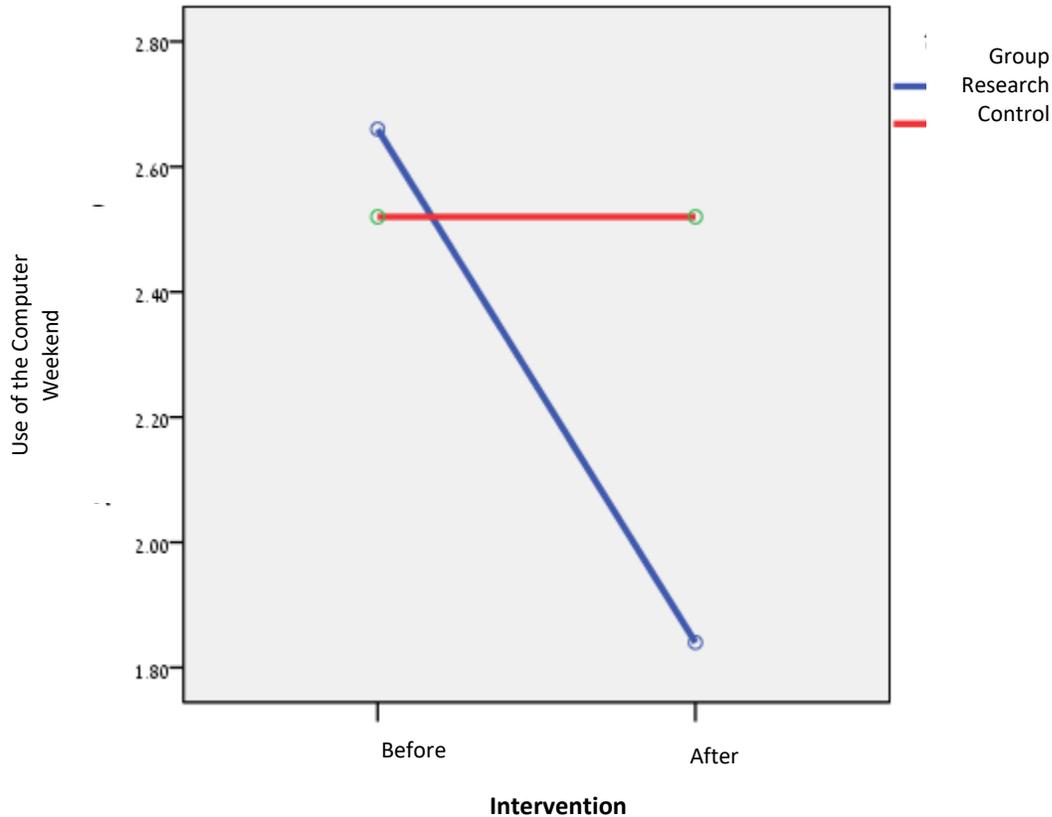
Regarding the hours of computer use in the middle of the week, a significant effect of research group on the hours of computer use was not found ( $F(1,196)=0.34$ ,  $p>0.05$ ). The effect of the intervention on the hours of computer use in the middle of the week was found to be significant ( $F(1,196)=5.01$ ,  $p<0.05$ ). The average duration of the computer use in the middle of the week was significantly higher before the intervention in comparison to after the intervention. In addition, a significant interaction of the intervention and the research group on the hours of computer use was found in the middle of the week ( $F(1,196)=05.33$ ,  $p<0.05$ ). Thus, in the experimental group there was a relatively significant decline in the hours of computer use in the middle of the week before/after the intervention, while in the control group no change was apparent. The data are illustrated in the following figure.

Figure Number 5: Differences in the Use of the Computer in the Middle of the Week according to Control and Intervention Groups



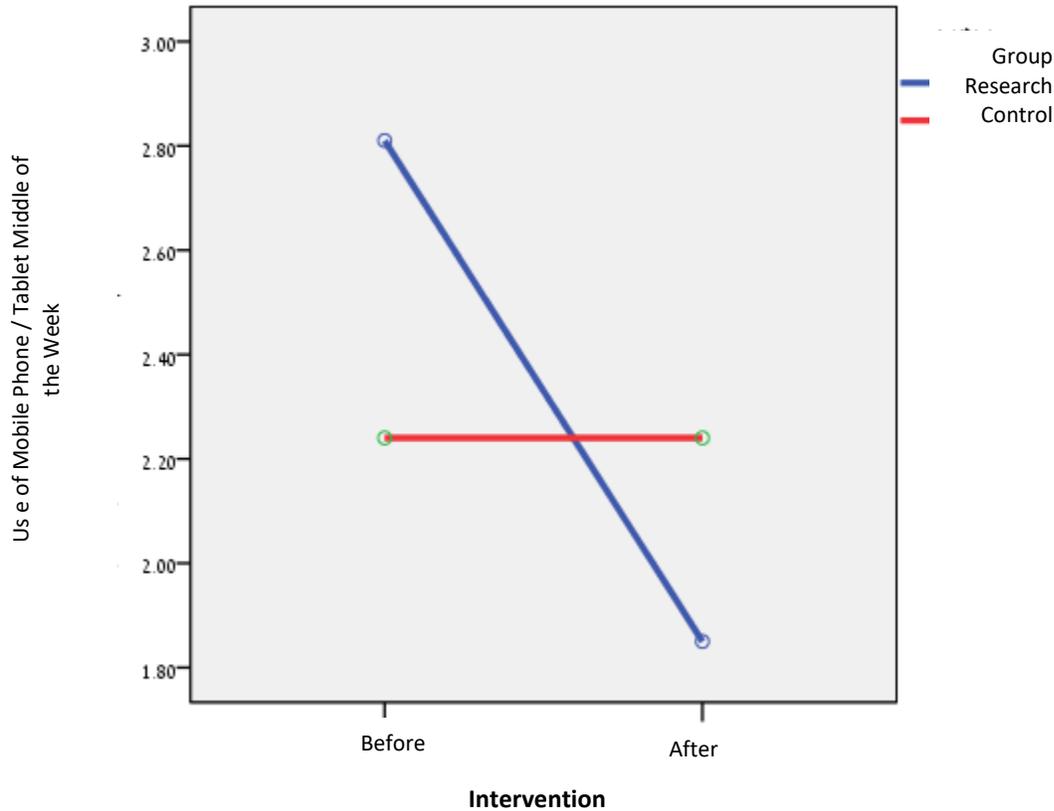
Regarding the hours of computer use on the weekend, a significant effect was not found of the research group on the hours of use ( $F(1,196)=2.14$ ,  $p>0.05$ ). The effect of the intervention on the hours of computer use on the weekend was found to be significant ( $F(1,196)=4.93$ ,  $p<0.05$ ). The average duration of computer use on the weekend was significantly higher before the intervention in comparison to after the intervention. In addition, a significant interaction of the intervention and the research group was found on the hours of computer use on the weekend ( $F(1,196)=5.22$ ,  $p<0.05$ ). Thus, in the experimental group there was a relatively significant decrease in the hours of computer use on the weekend before/after the intervention, while in the control group a change was not apparent. The data are illustrated in the following figure.

Figure Number 6: Differences in the Use of the Computer on the Weekend according to Control and Intervention Groups



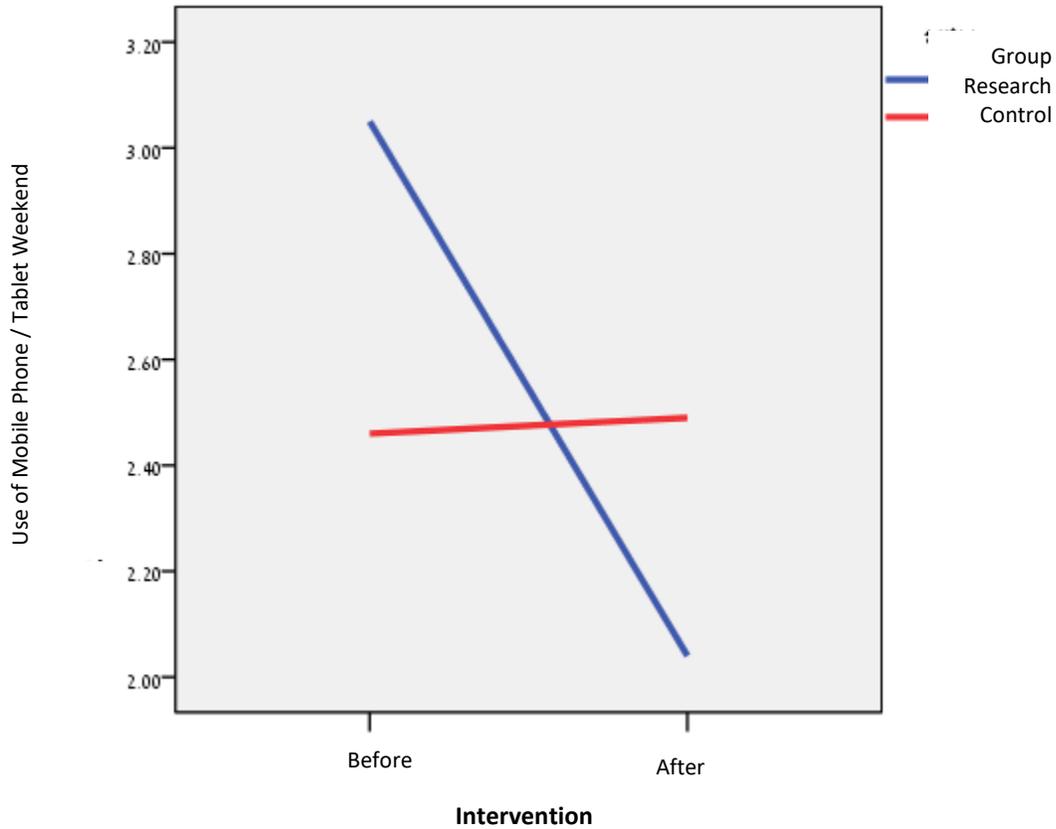
Regarding the hours of use of the mobile phone/tablet in the middle of the week, a significant effect of the research group on the hours of use was not found ( $F(1,196)=0.21$ ,  $p>0.05$ ). The effect of the intervention on the hours of mobile phone/tablet use was found to be significant ( $F(1,196)=6.18$ ,  $p<0.05$ ). The average duration of use of the mobile phone/tablet in the middle of the week was significantly higher before the intervention in comparison to after the intervention. In addition, a significant interaction was found for the intervention and the research group on the hours of the mobile phone/tablet use in the middle of the week ( $F(1,196)=6.18$ ,  $p<0.05$ ), so that in the experimental group there was a relatively significant decrease in the hours of mobile phone/tablet use in the middle of the week before/after the intervention, while in the control group a change was not apparent. The data are illustrated in the following figure.

Figure Number 7: Differences in the Use of the Mobile Phone / Tablet in the Middle of the Week according to Control and Intervention Groups



Regarding the hours of mobile phone/tablet use on the weekend, a significant effect of the research group on the hours of use was not found ( $F(1,196)=0.10, p>0.05$ ). The effect of the intervention on the hours of use of the mobile phone/tablet on the weekend was found to be significant ( $F(1,196)=5.05, p<0.05$ ). The average duration of use of the mobile phone/tablet on the weekend was higher significantly before the intervention in comparison to after the intervention. In addition, a significant interaction of the intervention and the research group on the hours of the mobile phone/tablet use in the middle of the week was found ( $F(1,196)=5.69, p<0.05$ ), so that in the experimental group there was a relatively significantly decrease in the hours of use of the mobile phone/ tablet on the weekend before/after the intervention, while in the control group a change was not apparent. The data are illustrated in the following figure.

Figure Number 8: Differences in the Use of the Mobile Phone / Tablet on the Weekend according to Control and Intervention Groups



#### **7.4.5 Fourth Hypothesis - Quality of Life**

In the research study, we hypothesized that the intervention program would lead to an improvement in the measures of quality of life. First, the descriptive characteristics of the measures of quality of life in the entire sample are presented (on a scale of 0-4).

Table Number 15: Descriptive Characteristics of the Quality of Life in the Entire Sample  
(n=100)

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
<b>Physical quality of life (physical difficulty)</b>	0.55	0.61	0.00	2.80
<b>Emotional quality of life (emotional difficulty)</b>	1.05	0.76	0.00	2.75
<b>Social quality of life (social difficulty)</b>	0.70	0.76	0.00	3.33
<b>Difficulty with functioning in the school</b>	1.20	1.00	0.00	4.00
<b>General quality of life</b>	0.84	0.55	0.00	2.33

According to the data presented in the table, it can be seen that on the average the sample of participants report relatively high general quality of life (0.84 on a scale of 0 (Not at all) -4 (Almost always)), when a high score indicates difficulty/ lower quality of life. In the rest of the measures of quality of life – physical (0.55), emotional (1.05), psychosocial (0.7) and functioning in the school (1.2), the level of quality of life is also relatively high. Of all the measures, the main difficulty was the functioning in the school and in the emotional realm.

To examine the research hypothesis, two-way variance analysis for the measures of the quality of life questionnaire before the intervention and three months after the intervention was performed for the experimental group and the control group.

Table Number 16: Mean and Standard Deviation of the Measures of Quality of Life for the Experimental Group and the Control Group (n=100)

	<b>Participated in a Workshop</b>		<b>Did not Participate in a Workshop</b>	
	<b>Before the Intervention n=50 M (SD)</b>	<b>Three Months after the Intervention n=50 M (SD)</b>	<b>Before the Intervention n=50 M (SD)</b>	<b>Three Months after the Intervention n=50 M (SD)</b>
<b>Physical Quality of Life</b>	0.50 (0.54)	0.43 (0.46)	0.63 (0.70)	0.60 (0.65)
<b>Emotional Quality of Life</b>	1.11 (0.74)	0.96 (0.78)	1.07 (0.76)	1.03 (0.66)
<b>Psychosocial Quality of Life</b>	0.76 (0.69)	0.72 (0.63)	0.67 (0.85)	0.68 (0.75)
<b>Functioning in the School</b>	1.32 (1.00)	1.22 (0.97)	1.12 (1.02)	1.10 (1.00)
<b>General Quality of Life</b>	0.88 (0.48)	0.79 (0.45)	0.85 (0.63)	0.80 (0.61)

In the two-way variance analysis, a significant effect of the research group on the physical quality of life was not found ( $F(1,196)=3.65, p>0.05$ ). In addition, a significant effect of the intervention on the physical quality of life was not found ( $F(1,196)=0.17, p>0.05$ ). Furthermore, a significant interaction of the intervention and research group on the physical quality of life was not found ( $F(1,196)=0.17, p>0.05$ ).

Regarding the emotional quality of life, a significant effect of the research group on the emotional quality of life was not found ( $F(1,196)=0.10, p>0.05$ ). In addition, a significant effect of the intervention on the emotional quality of life was not found ( $F(1,196)=0.48, p>0.05$ ). Furthermore, a significant interaction of the intervention and research group of the emotional quality of life was not found ( $F(1,196)=0.48, p>0.05$ ).

With regard to the psycho-social quality of life, a significant effect of the research group on the psycho-social quality of life was not found ( $F(1,196)=0.38, p>0.05$ ). In addition, a significant effect of the intervention on the psycho-social quality of life was not found ( $F(1,196)=0.03, p>0.05$ ). Furthermore, a significant interaction of the intervention and research group of the psycho-social quality of life was not found ( $F(1,196)=0.03, p>0.05$ ).

With regard to the functioning in the school, a significant effect of the research group on the functioning in the school was not found ( $F(1,196)=1.05$ ,  $p>0.05$ ). In addition, a significant effect of the intervention on the functioning in the school was not found ( $F(1,196)=0.14$ ,  $p>0.05$ ). Furthermore, a significant interaction of the intervention and research group of the functioning in the school was not found ( $F(1,196)=0.14$ ,  $p>0.05$ ).

Last, regarding the general quality of life, a significant effect of the research group on the general quality of life was not found ( $F(1,196)=0.08$ ,  $p>0.05$ ). In addition, a significant effect of the intervention on the general quality of life was not found ( $F(1,196)=0.36$ ,  $p>0.05$ ). Furthermore, a significant interaction of the intervention and research group of the general quality of life was not found ( $F(1,196)=0.36$ ,  $p>0.05$ ).

#### **7.4.6 Further Findings**

##### **Relationship between Parenting Style and Sleep Measures before the Intervention**

To examine the relationships between the parenting style and the sleep measures (bedtime in the middle and end of the week and wake-up time in the middle and at the end of the week) before the intervention the Pearson test was performed. The test findings showed that significant relationships were not found between the three parenting styles, authoritative, authoritarian, and permissive, and the bedtime in the middle and end of the week or the wake-up time in the middle of the week and on the weekend.

##### **Relationship between Sleep Measures and Quality of Life**

To examine the relationships between the sleep measures (bedtime in the middle and end of the week and wake-up time in the middle and end of the week) and the quality of life measures before the intervention the Pearson test was performed. The test findings showed that significant relationships were not found between the bedtime in the middle and at the end of the week and the wake-up time in the middle and end of the week and the measures of quality of life – physical quality of life, emotional quality of life, psychosocial quality of life, functioning in the school, and general quality of life.

## **Summary of the Empirical Findings**

The first and second research hypotheses were that the intervention program would lead to an increase of awareness and knowledge about developmental changes in adolescence and strengthening of the authoritative parenting style. First, the differences were examined on the level of knowledge regarding the importance of sleep according to the research and intervention groups (before/after). The research findings indicated that the level of knowledge regarding the importance of sleep in the experimental group was found to be significantly higher in comparison to the control group. In addition, it was found that the level of knowledge after the intervention was significantly higher in comparison to before the intervention. As expected, it was even found that in the experimental group the gap in the level of knowledge before and after the intervention was significantly higher in comparison to the control group, for which the change in the level of knowledge was negligible. However, the research findings showed that significant differences were not found in the authoritative parenting style (or permissive or authoritarian) according to the research and intervention groups led to the strengthening of the authoritative parenting style. These findings indicate that the first research hypothesis was confirmed and the second research hypothesis was not partially confirmed.

The third and fourth research hypotheses were that the proposed intervention program would lead to the promotion of health behaviors including the improvement of sleep patterns, the limitation of exposure to the media, and the improvement of the quality of life among adolescents. In the examination of the differences in the sleep measures according to the research and intervention groups it was found that in the research groups the wake-up time on the weekend was significantly earlier in comparison to the control group. In addition, it was found that the wake-up time on the weekend before the intervention was significantly later in comparison to the wake-up time after the intervention. As expected, it was even found that while in the control group there was no change in the wake-up times before and after the intervention, in the research group the wake-up time on the weekend was earlier after the intervention. Regarding the other measures of sleep, bedtime and wake-up time in the middle of the week and bedtime on

the weekend, differences were not found according to the research and intervention groups. In other words, it is possible to conclude that the intervention program led to the improvement of the sleep pattern of wake-up time on the weekend.

In the continuation, in the examination of the differences in the exposure to media according to the research and intervention groups a trend of decline in the hours of television watching in the middle of the week was found and even a relatively significant decline in the hours of television watching on the weekend in the experimental group before/after the intervention, while in the control group a change was not apparent. The mean television viewing time on the weekend was higher in general before the intervention than after the intervention. The mean computer use time and mean mobile phone/tablet use time in the middle of the week and on the weekend was significantly higher before the intervention in comparison to after the intervention. In addition, in the experimental group there was a relatively significant decline in the hours of computer use and mobile phone/tablet use in the middle of the week and on the weekend before/after the intervention, while in the control group a change was not apparent. In other words, it can be concluded that the intervention program indeed led to the improvement of the exposure to the media and the reduction of the viewing and use times of the different media examined in this research study. However, the research findings showed that differences were not found in the general quality of life and the rest of the quality of life measures according to research and intervention groups. In other words, it is not possible to determine that the intervention program indeed led to an improvement in the quality of life among adolescents. These findings indicate that the third and fourth research hypotheses were partially confirmed.

#### **7.4.7 Analysis of the Qualitative Part**

The parents' questionnaires included two open-ended questions to obtain information about the changes undertaken in the family following the intervention that they participated in for three months.

The first question was: Following the intervention, were there changes at home on the topics related to sleep? If so, then note the changes. The mothers who participated in

the intervention program reported that the intervention helped them and contributed to them greatly and that a change occurred at home following their participation in the workshops, such as sleeping only in the bedroom, sleeping in a quiet and dark bedroom, attempt to prevent the children from drinking caffeinated drinks in the evening (including tea, cola, coffee, and hot chocolate), going to sleep between 20:00-21:00 at night on weekdays, going to sleep at a regular hour, not sleeping in the afternoon, not watching television, and not being on the computer about an hour to two hours before going to sleep, not engaging in sports activity about an hour to two hours before going to sleep, turning off or silencing the mobile phone before sleep, opening the blinds in the morning to let in the daylight). In contrast, most of the parents who did not participate in the intervention program did not answer this question.

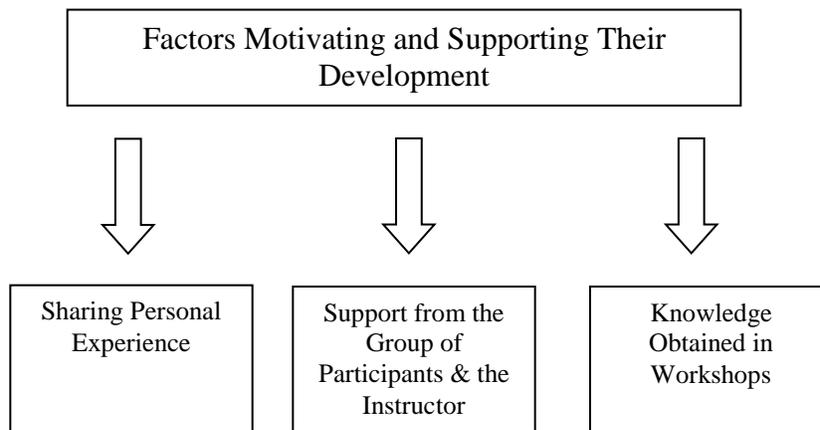
The second question was: Following the intervention, were there changes at home on topics related to the media? If so, note the changes. The parents expressed that the control in the topic of media was more difficult, but nevertheless there were slight changes, such as the computer and television were not in the bedroom, the tablet and the mobile phone were turned off before bedtime and removed from the bedroom, there was no eating when using media devices, and they tried to occupy their children with other activities, such as going to the garden or playing family games, instead of spending long hours in front of media devices. For this question, too, most of the parents who did not participate in a workshop did not answer.

Some of the mothers who participated in the program reported that it was hard for them to make a change in the home environment, especially regarding the mobile phone. Their children would keep it in their room and refuse to remove it from their room. In addition, they would refuse to go to sleep early because their older siblings (aged seventeen-eighteen) are in the same room and they remain awake until a later hour. Another difficulty the parents reported is with setting clear boundaries for the children, especially when they did not receive support from their spouse. They asserted that the participation of the fathers in such workshops is essential so as to effect a significant change in the home environment. In addition, some of the parents recommended that the workshops should last for a longer period of time and be more dynamic, so as to let the

parents bring their personal experience and discuss the difficulties they encounter with their adolescent children.

In addition, a large number of the mothers who participated in the intervention reported that the difficulty with the influence on their children in the topic of media and sleep was more serious with the boys. With the girls, it was easier to control their sleeping hours and to restrict their use of electronic media. The topic of the difference between boys and girls also arose during the discussions in the workshops. The mothers told about the difficulty in their coping with their boys more than with their girls. The boys are more stubborn and do not always accept the limitations that the parents attempt to impose.

Analysis of the two questions and the discussions in the workshops indicated three main factors that motivated and supported the development of the mothers who participated in the workshops.



The mothers who participated in the workshops reported that the knowledge and information they obtained during the workshops increased their awareness of the importance of sleep and the influence of excessive use of the media on the health of their adolescent children and especially their sleep, which is vital to their normal development.

Samar: “In the workshop I received much information about the importance of sleep for my children and today I am more careful that they will go to sleep not at late hours, even during the vacations.”

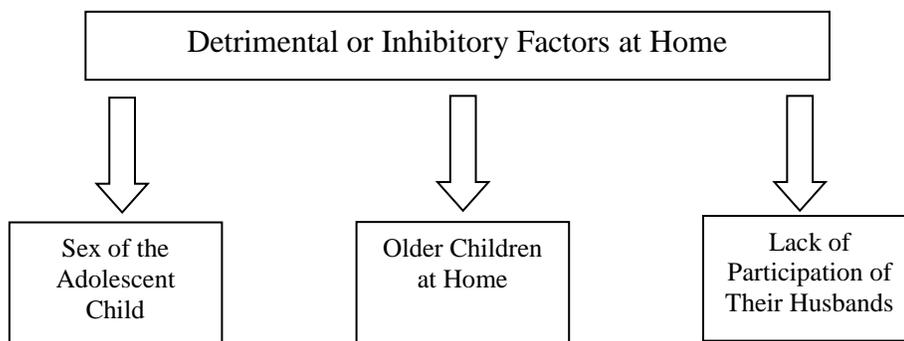
Lila: “Ahmad, my son, would fall asleep in front of the television and after an hour I would move him to the bedroom. After the workshops, today I turn off the television, give him a book to read in the bedroom, and then turn of the lights right after he falls asleep.”

In addition, the support from the group of participants and the sharing of their personal experience and difficulties in the raising of adolescents in the Internet era helped them obtain the instruments for coping with this difficulty, such as, for example, to provide substitutes, like going out to play with the child in the yard or giving the child thinking games and having the entire family participate in the game. These activities will slightly distance the child from the Internet and will also strengthen the family relationship.

Sapa: “In the workshop I received new instruments what to do in my children’s leisure time hours so that they would not remain in front of the computers. A week ago I took them to a horse farm beside the home and we spent a few hours together.”

Ramzia: “I bought a number of small games and I sat with my son to play together, and even his older brothers were enthusiastic and sat down to play with us.”

Regarding the elements that harmed or inhibited the women’s path in the fulfillment of their potential, the analysis of the data indicated a number of components that were detrimental to or inhibited the potential of the women who participated in the workshop.



The mothers who participated in the workshops reported a number of difficulties they encountered that inhibited their ability to make a change in their home environment.

The main factor is that the fathers did not participate in the workshops. The fathers' participation would greatly help cause a change at home, since the father is the greater authority in the traditional family and he sets the boundaries, clearly and unequivocally. The Arab family in Israel is considered a part of patriarchal society, the control in the family is built in a patriarchal hierarchy, so that the father is situated for the most part at the head of the pyramid and is perceived as having power and his children and wife are subordinate to him (Alhiadari, 2003).

Salima: "My husband is the dominant one in the family. My children take advantage of this. If he were to participate, it would help me a lot in the setting of boundaries for the children."

Hadiga: "This is very true, the father is the dominant figure in the home and the children take advantage of this".

Some of the mothers have adolescents in the eleventh and twelfth grades, who are harder to influence and whose younger adolescent siblings are influenced by them and imitate them. Therefore, it was very difficult for the mothers to prevent the use of the Internet or to limit it to certain hours while their siblings can use it and even have personal phones.

Lema: "I found it very difficult to set boundaries for my son Samir, and every time I asked him to leave the computer and go to study, he objects and tells me why can my brother Mohammed sit all the time in front of the computer and I can't."

Bador: "My difficulty with the eldest son is that today he is in the eleventh grade and he spends many hours on the mobile phone and his brothers imitate him and they too already want a mobile phone although his brother is still in the third grade."

Another difficulty reported by the mothers is the adolescent's sex. Mothers of adolescent boys found it harder to set for their children boundaries and to restrict the house of media use, while mothers of adolescent girls found it easier. This situation derives from the difference in the education of boys and girls in Arab society, when girls need to be more disciplined and to obey the laws of family and society. There is preference for male children over female children (Haj Yahia, 2003), which leads to different education for boys and girls in the family and influences differently their social

development, especially in adulthood (Sharabi, 1975; Antonovsky et al., 1978; Florian & Har-Even, 1984).

In the discussions in the workshop in the session when we spoke about parental authority, the difficulty of dealing with boys more than with girls arose.

Vegdan: "I do not have a problem with San my daughter, the problem with Sammy is that he sits a lot in front of the computer."

Another mother, Iman, reinforces these words, adding: "There is a difference between the boys and the girls, the girls are more obedient and accept the parents' statements, while the boys are less and are more stubborn. My daughter makes a schedule and writes for herself how much time to use her mobile phone, her brother refuses to leave the phone and holds it all the time. Sometimes I hide it for a few hours and punish him, if he does not stop his considerable use of the phone then he will never get it."

Another mother, Rahme, laughed and said: "Once I took away my son's phone and hid it in the oven so he would not find it."

Another factor that inhibited the mothers who participated in the workshops is the relatively small number of sessions and the short period in which they received instruction (only three months). This is a low number and a short period for causing a change in people's attitudes and lives, especially in their parenting style. This is a large and charged topic, and it takes more time to see the change.

Rahma: "There is a need for lectures and workshops throughout the entire year so as to raise the awareness among the parents."

Lema: "The topic of parenting is very important and we need somebody who will instruct us all the time on how to cope with them, especially during adolescence, which is a very difficult period."

Salima: "The sessions contributed greatly to me but there is a need for more sessions on the topic of parental authority and how to cope with the rapid changes in the Internet era."

Analysis of the open-ended questions in the questionnaire and the workshops indicates the strong need to involve the fathers in future workshops. It is necessary to increase the awareness among the parents of the importance of the involvement of both parents in the education of their children. The fathers are very important in the education

of their children, in addition to the mothers, and the instruction of both parents about the importance of their adolescent children's sleep and the impact of electronic media on their health in general and on their sleep patterns will help promote a healthy life and the limitation of the use of electronic media. Furthermore, it is necessary to hold workshops for the parents from a young age to educate the children according to the clear rules of the culture, without difference between the children according to their sex. The workshops need to begin at a young age and last over time. In addition, the involvement of the adolescents in workshops in parallel to the parents' workshops will contribute further to the increase of the awareness of the topic of electronic media and sleep patterns.

## **7.5 Discussion**

The present research study examined for the first time the influence of an intervention program for parents for the improvement of sleep patterns and intelligent consumption of media among adolescents from the Arab sector in Israel who live for the most part in the communities in the north of the country. Research studies found that training and parent instruction have considerable influence on a variety of aspects in the child's development (Hallberg & Hakansson, 2003; Weisner, 2001) and that parents need instruction using techniques and tools for parenting along with alertness, awareness, and encouragement, so as to believe in their abilities to function as parents (Lindquist & Watkins, 2014).

The intervention program is unique, both in terms of the design of the intervention and in terms of the research population. Few interventions have been conducted until today on the topic of the sleep patterns among adolescents, and fewer have been performed in the context of the habits of media exposure, and this is the first time that an intervention is performed for parents in the Arab sector in Israel. This parent intervention is based on the conceptual model (Golan, 2006), a model of intervention developed in the field of eating disorders, from the approach that sees the family circle to be a complex system whose components are interrelated and influence one another. The model addresses the parent as an agent of change and focuses on the change of the parent

cognitions and behaviors from the assumption that these two elements will cause a change in the health behaviors of the children. This model was found to be effective in a number of research studies in the field of eating disorders, and the present research study examined the feasibility and effectiveness in the field of patterns of sleep and media exposure.

The present research study adds to the existing literature in that it examined the use of four types of electronic media that adolescents tends to use: television, computer, mobile phone, and tablet, while past research studies examined only two types of media, television and computer (Shochat et al., 2010; Van den Bulck, 2004).

Another topic that the research study addressed is the differences between parents and adolescents in the approach and perception of the media in the virtual world. The virtual life and the social networks present the parents with a new challenge, since in most cases the parents are not members of the social networks or do not understand the virtual world as their children do. Much of the communication on the social networks is undertaken on the mobile phone, thus further challenging the parents' supervision of the matter (Clarke-Pearson & Schurgin Okeeffe, 2011).

In the workshops conducted for the parents, we emphasized especially the use of social media, which has become more common among children and adolescents in recent years, and social websites such as Facebook, Instagram, and Twitter offer adolescents entertainment alongside the possibility of communicating with others.

### **7.5.1 Importance of the Parents' Participation in Intervention Programs**

The participation of the mothers in the present intervention program and the lack of the fathers' participation are supported by other research studies that generally the participation of mothers is greater in intervention groups. The research studies indicate that the search for support in social terms is more accepted among women than among men (Kwon et al., 2013). However, it seems that the combination between mothers and fathers in a parental intervention is necessary so as to balance the many requirements of marriage and parenting. Moreover, it was found that when fathers encourage and provide

an opportunity for participation in an intervention for a child they are expected to participate in meetings at a high frequency like the mothers (Bagner & Eyberg, 2003). The importance of fathers in the child's social and emotional development according to his behavior was further found (McDowell & Parke, 2005). Therefore, it appears that there is considerable importance in the father's taking part in the parental instruction groups for their child and the family life (Fletcher, Freeman, & Matthey, 2011).

According to the first hypothesis of the research study, the proposed intervention program will lead to the increase of the awareness and knowledge about the developmental changes during adolescence and to the reinforcement of the authoritative parenting style. The hypothesis was partially confirmed.

### **7.5.2 Parents' Knowledge**

In the present research study, we hypothesized that the knowledge of the parents who are participating in the workshops about the development during adolescence and the importance of sleep at this age would increase. The research hypothesis was confirmed. The parents in the intervention group increased their knowledge after the intervention, and this knowledge remained also in the evaluation after three months. In contrast, the parents in the control group did not improve their knowledge in this period. This datum indicates that it is possible in a short intervention of a number of workshops to enrich the parents' knowledge. In addition, this datum indicates that there is a lack of knowledge among the parents and that professionals should help the parents fill in their knowledge gap and that it is possible to do so in a limited number of workshops.

These findings are supported by other research studies. In a research study conducted in Israel on Jewish parents who participated in an intervention program and received knowledge on the development of their children and the importance of sleep during early adolescence, the knowledge of the parents who participated in the workshops increased significantly in relation to the parents who did not participate in the workshops (Flint-Bretler, 2013). In another intervention research conducted in schools in Australia, in which eighty respondents participated, the goal was to evaluate the effectiveness of the school intervention, to increase the knowledge of the students

regarding sleep, and to improve the sleep problems of the students (Moseley & Gradisar, 2009). The agents of change were the adolescents themselves. The adolescents participated in four workshops that included information about correct health practices and sleep habits. This information included the changes in the sleep patterns during adolescence, the importance of sleep in the context of a healthy lifestyle, exposure to daylight, and so on. The students participated in four workshops during which they learned how to create a healthy lifestyle according to the cognitive behavioral model. Data were collected at three points in time, before the intervention, after the intervention, and a follow up after six weeks. The results showed that the knowledge of the students indeed increased.

### **7.5.3 Parenting Styles**

Research studies among Israeli Arab adolescents showed that the authoritative parenting style is related to better self-image and self-esteem and less anxiety, depression, behavior disorders, and identity confusion. On the other hand, negative influences of the authoritarian parenting style on the mental health of the Israeli Arab adolescents were not found (Dwairy, 2004).

Innovative research studies on the topic indicate a trend of change in attitudes towards the parent-child relationships. Thus, in the research study of Haj Yahia (2006) significant differences were found between women from three generations (grandmother, mother, and granddaughter), so that as the generation is younger, it is less characterized by traditionalism and presented a more positive towards the authoritative parenting style. Other research studies conducted in recent years among groups of adolescents support this argument that the characteristics of Arab society change gradually and that Arab society in Israel is found in a period of transition and is influenced by what occurs around it. It is exposed to Western values and norms following its encounter with Jewish society, satellite television, Internet, and many other factors, thus leading to the adoption of a more authoritative parenting style, as opposed to authoritarian or permissive parenting (Anabusi, 2007; Eshel & Hakim, 2006; Hakim, 2006; Perach, 2002; Sharabany, 2002). In addition, society is influenced by the expectations accepted in Western society, according

to which good parenting means clear and assertive guidance for children, which is moderated by warmth, flexibility, and verbal giving (Dwairy, 2004).

In the present research study, we hypothesized that the intervention program would strengthen the authoritative parenting style among the parents participating in the workshop. This hypothesis was not confirmed: the parenting style did not change following the intervention and did not become authoritative after the intervention and in the follow up after three months. It is possible that it would be unreasonable to change the parenting style in a short period of time and in a limited number of workshops since this is an essential change that requires longer time. Another reason can lie in the lack of suitability of the questionnaire to the present period.

New research studies speak today about a parental authority different from that proposed by Buri (Omer, Steinmetz, Carthy, & Von Schlippe, 2013; Weinblatt, 2004; Weinblatt & Omer, 2008). In recent years, a new model was developed for the concept of parental authority, which integrates between the responsive and sensitive aspect and the limiting and defensive aspect of the parenthood (Omer, 2010). According to this approach, the new authority emphasizes the importance of the parent's ability to be anchored and stable in his role as a parent, so as to provide the child with real and psychological security, to create a stable framework of a relationship between the parent and the child, and to enable the child to internalize positive models of work. The parent's ability to be anchored in his role is based on four different and complementary dimensions: structure, parental presence, self-control, and social support of the parent for the child. The dimension of structure addresses the laws that the parents define and the family routine intended to preserve the activities of the family and the child. The dimension of parental presence addresses the alert and active worry of the parent both in the responsive and sensitive aspect and in the limiting aspect. The dimension of self-control addresses the ability of the parent to restrain his negative responses towards the child and to persevere and display patience in the display of the parental authority. The dimension of social support addresses the degree to which the parent creates a basis for sharing and exchange of ongoing and up-to-date opinions with different factors in his

environment so as to strengthen his legitimacy to act according to values and his parental commitment towards his child.

In the present research study, the work with the parents focused on the dimensions of the structure and parental presence, like the authoritative parenting style that emphasizes both the requirements and laws that the parent sets for the child and the parent's ability to support the child and include him. In addition, in the work with the parents emphasis is placed on the dimension of the self-control and the parents were trained how to respond assertively and not to blow up at their adolescents. In the present research study there was no reference to the dimension of the social support. In light of the change that has occurred in recent years in the parenting style and in the attempt to conceptualize theoretically the concept, it is likely that there is a need to update the research instruments.

#### **7.5.4 Promotion of Healthy Behaviors**

The third hypothesis of the research study maintained that the proposed intervention program will lead to the promotion of healthy behaviors, including the improvement of sleep patterns, the limitation of exposure to the media, and the improvement in the quality of life among adolescents. The hypothesis was partially confirmed.

##### **Sleep Patterns**

In the present research study, we hypothesized that the intervention program would lead to the improvement in the sleep patterns of the adolescents according to the SHSS questionnaire (bedtime and wake-up time) in the middle and at the end of the week.

In the relation to the bedtime in the middle and at the end of the week, a significant effect of the research group on the bedtime was not found. In addition, a significant effect of the intervention of the bedtime in the middle and end of the week was not found. Therefore, this hypothesis was not confirmed, but although it was not confirmed, the results indicate a slight change in the bedtime of the young adolescents in

the experimental group in contrast to the control group, while in the control group there was a slight delay of an average of ten minutes in their going to bed. This datum reinforces the knowledge in the literature about the direct relationship between the bedtime and the age (Gradisar, Gardner, & Dohnt, 2011; Matricciani et al., 2012; Olds, Blunder, & Matricciani, 2010; Yang et al., 2005). In the experimental group, the adolescents went to sleep a quarter of an hour earlier. These findings show that the intervention program succeeded not only in moderating this trend but also in causing the young adolescents to go to sleep earlier.

Regarding the wake-up time in the middle and at the end of the week, the hypothesis was partially confirmed. A significant effect was not found of the research group on the bedtime in the middle of the week, but regarding the wake-up time on the weekend a significant effect was found of the research group on the wake-up time. In the research group, the wake-up time on the weekend is significantly earlier in comparison to the control group. In addition, a significant effect of intervention on the wake-up time on the weekend was found.

These findings are supported by researches conducted on different populations in Israel and around the world. In a research study performed in Israel on the Jewish population (Flint-Bretler, 2013), The parents and the adolescents reported an improvement in the sleep patterns after the intervention program (bedtime became earlier and the percentages of sleep, which address the net sleep time from the time spent in bed, rose).

In another intervention research conducted in England, with the goal of teaching the middle school students correct sleep hygiene, with the aim that this would cause the students lengthy and regular sleep, there were 26 participants aged 12-14 who were divided into an experimental group and a control group (Vo, LeChasseur, Wolfson, & Marco, 2003). The experimental group participated in eight sessions for five weeks. The respondents filled out sleep questionnaires and wore sensors called actigraphs. The intervention results showed that the experimental group had more regular sleep patterns in comparison to their sleep patterns before the intervention.

## **Use of Electronic Media**

The examination of the differences in the exposure to the media according to the research and intervention groups found a trend of a decline in the television viewing hours in the middle of the week and even a relatively significant decline in the television viewing hours at the end of the week in the experimental group before/after the intervention, while in the control group no change was apparent. The mean duration of television viewing, computer use and mobile phone / tablet use in the middle of the week and on the weekend was significantly higher before the intervention in comparison to after the intervention. In addition, in the experimental group there was a relatively significant decline in the hours of computer use and mobile phone / tablet use in the middle of the week and on the weekend before and after the intervention, while in the control group there was no apparent change. In other words, it is possible to conclude that the intervention program indeed led to the improvement of the exposure to the media and the reduction of the viewing and use hours of the variety of media devices examined in this research study.

These findings are supported by a research study conducted in Israel on the Jewish population. The research study of Flint-Bretler (2013), which was conducted on Jewish adolescents and their parents, found that the experimental group reduced the use of the Internet on the weekend by half an hour and the general consumption of media (computer, gaming and Internet, television) by an hour in the middle of the week, after the intervention.

## **Quality of Life**

The research findings indicated that differences were not found in the general quality of life and the other measures of quality of life according to the research and intervention groups. In other words, it is not possible to determine that the intervention program indeed led to the improvement of the quality of life among adolescents. These findings are contradictory to the findings of a research conducted on Jewish adolescents and their parents in Israel. According to the research study of Flint-Bretler (2013), the parents' reports indicate that the experimental group showed higher measures of physical

quality of life after the intervention. The control group showed lower measures of physical, emotional, and psycho-social quality of life after the intervention and in the follow up of three months. According to the adolescents' reports, the experimental group showed higher measures of general quality of life after the intervention and in the follow up after three months.

It is possible that the reason was not improvement in the measures of quality of life in the present research, since according to the presented data it is possible to see that on the average the sample of the participants report relatively high general quality of life (0.84 on a scale of 0-4, when a high score indicates difficulty/lower quality of life). In the other measures of quality of life (physical, emotional, and psycho-social and functioning in the school) the level of quality of life is relatively high. Of all the measures, the main difficulty was found in the functioning in the school and in the emotional field. Therefore, it is possible that there are additional factors, such as school tasks and the relationship between the teachers and the students, and not the parenting style or consumption of the media. Hence, it is recommended in future research studies to examine additional statements in the measures of quality of life and their relationship with additional systems of relationships, such as the teachers' attitude in the school and the level of difficulty of the scholastic tasks and their influence on the emotional measure of the Arab adolescents in Israel.

To summarize, the present research study has a contribution: on the theoretical level, in terms of the empirical knowledge that it adds to the field, and in the applied implications in the field of the advancement of health among adolescents.

This is the first time that an intervention program for the improvement of sleeping patterns, intelligent consumption of media, and improvement of the quality of life among Arab adolescents in Israel used the parents as the sole agents of change. Thus, the present research study contributes to the reinforcement of the conceptual model, and the present intervention strengthens the model in that it illustrates that the increase of the self-awareness, the knowledge acquired in the intervention, and the relations of support and help, the support of the instructor, and the group support, lead to and help achieve the

behavioral change. The present research study strengthens in part the model of the parenting style in that it illustrates that there is a relationship between the parenting styles and the health habits among adolescents.

The present research study adds to the body of research knowledge about the patterns of sleeping, media exposure, and quality of life among Arab adolescents in Israel. In addition, the research study shows that the Arab adolescents in Israel spend much of their free time using media and that this time increases with the rise in age and when the adolescent has a media device in his bedroom. In terms of applied implications, the research study proposes that future interventions be longer and include in them the motivational component for the increase of the adolescents' own motivation to change their health habits. In addition, the research study proposes that future interventions engage in the determination of norm values regarding the appropriate amount of use of media, and it is very important to increase the awareness of the social networks and the dangers of the Internet and cellular phone addiction.

## **7.6 Research Limitations**

The present research study has a number of limitations. These limitations will be presented here, followed by recommendations for further research.

First, the chosen sample represents the entire Arab population in Israel only partially. The research study was conducted in the north of Israel and did not include the parents of adolescents from other regions, such as the center and south of Israel. In addition, differences in the Arab sector were not examined, such as Christians/Muslims and residential region – Arab villages versus Arab cities and mixed cities where Jews and Arabs both live. It is possible that in the mixed cities Arab adolescents are more exposed to Jewish society and thus undergo a more rapid process of modernization than do adolescents who live in the Arab villages. Therefore, it is necessary to increase the number of participants in the research, to perform a random sampling, and to include participants from different ethnic communities and different regions. In a research with a large number of participants, it will be possible to recruit people who will represent the entire population, with all the data not included in the present research study

(Muslims/Christians/Druse, villages/cities/mixed cities). In addition, in terms of the sample, the participants were only mothers, and fathers did not participate. In the research study we speak of parents, and therefore it is important that in future research the workshops include fathers.

Second, the present research study relied on the subjective reporting of the parents of the young adolescents through the filling out of questionnaires on the patterns of sleep and media use and the parenting style. There was no use of objective measures, such as an actigraph, which provides more accurate and objective data, or of interviews that provide more information.

Third, in terms of the intervention program itself, the intervention was short, included only six workshops for parents alone, and in addition the research study followed up after the respondents only during three months from the end of the intervention. The intervention did not address the motivational component, did not focus on high levels of cognition, and did not propose that the parents undergo a personal change, and there were no personal conversations with the parents.

Fourth, the second stage of research was carried out among the parents of nine to eleven year olds, who are children, not adolescents in the light of the theory of adolescence. Moreover, in the first stage of the study, adolescents aged about fifteen were examined. The difference of five to six years at this age is a biological, psychological, and cultural gulf. In the future, we intend to examine the children of parents who participated in the workshops when they reach the age of fifteen, using the same research tool that was used in the first stage of the study in order to compare the results and examine whether preventive measures have had the expected effect in the long term.

## **7.7 Summary**

The present research study examined for the first time the influence of the parent intervention program for the parents of Arab young adolescents in Israel on their patterns of sleep and the degree of use of electronic media. The research findings show an improvement in some but not all of the measures. However, in the verbal report that the

parents wrote, they reported that the program helped them and contributed to them and it is very important to continue in the intervention programs for the parents since the parents are the agents of change in society.

The intervention program greatly improved the parents' level of knowledge regarding the development of their adolescent children and the importance of sleep and the reduction of the consumption of electronic media. In addition, the intervention program led to a change in the consumption of media and the bedtime of the adolescents. Although the hypothesis was not fully confirmed, we saw a slight improvement in the bedtime and wake-up time of the adolescents whose parents received instruction as opposed to the adolescents whose parents did not participate in the intervention.

Regarding the parenting style, a change did not occur, and the parents who received instruction did not become more authoritative. In my opinion, such an essential topic requires more sessions and a more in-depth intervention program, in which the parents will analyze and discuss their relationship with their adolescent children and the importance of the rapid changes that Arab society is experiencing in recent years following its exposure to Jewish society in Israel and the exposure of the adolescents to the Western world through the electronic media and global technology that is developing very rapidly.

## **Conclusion**

Arab society in Israel is undergoing a rapid process of modernization (Ganayem, 2018), which is expressed in the rise in the level of education, which is a condition of the earning of a livelihood, and the exposure to the media and changes in the method of the raising of the children. The process of modernization caused cultural, value-oriented, and structural changes in society. In addition, over the years, the Arab population has adopted the standards and aspirations of the Jews, especially in terms of the family, so that the nuclear family has grown, instead of the extended family, and the sons have left family businesses and joint family residences after they married (Amar Imar, 2012). The modernization and changes to which Arab society was exposed greatly influenced the adolescents and their lifestyle, and today Arab adolescents are more exposed to electronic media and are influenced by European society (Anabusi, 2007; Ganayem, 2018). Nevertheless, there are few researches on the influence of modernization and the exposure to the media on the measures of health and functioning of the Arab adolescent and especially on the sleep patterns and quality of life. The present research study addressed this issue – the influence of modernization on the sleep patterns of the Arab adolescents. my thesis shades new light on modernization theory and enables to interpret this theory through the prism of adolescents' sleep problems and their consequences, which can be perceived as “side effects” (latent functions in Merton's term) of the process of modernization especially the increase of usage of modern technologies which is an important aspect of modernization and postmodernization of contemporary societies.

The findings of the present research study may have a theoretical and practical contribution. This type of research enriches the knowledge on the sleep patterns, media use, and parenting authority style in the nuclear Arab family in Israel. These characteristics have barely received comprehensive and in-depth empirical examination, and in the scientific literature there is a void on this issue. The knowledge about the trends of change and the preservation of these characteristics is for the most part sparse, and hence the understanding of their reasons is deficient. This research study contributes to the filling of the void existing in the literature and facilitates the knowledge of the

characteristics that distinguish the Arab family. In addition, it contributes to the identification of the changes in these characteristics and to the understanding of the factors that promote the changes in the Arab family. this research study provides a description of the sleep patterns, electronic media use, and parenting style in the Arab family and clarifies the processes that they undergo and thus focuses on the factors that nurture these processes and contribute to their occurrence. In addition, the findings enable professionals and caregivers of Arab families to help them better, in a way sensitive to their culture (sector) and the processes of change they experience. The understanding of the Arab family in Israel and its distinct characteristics among the many groups that exist in it is a basic condition for the providing of culturally sensitive care. The assumption is that the chances of the success and effectiveness of intervention program on the level of the individual, the couple, or the family that does not take into account these characteristics are almost zero, when the lack of knowledge about the distinct characteristics of the family, couple, or parent-child relationships may lead to harm to the treatment process. The reference of the therapist to the unique characteristics of the Arab family and to the processes of change that it is undergoing will make the intervention effective and the chance of the success of the treatment high. It is important to note in this context that most of the therapists of Arab families are therapists who do not belong to the same sector or are Arab therapists of the same sector but who learned in Western universities and the methods of intervention in which they were educated are not always commensurate with Arab society with all its unique characteristics. Therefore, the research findings can contribute to their knowledge about the Arab family and the changes that occur in it, following the process of modernization and the exposure to the Internet, so that their care will be culturally sensitive and suited to the unique characteristics of the family and commensurate with the needs and character of the population.

In addition, the sample chosen is not a representative sample, and therefore caution is required in the generalization from the research findings to the Arab population at large. In this research study we increased the sample greatly so as to overcome the limitations of the sampling. However, there is difficulty with the generalization of the findings of this research study, since it does not represent the entire Arab population in

Israel. Hence, it is proposed that to the extent possible future research studies will examine the Arab family through a representative sample. The broadening of the scope of the sample is most important in Arab society, which is known as very heterogeneous and is not made of one piece. Therefore, it is very important that research studies be performed that indicate characteristics of the different groups of population in Arab society. Many of the research studies describe society with over-generalization, almost without reference to the differences between the different groups. There is room to examine in the future the characteristics of the various groups, such as the diversities between the different religions (Muslim, Christian, and Druse), between residents of homogeneous communities and heterogeneous ones (Arab villages, Arab cities, and mixed cities where both Jews and Arabs live together) and between communities situated in the different regions in Israel (in the North, in the Center, and in the South).

Alongside this, during the collection of the data for the research study, a significant shortage was discovered in the databases of statistics and research studies that address the Internet in Arab society. This deficiency joins the existing gap between Arab society and Jewish society in Israel and makes it difficult to determine a policy based on data and information and on the measurements of trends over time. The gap between Arab society and Jewish society in the physical access to the Internet has lessened considerably because of the widespread use of smartphones and the access they allow to the Internet and because of the proliferation of the home computers. However, a tremendous gap still remains in the quality of the access to the Internet in terms of the Internet speed, the quality of the infrastructures that reach the Arab communities, the number of cellular antennas, the stability and speed of the Internet lines to public and business organizations, and the access to Internet from computers and from the workplaces.

Since the patterns of use of the Internet directly influence human lives and reflect processes of change and development in the era in which the Internet is an inseparable part of the everyday life and constitutes an essential and necessary component in many areas such as education, employment, economics, and so on. In the State of Israel, which is one of the most advanced countries in the development and use of the Internet,

especially for useful needs, it is possible to find essential differences in the manner of the use of the Internet, primarily when a comparison is made between Jewish society and Arab society. In the Jewish population, we see the high use of functional characteristics (such as filling out forms, performing services online, use of email, etc.), as opposed to the low use in the Arab population in these areas. The Arab population, conversely, uses the Internet more for social communication, and it is apparent that it does not link between the functional use of the Internet and the increase of the quality of life and personal and social development. These differences reflect a digital gap. The examination of the results of a survey of the Internet Association (2017) indicates that when two-thirds of the Jewish population uses online services for behavior for the purpose of the filling out of forms, payments, appointments, and so on, as opposed to one-third in Arab society. In contrast, the Arab population uses massively social networks – more than 75%.

Another topic that this research study did not address but that is beginning to acquire momentum and be researched in recent years is the differences between parents and adolescents in the approach to and the perception of the media in the virtual world. The virtual world and the social networks present to the parents a new challenge since in most cases the parents are not members of social networks or do not understand the virtual world as their children do.

It is important that the parents will recognize the social networks since not all of them are safe for use and they entail many dangers. Because of the limited self-control of adolescents and their sensitivity to the social pressure, the young people can be harmed by the use of the social networks. The use of social networks became a far greater risk than the adults understood. Most of the risks address elements of inappropriate communication in the group of peers, lack of privacy, and influences of inappropriate publications and contents. The dangers include online bullying and online harassment, sexting (transmission of messages of a sexual nature), Facebook depression (classic symptoms of depression following Facebook use), issues related to privacy, online shopping, and the influence of advertisements alongside unclear messages on the part of the law and the parents. In addition, future research studies should examine the influence of the social networks and the type of contents on the social networks on the sleep

patterns of the Arab adolescents and the quality of their life and physical and mental health.

In terms of the intervention, the research study proposes that continuation researches be longer, so that the parents will manage to perform a behavioral change themselves and reach levels of understanding beyond levels of knowledge and so that the program will include a longer follow-up after the respondents. In addition, the research proposes that future interventions engage in the instilling of parenting tools for the creation of motivation among the children and the reduction of the technological gap between the parents and the children. Furthermore, the research study proposes that future interventions include small work groups of no more than ten participants and incorporate personal meetings and interviews.

The research study proposes that continuation studies use interviews and take into account the individual's approach towards the behavior, the social influences, and the person's feeling of efficacy towards the change. In addition, the present research study indicates the lack of clear guidelines regarding the use of media by adolescents, in contrast to the clear guidelines of eight to ten hours of sleep a night. The research study suggests that future research studies propose values of norm regarding the appropriate use time for adolescents.

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## Appendices

### Appendix 1: Research Questionnaire Number 1

#### 1. Questionnaire on Sleeping Habits – Adolescents

The questionnaire is phrased in the masculine but refers equally to both sexes.

Please answer the questions in their order. Try to select the answer that is most correct for you. There are no right or wrong answers. The questionnaire is personal and anonymous.

1. Respondent Number \_\_\_\_\_
2. Sex – Male / Female
3. Height \_\_\_\_\_
4. Weight \_\_\_\_\_
5. Age \_\_\_\_\_
6. Class \_\_\_\_\_
7. What days of the week do you **not** study? Sun Mon Tues Wed Thurs Fri Sat
8. What time do you begin the study day in the school where you learn? \_\_\_\_\_

In the following questions write an answer that best describes your sleep in the *past two weeks*.

9.	What time do you tend to go to bed <b>in the middle of the week</b> ?	__:__
10.	In the nights in the <b>middle</b> of the week, how long does it take you, in your opinion, to fall asleep?	__:__
11.	What time do you tend to wake up from nighttime sleep in the <b>middle</b> of the week?	__:__
12.	How many hours, in your opinion, do you sleep in the nights before school, not including the time that you are awake in bed? (Try to be accurate.)	__:__
13.	What time do you leave home for school?	__:__
14.	What time do you tend to turn off the light for the nighttime sleep on <b>weekends</b> ?	__:__

15.	On <b>weekend</b> nights, in your opinion how long does it take you to fall asleep?	—:—
16.	At what time do you tend to wake up from the nighttime sleep on the <b>weekends</b> ?	—:—
17.	In your opinion, how many hours do you sleep at night <b>on the weekends</b> , not including the time you are awake in bed? (Try to be accurate.)	—:—

18. Please circle: what do you **generally** do in the last hour before you go to bed. (There may be more than one answer.)

- A. Watch television
- B. Play computer games
- C. Browse the Internet
- D. Use the mobile phone
- E. Listen to Music
- F. Read a book or newspaper
- G. Other (Describe): \_\_\_\_\_

19. Do you sleep in the afternoon?

- A. Never
- B. Sometimes I sleep on school days
- C. Sometimes I sleep on weekends
- D. I only sleep when I am sick

20. In the past two weeks have you struggled to remain awake or have fallen asleep in one of the following situations? (Please note one answer for every section.)

	No 1	I struggled to stay awake 2	I fell asleep 3	I struggled and I fell asleep 4
A. In a face-to-face conversation				
B. While traveling in the bus, in a car, in a train				
C. During a performance (film, concert, show)				
D. While watching television or listening to music				
E. While reading or doing homework				
F. During a test				
G. During a lesson in the school				
H. While working on the computer				

I. During computer games / electronic games				
---	--	--	--	--

**22. In the past two weeks, how many times did you feel that ... (please note one answer for every section)**

	Never 1	Once 2	Twice 3	A few times 4	Every day & night 5
A. You were late to class since you slept late					
B. You fell asleep in the lesson in the morning					
C. You fell asleep in the lesson in the afternoon					
D. You woke up too early and did not fall asleep again					
E. You stayed awake until at least 03:00 at night					
F. You stayed awake all night					
G. You slept until noon					
H. You felt tired and drowsy during the day					
I. You needed more than one wake-up in order to get up					
J. It took you a lot of time until you fell asleep					
K. You had bad dreams or nightmares					

**23. How many times during the last two weeks did the following issues bother you?**

	Not at all 1	To some extent 2	Often 3
A. I felt too tired to do things			
B. It was difficult going to sleep and sleeping continuously			
C. I felt sad or depressed			
D. I felt hopeless about the future			
E. I felt tense and pressured			
F. I felt worried about many things			

In the following questions, we examine how you would plan your time if you could choose which activities you would perform when you are found at the top of your ability.

Please answer the following questions according to your familiarity with yourself when you are at the top of your ability.

24. Imagine that your school was cancelled. If you could get up whenever you wanted, what time would you get up?

- A. 5:00-6:30 in the morning
- B. 6:30-7:45 in the morning
- C. 7:45-9:45 in the morning
- D. 9:45-11:00 in the morning
- E. 11:00-12:00 in the morning

25. Is it difficult for you to get up in the morning?

- A. It is very difficult for me to get up
- B. It is rather difficult for me to get up
- C. It is easy for me to get up
- D. It is very easy

26. If you have a gym lesson at 7:00 in the morning, how will you function?

- A. The best
- B. Alright
- C. Worse than usual
- E. Horribly

27. If you had to choose a time to take a two hour test, then what time would you choose?

- A. 8:00-10:00 in the morning
- B. 11:00-13:00 in the middle of the day
- C. 15:00-17:00 in the afternoon
- D. 19:00-21:00 in the evening

28. At what time during the day do you have the most power to do things you like to do?

- A. In the morning, since I am tired in the evening
- B. More in the morning than in the evening
- C. More in the evening than in the morning
- D. In the evening since I am tired in the morning

29. Your parents decided that you will choose what time to go to sleep. What time will you choose?

- A. 20:00-21:00 at night
- B. 21:00-22:15 at night
- C. 22:15-24:30 at night
- D. 24:30-01:45 at night
- E. 01:45-3:00 at night

30. How awake are you in the first half hour after you have woken up?

- A. Totally not awake
- B. A little sleepy
- C. Alright
- D. Very awake

31. At what time do you feel that your body is tired and wants sleep (even if you ignore this)?

- A. 20:00-21:00 at night
- B. 21:00-22:15 at night
- C. 22:15-24:30 at night
- D. 24:30-01:45 at night
- E. 01:45-3:00 at night

32. Assume that you need to get up every morning at 06:00. How will you feel about this?

- A. This will be terrible
- B. Not so bad
- C. Alright (if I must)
- D. It's okay, no problem

33. When you get up in the morning, how long does it take you to be completely awake?

- A. 0-10 minutes
- B. 11-20 minutes
- C. 21-40 minutes
- D. More than 40 minutes

34. Do you suffer from difficulties falling asleep and/or from awakening at night?

Yes / No

35. Do you wake up in the morning with a feeling that the sleep was not good and refreshing? Yes / No

Thank you for your cooperation.

**2. Questionnaire on Television Viewing, Computer Use, and Mobile Phone Use Habits**

1. Is there a –

	At home	In your room
Television		
Computer		

2. Do you have a mobile phone (your own)?

3. Do you have a tablet (iPod, iPad)?

4. Try to estimate how much time (in hours) do you use each one of the devices in the list below?

*On the study days*

	Before the studies	During the studies	After the studies and before bed	At night After lights out
Television				
Computer				
Mobile phone				
Tablet (iPod, iPad)				

*On vacation days and weekends*

	Before the studies	During the studies	After the studies and before bed	At night After lights out

Television				
Computer				
Mobile phone				
Tablet (iPod, iPad)				

Thank you for your cooperation.

## **Appendix 2: Research Questionnaire Number 2**

### **1. Questionnaire on Habits of Watching Television and Using Computer, Mobile Phone, and Table**

Person filling out the questionnaire: Mother / Father

Date: \_\_\_\_\_

#### Part 1: Watching Television

On the basis of the past two weeks, attempt to evaluate how much time and at what hours does your child watch television, according to the following questions. If you don't know, then choose 'do not know'.

How many hours a day, on the average, does your child watch television programs on days when there are studies the next day:

\_\_\_\_\_ hours, \_\_\_\_\_ minutes, from \_\_\_\_\_ to \_\_\_\_\_ / do not know

How many hours a day, on the average, does your child watch television programs on days when there are no studies the next day:

\_\_\_\_\_ hours, \_\_\_\_\_ minutes, from \_\_\_\_\_ to \_\_\_\_\_ / do not know

Does your child tend to eat while watching television?

Always / frequently / sometimes / infrequently / never

Do you limit your child's hours of watching television?

Always / frequently / sometimes / infrequently / never

If the answer is always or frequently, note how much time a day is the child allowed to watch television.

One hour / two hours / three hours / more / do not know

#### Part 2: Use of the Computer

On the basis of the past two weeks, attempt to evaluate how much time and at what hours your child sits in front of the computer according to the following questions. If you do not know, then choose 'do not know'.

How many hours a day, on the average, does your child sit in front of the computer on days when there are studies the next day?

\_\_\_\_\_ hours, \_\_\_\_\_ minutes, from \_\_\_\_\_ to \_\_\_\_\_ / do not know

How many hours a day, on the average, does your child sit in front of the computers on days when there are no studies the next day:

\_\_\_\_\_ hours, \_\_\_\_\_ minutes, from \_\_\_\_\_ to \_\_\_\_\_ / do not know

Does your child tend to eat while sitting in front of the computer?

Always / frequently / sometimes / infrequently / never

Do you limit your child's hours of computer time?

Always / frequently / sometimes / infrequently / never

If the answer is always or frequently, note how much time a day is the child allowed to use the computer.

One hour / two hours / three hours / more / do not know

### Part 3: Use of the Mobile Phone or Tablet

On the basis of the past two weeks, attempt to evaluate how much time and at what hours your child uses a mobile phone or a tablet according to the following questions. If you do not know, then choose 'do not know'.

How many hours a day, on the average, does your child use a mobile phone or a tablet on days when there are studies the next day?

\_\_\_\_\_ hours, \_\_\_\_\_ minutes, from \_\_\_\_\_ to \_\_\_\_\_ / do not know

How many hours a day, on the average, does your child use a mobile phone or a tablet on days when there are no studies the next day:

\_\_\_\_\_ hours, \_\_\_\_\_ minutes, from \_\_\_\_\_ to \_\_\_\_\_ / do not know

Does your child tend to eat while using a mobile phone or a tablet?

Always / frequently / sometimes / infrequently / never

Do you limit your child's hours of use of a mobile phone or a tablet?

Always / frequently / sometimes / infrequently / never

If the answer is always or frequently, note how much time a day is the child allowed to use a mobile phone or a tablet.

One hour / two hours / three hours / more / do not know

## **2. Sleep Habits Questionnaire – Parents**

Who in the family decides what your child's bedtime is?

Middle of the week: Mother / father / the child / somebody else \_\_\_\_\_

Weekend: Mother / father / the child / somebody else \_\_\_\_\_

In the following questions, write an answer that best describes your child's sleep during the past two weeks:

17.	At what hour does your child tend to turn of the light for a night's sleep in the <i>middle</i> of the week?	__:__ / do not know
18.	At what time does your child tend to wake up from a night's sleep in the <i>middle</i> of the week?	__:__ / do not know
19.	At what hour does your child tend to turn of the light for a night's sleep on the <i>weekend</i> ?	__:__ / do not know
20.	At what time does your child tend to wake up from a night's sleep on the <i>weekend</i> ?	__:__ / do not know

21. Can you estimate how many hours of sleep your child needs so as to function and feel good? \_\_\_\_\_

22. Do you think that your child sleeps enough?

Always / Frequently / Sometimes / Infrequently / Never

23. Does your child suffer from the following sleep problems?

A. Difficulties falling asleep – Yes / No / Sometimes / Do not know

B. Waking up during the night – Yes / No / Sometimes / Do not know

C. Difficulties waking up in the morning (school days)

Yes / No / Sometimes / Do not know

D. Sleepiness during the day – Yes / No / Sometimes / Do not know

### **3. Health and Quality of Life Questionnaire for Parents**

Note the degree to which each one of the following sentences was a problem for your child during the past month.

		0 Not at all	1 Almost not at all	2 Sometimes	3 Often	4 Almost always
24	It is difficult to walk on foot more than 500 meters (about 5 minutes)					
25	It is difficult to run.					
26	It is difficult to do sports or exercises.					
27	It is difficult to lift something heavy.					
28	It is difficult to perform tasks in the house.					
29	I feel scared or concerned.					
30	I feel sad or depressed.					
31	I feel angry.					
32	I fear what may come.					
33	It is difficult to get along with children the same age.					
34	Other children do not want to be friends.					
35	Other children bother me.					
36	It is difficult to concentrate.					
37	I forget things.					
38	It is difficult to fulfill the school tasks.					

#### **4. Parenting Questionnaire**

Details about you:

Age: \_\_\_\_\_

Sex: 1. Male / 2. Female (Circle)

Country of Birth: \_\_\_\_\_

Number of years of study: \_\_\_\_\_

Profession: \_\_\_\_\_

Health situation: \_\_\_\_\_ (Note if you have a disease or take medications regularly)

Average income level: \_\_\_\_\_

Number of rooms in the home: \_\_\_\_\_

Family situation: 1. Single 2. Married 3. Divorced 4. Widowed 5. Regular partner (Circle the answers, you may circle more than one)

Information about your partner (if you are married or have a regular partner):

Age: \_\_\_\_\_

Sex: 1. Male / 2. Female (Circle)

Country of Birth: \_\_\_\_\_

Number of years of study: \_\_\_\_\_

Profession: \_\_\_\_\_

Health situation: \_\_\_\_\_ (Note if you have a disease or take medications regularly)

Average income level: \_\_\_\_\_

Number of children in the family: \_\_\_\_\_

Family order (oldest, youngest, middle) of the child participating in the research \_\_\_\_\_

For each one of the following sentences, circle the number (on a scale of 1-5, when 1=definitely do not agree, 5 = definitely agree) that describes best how the sentence refers to you.

		Definitely agree			Definitely disagree	
39	I believe that in a properly managed home it is necessary to fulfill the children's desire to the same extent as their parents' desire.	1	2	3	4	5
40	Even if my child does not agree with me, I believe that forcing him to behave in my way is for his good.	1	2	3	4	5
41	Every time I say to my child to do something, I expect him to do it immediately, without asking questions.	1	2	3	4	5
42	When rules of behavior in the family are set, I discuss the logic behind these rules with my child.	1	2	3	4	5
43	I always encourage a discussion when my child feels that the family rules and limitations it sets are not reasonable.	1	2	3	4	5
44	I always believe that children need to be free to decide by themselves and to do what they want to do, even if this is not commensurate with what I, the parent, want.	1	2	3	4	5
45	I do not allow my child to doubt any decision I make.	1	2	3	4	5
46	I direct the activities and decisions of my child through logical explanation and discipline.	1	2	3	4	5
47	I always believe that the parents must use more force so as to cause their children to behave the way they should behave.	1	2	3	4	5
48	I believe that my child must obey the laws and rules of behavior only since somebody with authority set them.	1	2	3	4	5
49	My child knows what I expect of him in the family, but he also feels free to discuss these expectations with me when he feels that they are	1	2	3	4	5

	not reasonable.					
50	I believe that smart parents need to teach their children who the boss in the family is, already at an early age.	1	2	3	4	5
51	Infrequently I guide my child's behavior or express my expectations of him.	1	2	3	4	5
52	Most of the time I do what my child wants when family decisions are made.	1	2	3	4	5
53	I tend to consistently direct and guide my child objectively and rationally.	1	2	3	4	5
54	I am very upset if my child attempts not to agree with me.	1	2	3	4	5
55	I believe that most of the social problems would be solved if the parents would not limit their children's activities, decisions, and desires.	1	2	3	4	5
56	I let my child understand what behavior I expect of him and if he does not meet these expectations I punish him.	1	2	3	4	5
57	I let my child decide about most things himself, without much direction from me.	1	2	3	4	5
58	I take into consideration the opinions of my child when the family makes decisions, but I do not decide about something only because he wants it.	1	2	3	4	5
59	I do not see myself as responsible for the direction and guidance of my child's behavior.	1	2	3	4	5
60	I have clear standards of my child's behavior, but I am willing to adjust them to the needs of each and every child in the family.	1	2	3	4	5

61	I direct my child's behavior and activities and expect him to behave accordingly, but I am always willing to listen to things that bother him and to discuss this direction with him.	1	2	3	4	5
62	I allow my child to form his opinion on the family matters, and I generally allow him to decide by himself what he will do.	1	2	3	4	5
63	I always believe that most of the problems in society would be solved if the parents would behave with their children forcefully and meticulously, when they do not do what they are supposed to do.	1	2	3	4	5
64	I tell my child frequently exactly what I want him to do and how I expect him to do it.	1	2	3	4	5
65	I give my child clear direction regarding his behavior and activities, but I also understand when he does not agree with me.	1	2	3	4	5
66	I do not direct my child's behaviors, activities, and desires.	1	2	3	4	5
67	My child knows what I expect of him in the family, and I insist that he meet these expectations simply out of respect for my authority.	1	2	3	4	5
68	If I make a family decision that hurts my child, then I am willing to discuss this decision with him and to admit that I made a mistake if I made one.	1	2	3	4	5

## **5. Knowledge about Sleep Questionnaire**

69. How many hours does a child aged ten to twelve need to sleep?

- A. six-seven hours
- B. Eight hours
- C. Nine hours and more

70. What happens during dream sleep (called REM sleep)?

- A. The growth hormone is excreted
- B. There is brain activity related to the coding of memories
- C. The hormone melatonin is excreted.

71. What is correct to say about the adolescent's sleep needs, in comparison to an adult's?

- A. An adolescent sleep just like an adult.
- B. An adolescent needs less sleep hours.
- C. An adolescent needs more sleep hours.

72. Biological change that occurs during adolescence and influences the adolescents' sleep:

- A. Delay of the sleep to a later sleep hour.
- B. Bringing the sleep earlier and early sleep hour.
- C. Decline in the need for sleep.

73. For what functions is sleep important?

- A. Memory and learning
- B. Recovery and renewal of the body tissues and cells.
- C. Survival and rest
- D. All of the above

74. What can be said about sleep and watching television?

- A. There is no relationship between the two.
- B. You should fall asleep in front of the television; you fall asleep better that way.
- C. You should avoid watching television before sleep.

75. What can be said about sleep and computer use?

- A. There is no relationship between the two.
- B. You should use the computer before sleep, since this is tiring.
- C. You should avoid using the computer before sleep, since this causes wakefulness.

76. What can be said about sleep and use of a mobile phone or tablet?

- A. There is no relationship between the two.
- B. You should use the mobile phone or tablet before sleep, since this is tiring.
- C. You should avoid using the mobile phone or tablet before sleep, since this causes wakefulness.

Questions after the Intervention

77. Following the intervention, were there changes at home in the topics related to sleep? If so, please specify.

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78. Following the intervention, were there changes at home in the topics related to media? If so, please specify.

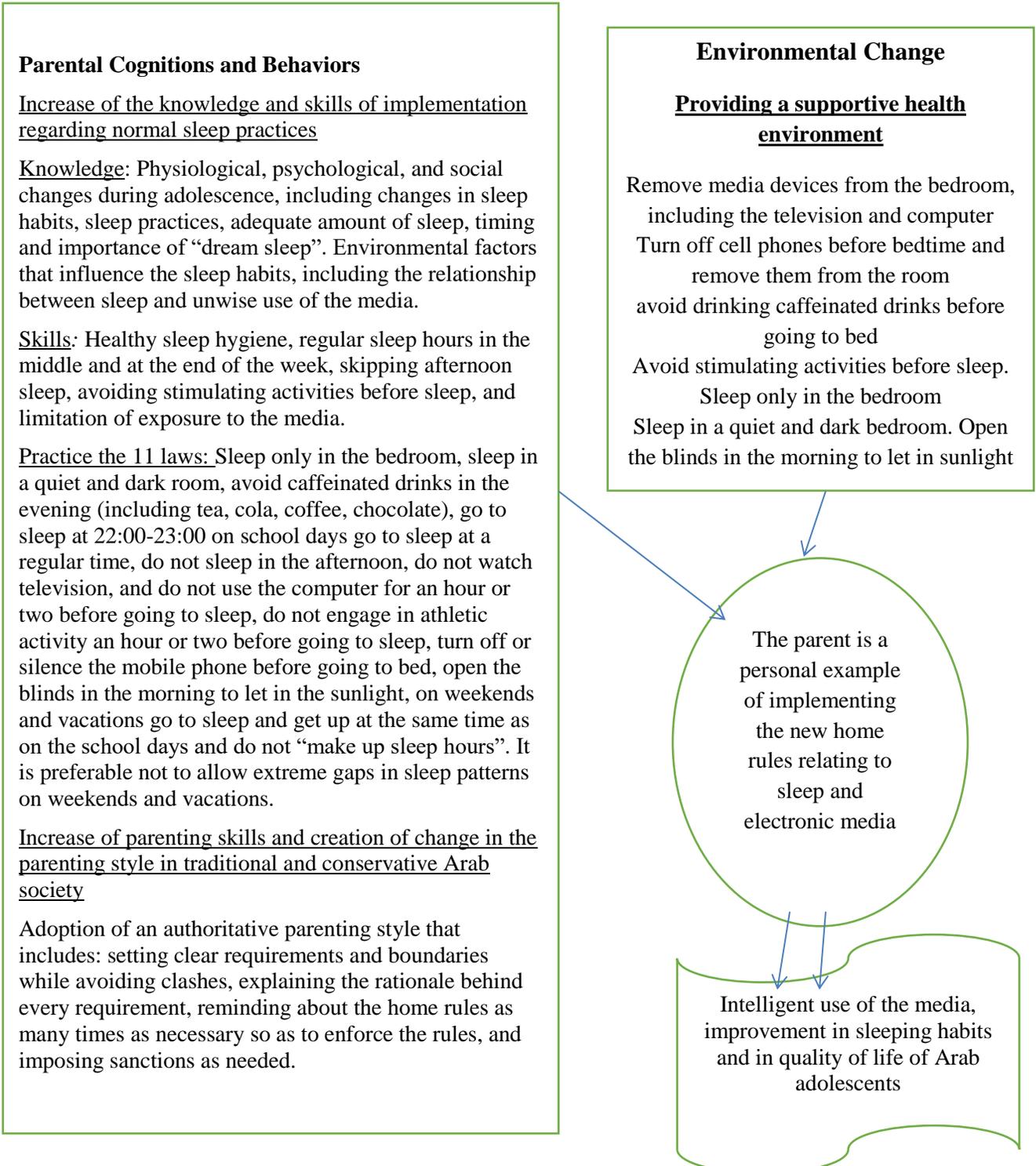
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## **Appendix 3: Figure Number 9**

Figure Number 9: Parameters for Parental Intervention according to the Conceptual Model



## Appendix 4: Statistics

### Reliability

#### Scale: ALL VARIABLES

**Case Processing Summary**

		N	%
Cases	Valid	172	86.0
	Excluded <sup>a</sup>	28	14.0
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.805	15

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
difficulty walking 500 meters	11.88	61.156	.079	.809
difficulty running	11.55	55.173	.470	.792
difficulty exercising	11.60	55.129	.460	.792
difficulty lifting weights	10.97	55.947	.292	.804
difficulty in home tasks	11.12	55.769	.296	.803
feeling fear or phobia	11.01	52.930	.495	.788
feeling sad or depressed	11.20	52.113	.565	.783
feeling angry	10.34	50.472	.602	.779
afraid of the unknown	11.16	57.166	.211	.810
difficulty fitting in	11.44	54.505	.459	.791
peers reject him	11.54	56.507	.328	.800
peers bully him	11.06	54.488	.415	.794

difficulty concentrating	10.87	52.584	.390	.798
forgetting	10.69	51.246	.575	.781
difficulty making homeworks	10.92	51.532	.528	.785

## Reliability

### Scale: ALL VARIABLES

#### Case Processing Summary

		N	%
Cases	Valid	183	91.5
	Excluded <sup>a</sup>	17	8.5
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.717	5

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
difficulty walking 500 meters	2.49	8.119	.177	.752
difficulty running	2.17	5.416	.651	.599
difficulty exercising	2.22	5.370	.644	.600
difficulty lifting weights	1.58	5.024	.516	.657
difficulty in home tasks	1.75	5.277	.439	.696

```
COMPUTE MEAN9=MEAN(Q24 to Q28).
EXECUTE.
RELIABILITY
```

## Reliability

### Scale: ALL VARIABLES

**Case Processing Summary**

		N	%
Cases	Valid	182	91.0
	Excluded <sup>a</sup>	18	9.0
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.671	4

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
feeling fear or phobia	3.17	6.021	.429	.619
feeling sad or depressed	3.30	5.602	.535	.550
feeling angry	2.49	5.345	.499	.571
afraid of the unknown	3.27	6.278	.352	.667

## Reliability

### Scale: ALL VARIABLES

**Case Processing Summary**

		N	%
Cases	Valid	200	100.0
	Excluded <sup>a</sup>	0	.0
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.639	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
difficulty fitting in	1.53	2.964	.391	.617
peers reject him	1.63	2.577	.557	.393
peers bully him	1.09	2.645	.410	.601

## Reliability

### Scale: ALL VARIABLES

**Case Processing Summary**

		N	%
Cases	Valid	198	99.0
	Excluded <sup>a</sup>	2	1.0
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.816	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
difficulty concentrating	2.42	4.073	.661	.762
forgetting	2.28	4.983	.613	.801
difficulty making homeworks	2.51	4.302	.742	.671

```
COMPUTE  NMEAN(Q36, Q37, Q38) .
EXECUTE .
RELIABILITY
  /VARIABLES=Q40 Q41 Q45 Q47 Q50 Q54 Q56 Q63 Q64 Q67
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /SUMMARY=TOTAL .
```

## Reliability

### Scale: ALL VARIABLES

#### Case Processing Summary

		N	%
Cases	Valid	176	88.0
	Excluded <sup>a</sup>	24	12.0
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.720	10

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q40	26.76	37.154	.490	.680
Q41	27.19	41.068	.262	.716
Q45	26.92	37.022	.486	.680
Q47	27.71	40.036	.312	.709
Q50	26.44	36.328	.504	.676
Q54	27.32	41.752	.239	.719
Q56	27.56	39.585	.327	.707
Q63	27.88	38.186	.389	.697
Q64	26.25	39.914	.359	.702
Q67	26.74	39.040	.411	.694

## Reliability

### Univariate Analysis of Variance

#### Between-Subjects Factors

		Value Label	N
Group	1	Experiment	100
	2	Control	100
Time	1.00	Before	100
	2.00	After	100

#### Descriptive Statistics

Dependent Variable: ט'ע

Group	time	Mean	Std. Deviation	N
experiment	before	2.8600	1.56505	50
	after	8.7000	.54398	50
	Total	5.7800	3.15774	100
Control	before	4.4600	1.45980	50
	after	4.4400	1.51402	50
	Total	4.4500	1.47966	100
Total	before	3.6600	1.70691	100
	after	6.5700	2.42152	100
	Total	5.1150	2.54838	200

#### Tests of Between-Subjects Effects

Dependent Variable: ט'ע

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	941.095 <sup>a</sup>	3	313.698	175.041	.000
Intercept	5232.645	1	5232.645	2919.770	.000
Group	88.445	1	88.445	49.352	.000
Time	423.405	1	423.405	236.256	.000
Group * time	429.245	1	429.245	239.515	.000
Error	351.260	196	1.792		
Total	6525.000	200			
Corrected Total	1292.355	199			

### Descriptive Statistics

Dependent Variable: סמכותני

Group	time	Mean	Std. Deviation	N
experiment	before	3.0276	.76344	50
	after	3.0452	.75478	50
	Total	3.0364	.75533	100
Control	before	2.9877	.68991	50
	after	2.9877	.68991	50
	Total	2.9877	.68641	100
Total	before	3.0076	.72420	100
	after	3.0164	.71999	100
	Total	3.0120	.72029	200

### Tests of Between-Subjects Effects

Dependent Variable: סמכותני

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.126 <sup>a</sup>	3	.042	.080	.971
Intercept	1814.457	1	1814.457	3448.746	.000
Group	.119	1	.119	.226	.635
Time	.004	1	.004	.007	.932
Group * time	.004	1	.004	.007	.932
Error	103.120	196	.526		
Total	1917.704	200			
Corrected Total	103.246	199			

a. R Squared = .001 (Adjusted R Squared = -.014)

### Descriptive Statistics

Dependent Variable:

Group	time	Mean	Std. Deviation	N
experiment	before	08:45	01:07	50
	after	07:59	00:43	50
	Total	08:22	01:00	100
control	before	08:45	01:15	49
	after	08:45	01:15	49
	Total	08:45	01:15	98
Total	before	08:45	01:11	99
	after	08:22	01:05	99
	Total	08:33	01:09	198

### Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	284775388.497 <sup>a</sup>	3	94925129.499	5.946	.001
Intercept	188228675788.497	1	188228675788.497	11789.827	.000
Group	92675788.497	1	92675788.497	5.805	.017
time	95079600.000	1	95079600.000	5.955	.016
Group * time	95079600.000	1	95079600.000	5.955	.016
Error	3097277338.776	194	15965347.107		
Total	191545560000.000	198			
Corrected Total	3382052727.273	197			

a. R Squared = .084 (Adjusted R Squared = .070)

Cronbach

B452-b462-b472-b482

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	97	42.4	43.1	43.1
Valid female	128	55.9	56.9	100.0
Total	225	98.3	100.0	
Missing System	4	1.7		
Total	229	100.0		

MANOVA

**Case Processing Summary**

	N	%
Valid	229	100.0
Cases Excluded <sup>a</sup>	0	.0
Total	229	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.422	3

MANOVA:

**Between-Subjects Factors**

		Value Label	N
group_1	.00	arab	117
	1.00	j	108
sex	.00	m	97
	1.00	f	128

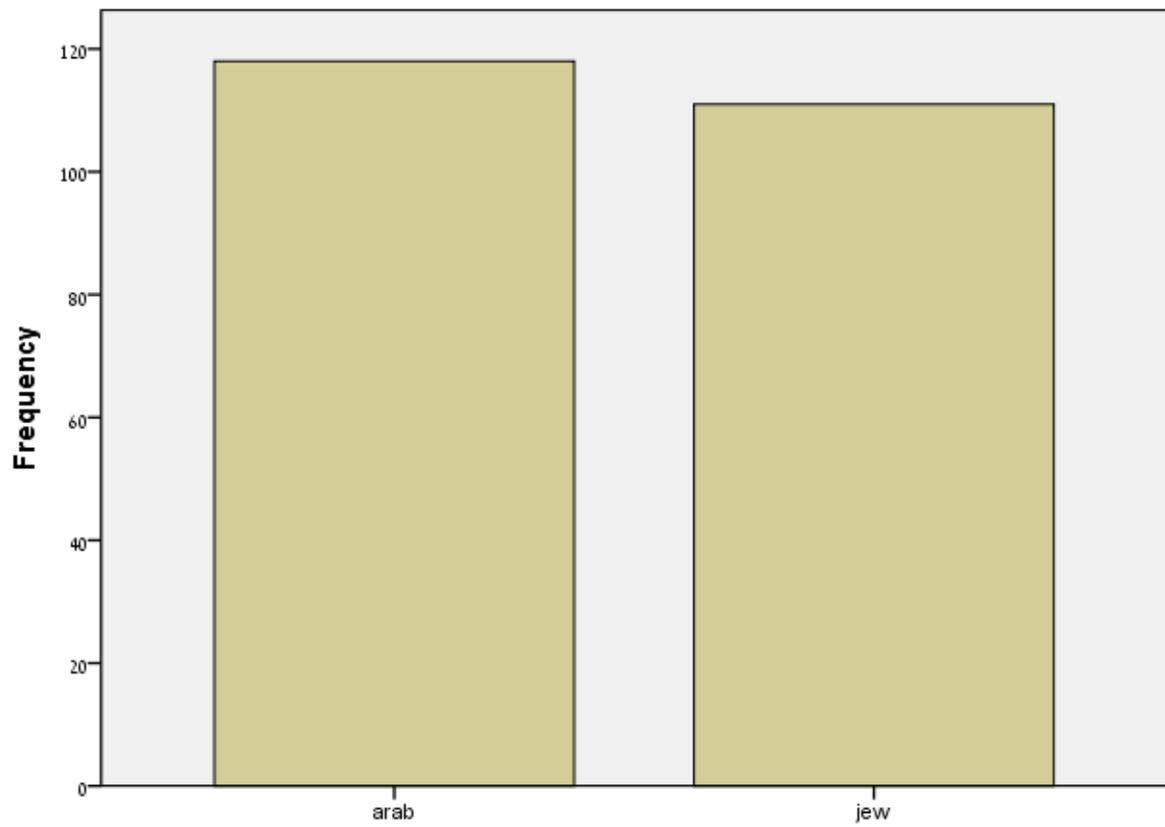
**Multivariate Tests<sup>a</sup>**

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.624	121.113 <sup>b</sup>	3.000	219.000	.000
	Wilks' Lambda	.376	121.113 <sup>b</sup>	3.000	219.000	.000
	Hotelling's Trace	1.659	121.113 <sup>b</sup>	3.000	219.000	.000
	Roy's Largest Root	1.659	121.113 <sup>b</sup>	3.000	219.000	.000
group_1	Pillai's Trace	.020	1.506 <sup>b</sup>	3.000	219.000	.214
	Wilks' Lambda	.980	1.506 <sup>b</sup>	3.000	219.000	.214
	Hotelling's Trace	.021	1.506 <sup>b</sup>	3.000	219.000	.214
	Roy's Largest Root	.021	1.506 <sup>b</sup>	3.000	219.000	.214
sex_1	Pillai's Trace	.022	1.616 <sup>b</sup>	3.000	219.000	.187
	Wilks' Lambda	.978	1.616 <sup>b</sup>	3.000	219.000	.187
	Hotelling's Trace	.022	1.616 <sup>b</sup>	3.000	219.000	.187
	Roy's Largest Root	.022	1.616 <sup>b</sup>	3.000	219.000	.187
group_1 *	Pillai's Trace	.020	1.512 <sup>b</sup>	3.000	219.000	.212
	Wilks' Lambda	.980	1.512 <sup>b</sup>	3.000	219.000	.212
sex_1	Hotelling's Trace	.021	1.512 <sup>b</sup>	3.000	219.000	.212
	Roy's Largest Root	.021	1.512 <sup>b</sup>	3.000	219.000	.212

a. Design: Intercept + group\_1 + sex\_1 + group\_1 \* sex\_1

b. Exact statistic

### Arab Jew



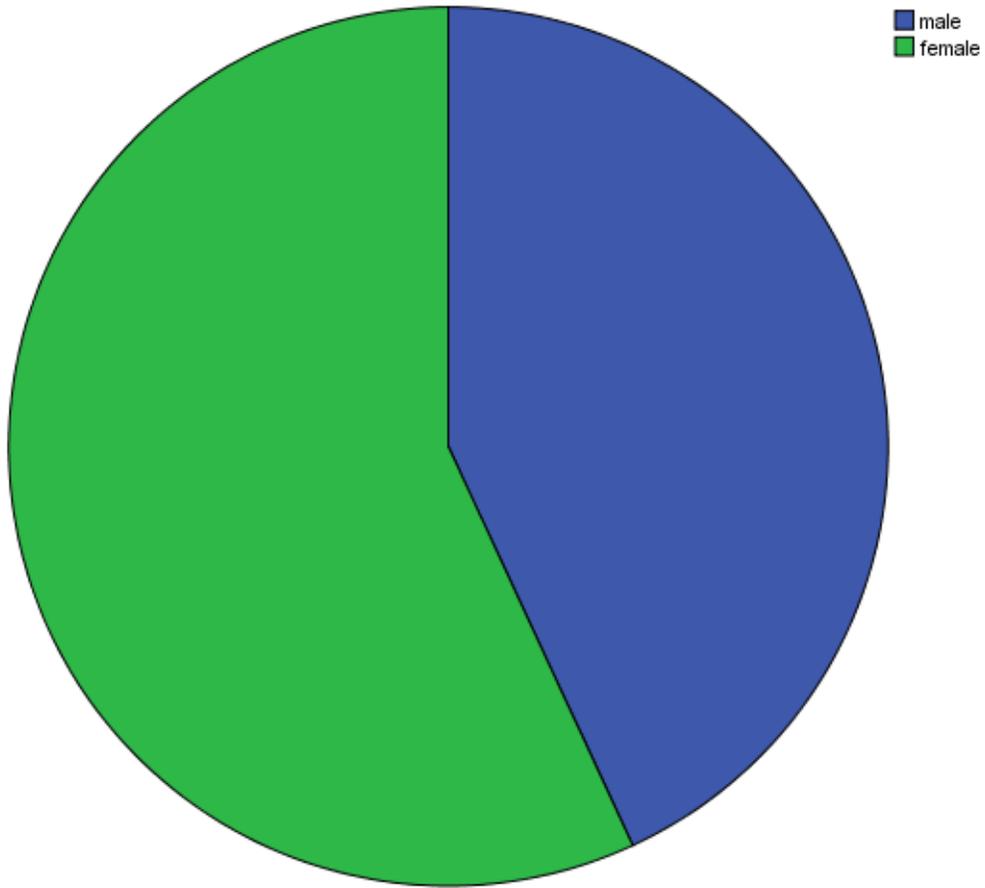
### Arab Jew

**Arab\ Jew**

	Frequency	Percent	Valid Percent	Cumulative Percent
Arab	118	51.5	51.5	51.5
Valid Jew	111	48.5	48.5	100.0
Total	229	100.0	100.0	

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	97	42.4	43.1	43.1
Valid female	128	55.9	56.9	100.0
Total	225	98.3	100.0	
Missing System	4	1.7		
Total	229	100.0		

Sex



## **Abstract**

### **Background**

Sleep is a physiological process essential for the person's existence and important for the person's physical and mental development. Many research studies show that adolescents in the Western world suffer from poor and inadequate sleep. Of the characteristics of the modern lifestyle, the increased exposure to the media and to the electronic media was found related to the harm of sleep patterns in adolescents. In contrast, Arab society in Israel is a conservative and traditional society that is undergoing a process of modernization following its exposure to the Western world and Jewish culture in Israel.

The main research objective is to compare patterns of sleep and electronic media use in a cultural context in secular Jewish society and in Arab society, In order to explore these aims, a "two staged" study has been applied.

### **The First Stage**

The first stage is considered as a preliminary one, the main **objective** is to compare the patterns of sleep and exposure to electronic media in the cultural context, namely in secular Jewish society and in conservative Arab society. Another objective is to examine whether the gender constitutes a variable that moderates the relationships between the culture and the patterns of sleep and media exposure. The **main question** is whether differences would be found in the patterns of sleep and media exposure between cultures (Jewish/Arab) and whether the differences in the patterns of sleep and media use are also related to gender.

### **Method**

The research study is a comparative cross-sectional study that includes closed questionnaires. The **sample** included 229 adolescents, male and female, Arab and Jewish, who learn in middle schools and high schools and who were recruited using cluster

sampling. The **research instruments** used in the research study included: (1) Sleep survey – the questionnaire is intended for adolescent students (ages nine to eighteen) and is called the School Sleep Habits Survey (SSHS). The survey examines sleep patterns and everyday characteristics related to sleep, (2) Follow up questionnaire after the exposure to electronic media, and (3) Sociodemographic questionnaire. The **research process** – The questionnaires were distributed to the adolescents in the middle school in the eighth and ninth grades and in the high school in the tenth and eleventh grades in the Arab and Jewish state schools in the north of the country, after the approval from the Chief Scientist in the Ministry of Education and the agreement of the school principals were received.

### **Statistical Analysis**

The result variables and the background variables were presented using measures of descriptive statistics (means and standard deviations or percentages). To examine the relationship between the use of electronic mode and the sleep patterns we used the Pearson test. To compare the measures of sleep and media use according to groups (Jews/Arabs), gender, and group\*gender interaction, use was made of multivariate variance of analysis (MANOVA).

### **Results**

The increased use of electronic media in the middle of the week was found related to long sleep latency and to shorter sleep duration among the adolescents and on the weekend the increased use of electronic media was found related to a later sleep time, a shorter sleep duration, and a later wake-up time. Regarding sleep patterns in the middle of the week, a significant main effect of the group on the wake-up time was found, so that the Jewish adolescents wake up earlier than do the Arab adolescents. In addition, main effects were found for the gender regarding the wake-up time and the sleep duration, so that girls wake up earlier than do boys and the boys' sleep duration is longer than that of the girls. An effect of interaction in the sleep patterns in the middle of the week was not found.

On the weekend, main effects were found for the group in the bedtime and sleep latency. Arab adolescents go to bed earlier than Jewish adolescents, but their sleep latency is longer and it takes them more time to fall asleep. A significant main effect was not found for gender, and a group\*gender interaction was not found.

Regarding the measures of everyday functioning, a significant main effect was found for the group in the measures of sleepiness, behavior problems, and type. Arab adolescents are sleepier during the day and have more behavior problems related to sleep than do Jewish adolescents. It was further found that Arab adolescents are more morning types than are Jewish adolescents. A significant main effect was further found for gender in mood, so that girls have a more depressive mood than do boys. An effect of interaction in the everyday functioning measures was not found.

Regarding the exposures to electronic media, a significant main effect was found for the group, so that Jewish adolescents are more exposed to the types of electronic media than are Arab adolescents on weekdays. Jewish adolescents use the computer more time after the studies than do Arab adolescents, and at later hours in the night Jewish adolescents use the television more than do Arab adolescents. In addition, a significant main effect was found for the gender: boys use the computer after the studies and in the later hours of the night than do girls. An effect was found of the interaction between group and gender. Regarding the use of the media, on the weekend main effects were not found between the two groups (Arabs/Jews) and between gender (boys/girls), and no interaction was found.

## **Discussion and Conclusions**

A number of conclusions arise from the work. The first conclusion is that as the exposure to the electronic media increases, the duration of sleep shortens and the time of going to sleep becomes later in both cultures. Arab adolescents go to sleep earlier than do Jewish adolescents. In addition, the exposure to electronic media is greater among Jewish adolescents, both in the use of the computer after the studies and in the viewing of television in the middle of the week after lights-out. Boys sleep on the average longer

than do girls on the weekdays and (a difference of almost an hour), but differences were not found between boys and girls on the weekend.

## **The Second Stage Research: Intervention Program for Arab Parents**

On the basis of the data of the preliminary research conducted on Arab adolescents, an intervention program was built for the parents of young Arab adolescents, aged nine to eleven.

The main **objective** was to evaluate the advantages and effectiveness of the parental intervention program based on the conceptual model, in which the parents are agents of change in the raising of the awareness and the increase of the knowledge about the developmental changes during adolescence and the reinforcement of the authoritative parenting style, and to examine whether the proposed parental intervention will lead to the promotion of health behaviors, including the improvement of sleep patterns, the limitation of the exposure to media, and the improvement of the quality of life among Arab adolescents.

### **Method**

The research is a comparative experimental design with a convenience sample for the experimental group that participated in a parenting intervention workshop, when the control group did not participate in the intervention program. The **sample** consists of one hundred respondents, when fifty are in the experimental group and participated in the intervention and fifty are in the control group and did not participate in the intervention program. All the respondents who participated in the research were mothers (100%), when their average age is 38.7 years. The **research instruments** used in the research study consisted of (1) a demographic questionnaire, information about the parents including age, sex, and family situation, (2) sleep survey – the questionnaire is intended for adolescent students (aged nine to eighteen) and called the School Sleep Habits Survey (SSHS) and examines the sleep patterns, (3) follow up questionnaire after the exposure to the means of electronic media, (4) knowledge questionnaire on the issues of sleep and media, (5) Pediatric Quality of Life Inventory, a questionnaire that evaluates the quality

of life subjectively and addresses the dimensions of physical, emotional, social, and psychosocial ability, functioning in the school, and general quality of life, and (6) Parental Authority Questionnaire (Buri, 1991), a questionnaire that examines the authoritative, authoritarian, and permissive parenting styles. The questionnaires were translated into Arabic and distributed to the parents in the experimental group and in the control group, in the northern region before the intervention and three months after the intervention.

### **Statistical Analysis**

To evaluate the relationships between the parenting style and the patterns of sleep and media use, Pearson correlations were conducted between the SSHS measure (bedtime, wake-up time) and the media measure (exposure time to television, computer, mobile phone, and tablet). To evaluate the changes that occurred among the parents following the parental intervention: the data of the knowledge questionnaire and the scores of the parenting questionnaire (henceforth: the parental measure), two factor variance analysis was performed at two points in time, before the intervention and three months after the intervention in the experimental group and in the control group. To evaluate the changes that occurred in the adolescents following the parental intervention, the SSHS measure (sleep patterns – bedtime, wake-up time), the media measure, and the quality of life measure, two factor variance analysis was performed before the intervention and three months after the intervention in the experimental group and in the control group.

### **Results**

The first and second research hypotheses were that the intervention program would lead to an increase of awareness and knowledge about developmental changes in adolescence and strengthening of the authoritative parenting style. First, the differences were examined on the level of knowledge regarding the importance of sleep according to the research and intervention groups (before/after). The research findings indicated that the level of knowledge regarding the importance of sleep in the experimental group was found to be significantly higher in comparison to the control group. In addition, it was

found that the level of knowledge after the intervention was significantly higher in comparison to before the intervention. As expected, it was even found that in the experimental group the gap in the level of knowledge before and after the intervention was significantly higher in comparison to the control group, for which the change in the level of knowledge was negligible. However, the research findings showed that significant differences were not found in the authoritative parenting style (or permissive or authoritarian) according to the research and intervention groups led to the strengthening of the authoritative parenting style. These findings indicate that the first research hypothesis was confirmed and the second research hypothesis was not partially confirmed.

The third and fourth research hypotheses were that the proposed intervention program would lead to the promotion of health behaviors including the improvement of sleep patterns, the limitation of exposure to the media, and the improvement of the quality of life among adolescents. In the examination of the differences in the sleep measures according to the research and intervention groups it was found that in the research groups the wake-up time on the weekend was significantly earlier in comparison to the control group. In addition, it was found that the wake-up time on the weekend before the intervention was significantly later in comparison to the wake-up time after the intervention. As expected, it was even found that while in the control group there was no change in the wake-up times before and after the intervention, in the research group the wake-up time on the weekend was earlier after the intervention. Regarding the other measures of sleep, bedtime and wake-up time in the middle of the week and bedtime on the weekend, differences were not found according to the research and intervention groups. In other words, it is possible to conclude that the intervention program led to the improvement of the sleep pattern of wake-up time on the weekend.

In the continuation, in the examination of the differences in the exposure to media according to the research and intervention groups a trend of decline in the hours of television watching in the middle of the week was found and even a relatively significant decline in the hours of television watching on the weekend in the experimental group before/after the intervention, while in the control group a change was not apparent. The

mean television viewing time on the weekend was higher in general before the intervention than after the intervention. The mean computer use time and mean mobile phone/tablet use time in the middle of the week and on the weekend was significantly higher before the intervention in comparison to after the intervention. In addition, in the experimental group there was a relatively significant decline in the hours of computer use and mobile phone/tablet use in the middle of the week and on the weekend before/after the intervention, while in the control group a change was not apparent. In other words, it can be concluded that the intervention program indeed led to the improvement of the exposure to the media and the reduction of the viewing and use times of the different media examined in this research study. However, the research findings showed that differences were not found in the general quality of life and the rest of the quality of life measures according to research and intervention groups. In other words, it is not possible to determine that the intervention program indeed led to an improvement in the quality of life among adolescents. These findings indicate that the third and fourth research hypotheses were partially confirmed.

### **Discussion and Conclusions**

The present research study examined for the first time the influence of the parental intervention program for the parents of young Arab adolescents in Israel on their sleep patterns and degree of electronic media use. The research findings show an improvement in some of the measures but not all of them, but in the verbal report that the parents wrote they reported that the program helped them and contributed to them and that it is very important to continue with the intervention programs for the parents since the parents are agents of change in society.

The intervention program greatly improved the parents' level of knowledge regarding the development of their adolescent children and the importance of sleep and the reduction of the consumption of electronic media. In addition, the intervention program led to a trend of change in the consumption of the media and in the bedtime of the adolescents. Although the hypothesis was not fully confirmed, we saw a slight improvement in the bedtime and wake-up time of the adolescents whose parents received

instruction as opposed to those of the adolescents whose parents did not participate in any intervention.

Regarding the parenting style, a change did not occur, and the parents who received instruction did not become more authoritative. This essential topic requires more sessions and a more in-depth intervention program, in which the parents will analyze and discuss their relationship with their adolescent children and the importance of the rapid changes that Arab society is experiencing in recent years following its exposure to Jewish society in Israel and the exposure of the adolescents to the Western world through the electronic media and global technology, which is developing very rapidly.