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Health Education for Jewish and Arab Elderly People in Israel

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Bölcsészdoktori Disszertáció

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Dedication

I would like to dedicate this research to the memory of:

My grandfather Michael Adir, who died 25 years ago, at the age of 69, and who did not see and know my husband and my children

My grandmother Lida (Leah) Adir, who died three years ago, at the advanced age of 91

My grandfather Anton (Avraham) Yosef, who died eight months ago, at the age of 82.

Introduction

"May you live to be 120". One person blesses another and he has entirely good intentions – may he live a long life. However, sometimes it seems that a long life is not a blessing but rather a curse. What does a long life mean – a life of many years or perhaps many years of life? What can be expected? How can a person achieve a long life?

A long life exposes the elderly to new diseases and to ongoing limitations in functioning (Yeol, 2003). The question of how to extend functionality did not exist in the past. Everybody knew that there are limited people – people who for physical or mental reasons could not care for themselves – but there was no orderly reference to them to evaluate their ability and to provide assistance to them accordingly. In the past, the problem of the placement of the elderly person into an institution also did not arise. Generally, people were either healthy people who grew old within their families or sick people who died within a short period of time. In any event, it was clear and obvious that the grandmother would remain in the home till she died, whatever her situation would be, and certainly so would the grandfather. There were, here and there, institutions that were called 'homes for the elderly' and were intended for poor people or for childless elderly, but a respectable family would have been ashamed to place a relative into such an institution.

In the past fifty years, the situation has changed sharply. The life span has increased and in contemporary society there are far more elderly people than ever in the past. This situation is due to progress and not necessarily to medicine. Progress has succeeded in extending the life span but it has not succeeded in maintaining health at a normal level throughout the entire life. Progress and welfare have led in recent decades to another phenomenon: sometimes the family cannot and is not willing to cope in the home with the complex situations related to the sick person who needs nursing care (Ackstein, 1998).

To attain a long life, it is necessary to adopt regular life habits that reduce risk factors (physical activity, balanced diet, and cessation of smoking) (Yeol, 2003). The individual and the public have the right to know about their illnesses, the possibilities of treatment, the outcomes of the treatments, and how it is possible to improve health (Baron-Appel,

1997). Health is defined as physical, mental-emotional, and social well being and not merely as the absence of illnesses (Tamir, Dayan, Weinstein, and Erin, 1998).

The patient is the primary side in the medical team and a large part of the success of the treatment depends on him, primarily because only he determines his behavior and his response to the medical treatment (Baron-Appel, 1997). A long-term health policy includes many objectives related to health improvement using education and health promotion (Tamir, Dayan, Weinstein, and Erin, 1998).

Education is not only the transference of information. Today it is clear that information alone does not change the individual's health-oriented behaviors. Behavior change is what leads to the improvement of the health dimensions and not the knowledge itself. Today behavior change is a difficult challenge and there still are no clear solutions. Many factors influence behavior, ranging from the individual's attitudes and beliefs, through belief in the self-ability, perception of risk, skills for change, and accessibility, to social support, etc. (Baron-Appel, 1997).

Health education is defined as the use of methods from the domain of learning and education to voluntarily adopt behavior that improves the health. In recent decades it has become steadily clearer that the methods of health education are not always effective in causing the adoption of health promoting life practices and that additional changes are necessary to effect this adoption and to improve the health situation. These changes include environmental changes that support the health, changes in the policy of health-related services (including legislation), involvement and reinforcement of the community, and the cooperation among the different medical and non-medical, governmental and nongovernmental factors tied to health.

This discussion has led to the concept that is called *health promotion.* Health promotion is defined as the process that enables the individual and the community to control and to improve their health. This process is the combination of health education, environmental and political changes, organizational changes, strengthening of the preventative systems, and cooperation with the community and other factors (Tamir, Dayan, Weinstein, and Erin, 1998).

All those who are involved in the health realm today know the relationship between health and behavior patterns, consumption patterns, and lifestyles. The question of what is the place of these services among elderly people is especially complex because of the special characteristics of the elderly population. However, the tremendous increase that has occurred in the past decades in this group in the Western countries has inspired the need to extend the fields of research among the elderly and requires interdisciplinary effort to examine different aspects, including the relationship between old age and behavior patterns and health situation (Bentor, 2001).

Many research studies have been conducted on the topic of health education among the elderly, but there is still room to examine the health education of the elderly in a comparison between Jews and Arabs in Israel. The main issue that this research endeavors to examine is whether there are differences in the health education of the elderly in Israel between Jews and Arabs.

The subject of health education, as it is presented in the review of the literature, is comprised of different areas, in which it is hypothesized that differences will be found between Jewish elderly and Arab elderly in relation to knowledge, attitudes, and behavior in different aspects.

The **research hypotheses** are as follows:

1. The nationality (Jewish/Arab) will influence the knowledge on the topics of nutrition, physical activity, muscle loss, calcium loss, drugs and alcohol, intellectual activity, smoking, falls, social activity, immunizations, and mental state.

2. The nationality (Jewish/Arab) will influence the attitudes on the topics of drugs and alcohol, smoking, institutional placement, immunizations, and nutrition.

3. The nationality (Jewish/Arab) will influence the behavior in the topics of physical activity, taking calcium supplement, drugs and alcohol, social activity, intellectual activity, smoking, safety measures, immunizations, institutional placement, falls, level of functioning, and eating habits.

4. Differences will be found between Jewish elderly and Arab elderly in the correlations between knowledge, attitudes, and behavior in the topics of nutrition, drugs and alcohol, smoking, and immunizations.

5. Differences will be found between Jewish elderly and Arab elderly in the relationship between mental health and physical health.

6. The nationality (Jewish/Arab), attitudes, and knowledge will predict healthy and balanced behavior.

7. The nationality (Jewish/Arab), attitudes, and knowledge will predict a number of areas of the functioning of the elderly person in the home.

8. The nationality (Jewish/Arab), attitudes, and knowledge will predict a number of areas of the functioning of the elderly person outside of the home.

Review of the Literature

1. Health Education

The technological advances in the field of medicine (for example, antibiotics, medical apparatus, and medical procedures) have raised the life span among the population but have also exposed the elderly to new illnesses and ongoing functional limitations. Therefore, in a relatively short period of time, of approximately seventy years, the average life span in the Western countries has lengthened, following the transition from a situation of illness and mortality induced by infectious diseases to illness and mortality caused by chronic illnesses, such as cancer, joint illnesses, Alzheimer's, and sensory organ damage (Yeol, 2003).

In 1946 the meaning of the concept of health was changed from the 'lack of illnesses' to 'physical, social, and mental-emotional welfare'. However, only recently has the change in this definition been reflected in an essential change in the perception of the entire field. Today the individual's state of health is seen as influenced by a number of factors combined together:

- Genetic and biological factors
- Behavioral factors: characterized by lifestyle, such as smoking, deficient nutrition, physical inactivity, and other risk behaviors, versus the response to medical care and use of health services.
- Social factors: There is a relationship between the state of health and the socioeconomic situation. In addition, factors such as immigration, employment, social network, and social support also have impact on the health.
- Environmental factors: The quality of the water, sewage, air pollution – all these and other factors also influence the person's health.
- Political factors: The rank of the decision makers, the different laws, and the allocation of resources to health.
- Health services: The quality, availability, and accessibility of the health services and preventative health services and health promotion services (Baron-Appel, Peleg, and Weinstein, 2002).

Education for health also consists of all the methods known today that contribute to behavior change. The basis is the inculcation of knowledge and awareness of the change of attitudes towards the acquired behavior (Baron-Appel, 1997).

There are different definitions of health education. Review of these definitions reflects the development of the concept from the 1960s till today. Derryberry (1960) noted that health education requires careful and thorough consideration of the present knowledge, attitudes, goals, perceptions, social status, power structure, and cultural traditions.

In 1966, Nyswander (1966) spoke of the importance of attending to social justice and individual's sense of control and self – determination. Griffiths (1972) stressed that health education is concerned not only with individuals and their families, but also with the institution and social condition that impede or facilitate individuals toward achieving optimum health. In 1976 Simonds (1976) defined health education as aimed at bringing about behavioral change in individuals, groups and larger populations from behaviors that are presumed to be detrimental to health, to behaviors that are conducive to present and future health.

After three years, Smith (1979, in Downie, Tannahill, and Tannahill, 2000) suggested that health education may be defined as the sum total of all influences that collectively determine knowledge, belief and behavior related to the promotion, maintenance and restoration of health in individuals and communities. These influences comprise formal and informal education in the family, in the school and in the society at large, as well as in the special context of health service activities. In 1980 Green, Kreuter, Partridge and Deeds (1980) defined health education as any combination of learning experiences designed to facilitate voluntary adaptations of behavior conducive to health.

In 1996 Downie, Tannahill, and Tannahill, saw health education as a communication activity aimed at enhancing positive health and preventing or diminishing ill-health in individuals and groups, through influencing the beliefs, attitudes and behavior of those with power and the community at large. (Downie, Tannahill, and Tannahill, 2000)

Health education has become an official profession in Britain, with the establishment of the Central Council for Health Education in 1972.

The involvement of the Western countries and the industrialized countries in the promotion of the health of their citizens has steadily increased throughout the 20th century. The World Health Organization has organized in the past decades international meetings to promote the development of the theoretical basis of health promotion. At the Alma-Ata Convention (in Kazakhstan, 1978), it was emphasized that the increasing inequality in the health of different sectors is not desirable and therefore it was agreed that it is necessary to muster a joint effort to promote health around the world (Baron-Appel, Peleg, and Weinstein, 2002).

The definition of the term 'health promotion' according to the World Health Organization is a process that enables people to increase and to improve their control over their health. The process of health promotion focuses on the achievement of equality in the realm of health and its purpose, on the reduction of the gaps in the health situation between different groups in the population, which can be classified primarily according to age, gender, sector, and residential area. The purpose of the process of health promotion is the realization of the full health potential of every person, through the assurance of equal opportunities and equal resources for every person (Downie, Tannahill, and Tannahill, 2000; Kaplun, 1992).

To this point an attempt has been made to define the concept of 'health education', and now the areas of activity for health promotion are presented.

The Ottawa Convention (Canada, 1986) (Baron-Appel, Peleg, and Weinstein, 2002; Tamir and Weinstein, 1999) published five areas of activity of health promotion:

1. Crystallization of a health promoting public policy.

The aim of the policy is to achieve the highest possible level of health among the population through the improvement of environmental conditions, prevention of harmful and risky behavior, and protection of the population from such behavior. This realm places the issue of health on the agenda of the policy shapers in all sectors and instructs them to act with utmost responsibility in the making of decisions that pertain to the public health. This realm combines different but complementary approaches and entails legislation, allocation of resources for the

publication of administrative directives, crystallization of a tax policy, and organizational change.

2. Creation of a health-supporting environment.

The creation of a health supporting environment combines social conventions that create commitment and public responsibility with laws that are intended to preserve a clean and healthy environment and appropriate sanitation conditions. In the framework of this task, it is necessary to create secure, work and living conditions, which encourage, satisfy, and please.

3. Reinforcement of the community activity for health promotion.

This realm is based on the principle that the community and the individual are complete and important partners in all the processes of health related decision making. Therefore, it is necessary to consider the active involvement of the population in the development, implementation, and evaluation of programs.

4. Development of personal skills.

The purpose of the activity is to influence the behavior of the individual and the group and to contribute to the development of personal abilities that will help the individual and society preserve and improve their health. This realm should be promoted in the framework of the schools, the homes, the workplaces, and the community frameworks.

5. Renewed perception of health services.

The individual, the groups in the community, the professionals in the field of health, the institutions of health service, and the government – all these must work together cooperatively to create a system that will contrite to health promotion. Beyond the responsibility to provide clinical and medical services, the health sector must be oriented to a steadily increasing extent to the promotion of health. (Baron-Appel, Peleg, and Weinstein, 2002; Tamir and Weinstein, 1999).

This chapter presented different definitions of health education, when most address the fact that health education is a process that allows people to increase their control over their health and enable their health. The following chapter presents the relationship between knowledge, attitudes, and behavior.

2. Knowledge, Attitudes, and Behavior

After the previous chapter presented the different definitions of health education, the present chapter examines what is an attitude and what is the relationship between knowledge, attitude, and behavior.

It is difficult to define an ‘attitude’ precisely, since it is both positive orientation or negative orientation towards an object, concept, or situation and the willingness to respond in a predetermined manner to these objects, concepts, or situations or to all that is tied to them (Hilgard and Atkinson, 1967).

Lambert and Lambert (1964) proposed that an attitude is an organized and consistent form of thinking, feeling, and response in regards to important people or events. The primary elements of an attitude are thoughts and beliefs, emotions, and tendencies to respond.

Rucks and Shwarzwald (2000) see an attitude to be an internal ‘guide’, through which they attempt to explain a considerable part of their behavior.

People develop their attitudes in a process of overcoming and adjustment to social environments. After the attitudes develop, they make social adjustment easier.

Attitudes fill a primary role in the determination of human behavior (Lambert and Lambert, 1964). According to Hilgard and Atkinson (1967), since attitudes are so entwined in human experiences, they become regular personality traits.

The three-component approach sees an attitude to be the combination of three elements: a cognitive element, an emotional or value-oriented element, and a behavioral element. The cognitive component responds to the question of what the person thinks, knows, or believes regarding the object of the attitude. The emotional or value-based component responds to the question of what the person feels towards it or how he evaluates it in light of what he knows. The behavioral component answers the question of how the person tends to act towards it. The three-component approach asserts that the attitude is a combination of the cognitive, emotional, and behavioral components and

that there is a relationship between them (Allport, 1935; Breckler, 1984; Rosenberg and Hovland, 1960).

The attitude helps the person organize his world and serves as the 'guide' that directs his behavior. To function effectively in his physical and social environment, the person needs to adopt for himself a system of realistic and adjusted attitudes. Hence, the person's tendency to examine the appropriateness of his attitudes and to resolve the contradictions between them is understood.

Many social psychologists believe that people are motivated to achieve cognitive consistency – the state in which the person's beliefs, attitudes, and behaviors are commensurate to one another. Cognitive consistency assumes that people are by nature rational and possessed of logical thinking (Rucks and Schwarzwald, 2000).

Festinger (1957) noted the lack of logic among people and developed the cognitive dissonance theory. This theory determines that the desire of people to maintain cognitive consistency can lead to non-rational and non-adaptive behavior.

According to Festinger (1957), people have many cognitions on themselves and on the world around them. These cognitions include all that they know about their beliefs, emotions, attitudes, and behavior. Frequently, these cognitions are commensurate with one another. For instance, when a person believes that smoking is harmful to his health and thus he does not smoke, these two cognitions in this case are 'smoking is harmful to the health' (belief) and 'I do not smoke' (behavior).

However, in certain situations there is a lack of fit between different cognitions: the person knows that the sun is harmful to his health but he nevertheless will spend three hours tanning himself at the beach in the hottest time of the day. This situation of lack of consistency is frequently accompanied by an unpleasant sense of tension, which Festinger (1957) calls cognitive dissonance.

Cognitive dissonance can be found at different intensities. The intensity of the feeling of dissonance is influenced by three factors:

1. Importance of the topic. The more important the topic is to the person, the stronger the dissonance inspired in him is.

For instance, the conflict between overeating and the recognition of the health risks it entails awakens more severe dissonance than does wasting water alongside the recognition of the necessity to save water.

2. Number of cognitions that cause dissonance. The more cognitions like these the person has, the greater the dissonance he feels is. For instance, a person who eats too much and is aware of the health danger it entails will have a lower sense of dissonance than will a person who holds these two cognitions and knows also that his friend who suffered from excess weight had a heart attack.
3. Number of cognitions that ease the dissonance (contribute to consonance). The recognition that the rise in the percentage of people who are overweight is entailed by a rise in the life span or the fact that many people in his family suffer from excess weight but not one has suffered a heart attack – these two cognitions reduce the intensity of the dissonance of the overweight person who overeats.

The intensity of the dissonance depends on the importance of the cognitive components and on the attitude between the cognitive elements that induce dissonance and the cognitive elements that reduce dissonance.

Festinger (1957) asserted that when a person experiences cognitive dissonance, he feels the strong need to reduce it. There are several ways to reduce the sense of distress that it inspires. One of the ways is to change the behavior, but, since this is hard to accomplish, most people adopt one of the alternative courses of action:

1. To reduce the importance of the conflict – ‘In essence I don’t care that I am fat, life is short, and I should enjoy it as much as possible’.
2. To change one of the cognitions that contribute to the dissonance – “In essence I don’t need a diet’.
3. To add cognitions that reduce dissonance – ‘Chocolate mousse is very nutritious’.

After this chapter has presented the relationship between knowledge, attitude, and behavior and has focused on the theory of cognitive dissonance, the following chapter presents a review of the different realms of health education.

3. Different Areas in Health Education

Many realms engage in health education for the population at large. This chapter presents patterns of behavior that influence the health situation, such as smoking, nutrition, physical activity, drugs, alcohol consumption, and exposure to sun. In addition, the chapter presents additional realms that are related to health education, such as living conditions, mental and emotional factors, accessibility to health services, etc.

3.1 Health Related Behavior Patterns

3.1.1 Smoking

Smoking is a well-known example of a behavior pattern with destructive impact on the health situation (Ravenholt, 1990). Smoking is in essence on the primary risk factors of heart disease (Skelkens, 1994).

The influence of smoking goes far beyond malignant illness in the respiratory system. It is believed that smoking causes greater mortality than cardiovascular diseases and malignant illnesses (Ravenholt, 1990).

Every year thousands of people die in Israel and millions expire around the world because of the harm wrought by smoking. Smoking is today considered, therefore, the primary behavior variable related to illness and mortality. Simultaneously, the public awareness of the detrimental influences of smoking has increased. Smoking is an acquired social action, which can be combated on two dimensions – prevention and treatment. The struggle against smoking is today one of the main objectives of the organizations in charge of health in the 21st century, both in the national realm and in the international realm.

The activity of the Ministry of Health to promote health in the realm of smoking in Israel began in the beginning of the 1970s, at the initiative of the Ministry of Health. In the continuation, factors such as the Association for the Fight against Cancer, the Association for the Prevention of Smoking, and the General Health Services Network joined the cause. The activity focuses especially on explanation, lobbying, and laying the groundwork for legislation in the field (Baron-Appel, Peleg, and Weinstein, 2002).

3.1.2 Nutrition Habits

Nutrition habits may also influence the health (Smil, 1989). Nitzan-Klowsky (2003) maintains that the constellation of food and nutrition constitutes an important part of international economy and commerce and has both short-term and long-term implications on the health of the population and on the environment. The constellation includes the manufacture of foodstuff (agriculture), the processing of foodstuff (industry), and the dissemination, marketing, sales, and consumption of the foodstuff.

The food and nutrition policy is defined as a combined activity that is aimed at the entire food chain and focuses also on the health of the population and on the environment. The policy of 'food assurance' engages in the promise of the accessibility of all people all the time to food in a way appropriate to an active and healthy life. The concept of 'nutrition assurance' includes, in addition to the assurance of food, the providing of an environment that encourages society to choose food related to health in the short term and in the long term.

The State of Israel has experienced a sharp change from the status of a developing country to that of a developed country. From the 1950s, the economic growth has been accompanied by a decline in infant mortality and a rise in the life span and in mortality caused by heart disease and by certain types of cancer. In this period changes occurred in the characteristics of nutritive consumption: rise in the consumption of fats and sugars, rise in the consumption of meat, poultry, etc. The nutritional problems frequently found in Israel include obesity, cardiovascular diseases, osteoporosis, diabetes, high blood pressure, anemia caused by iron deficiency, dental problems such as cavities, etc.

Mortality from heart diseases rises when there is increased consumption of foods high in animal fats. In contrast, the controlled consumption of wine apparently lowers the level of mortality from heart disease (Smil, 1989).

Liquids and food are an essential condition to maintain human life. Therefore, nutrition is a main element in all that is tied to health. The impact of nutrition on health is decisive at all stages of life, from birth to death. In the past fifty years far-reaching changes have occurred primarily in the Western countries in all that pertains to the data of

disease, life span, and life quality. The rate of diseases deriving from deficient nutrition is higher than in developing societies.

Two primary tasks must be adopted by the shapers of nutrition policy. The first task is food assurance – the role of the nutrition policy is to ensure that food is accessible to the entire population to the extent that allows health and appropriate quality of life. The second task is nutrition assurance – the nutrition policy is intended to provide an environment that can encourage society to choose food that is not detrimental to health. This policy does not support the rigid prohibition against eating certain types of food but rather emphasizes the importance in appropriate consumption of food according to the bodily needs.

The changes in the ways of activity in the realm of nutrition are expressed in the development of programs based on the relationship in principle between nutrition and health and in the development of programs for the individualized treatment of health problems, and especially excess weight gain, high blood pressure, and diabetes.

The creation of a health-supporting environment in the realm of nutrition addresses two main foci:

1. The physical focus – The creation of an environment where the principles of intelligent nutrition are accessible and available, following the implementation of appropriate laws, for instance, nutritional labeling of all packaged products.
2. The social focus – Activity for the promotion of social conventions that can encourage principles of intelligent nutrition, for instance, through mass media, community lectures, etc.

In 1992 Israel joined the 159 countries that had adopted the four objectives of the World Health Organization (WHO) in the field of nutrition: (1) the reduction of frequency of chronic illnesses (2) the encouragement of breastfeeding (3) the defeat of illnesses caused by deficient nutrition and (4) the assurance of a supply of high quality food and water. The Ministry of Health works diligently to promote these objectives by instructing the public to develop personal skills.

The implementation of the principles of intelligent nutrition is today a high priority objective in the realms of preventative medicine and health promotion. The achievement of this objective necessitates

widespread activity, in the field of medicine, in the public realm, and in industry, including the formation of an education and explanation policy. (Baron-Appel, Peleg, and Weinstein, 2002; Simopolos, 2002).

3.1.3 Physical Activity

Physical activity is a way of improving the health situation in the population and especially of reducing chronic illnesses, such as cardiovascular diseases, osteoporosis, and back pains (Baron-Appel, Peleg, and Weinstein, 2002).

While the human genetic profile has not changed over the years, significant changes have occurred in the food supply and energy expense / physical activity (Simopolos, 2002). Many researches have indicated the inverse relationship between physical activity and a high level of physical fitness and illness, limitations, and mortality. It is known that regular physical activity has many advantages: increased flexibility of the joints and improvement in the power of the muscles, improvement in the feeling of health, improvement in the self-esteem and body image, reduction of the pulse, reduction of bone thinning, strengthening of the immune system, etc.

From the beginning of the 1990s, the following trend is apparent: the constant rise in the population that engages in regular physical activity. In the framework of the strengthening of the community activity for the promotion of health on this topic, it should be noted that in Israel there is a program intended to promote walking among the elderly population.

Intervention programs for the promotion of physical activity address the stages of prevention:

- Initial prevention is expressed in intervention relative to the entire population and is reflected in the encouragement of physical activity in the healthy population.
- Secondary prevention addresses a risk group and population suffering from health problems such as bone thinning or obesity.
- Tertiary prevention focuses on the rehabilitation of those sick with severe or chronic illnesses such as diabetes or heart disease (Baron-Appel, Peleg, and Weinstein, 2002).

Brenner (2003) adds that the good feeling caused by physical activity derives from metabolic changes that occur during the activity.

3.1.4 Drugs and Alcohol

The use of drugs and the consumption of alcohol are two aspects of the same phenomenon – the use of psychoactive materials. In recent years in Israel the increase in the use of drugs has been apparent and simultaneously there has been a rise in the number of organizations that work to combat the phenomenon. Thus, there is enhanced recognition that this is a severe problem that is not limited to the individual's functioning in society and to his health but is reflected in practice in the functioning of society as a whole and in the formation of its patterns.

The findings of research studies conducted till today indicate that the effectiveness of explanation and education programs is higher than that of the addiction treatment programs. Therefore, the focus of the care-giving organizations is gradually shifting from the areas of secondary and tertiary treatment (treatment / rehabilitation) to the areas of initial prevention.

Epidemiological researches have found sufficient evidence of a relationship between the consumption of alcoholic beverages and the development of cancer. It was found that the exaggerated consumption of alcoholic drinks increased by 50% the risk of cancer deaths (Baron-Appel, Peleg, and Weinstein, 2002).

A probability-based relationship was found between alcohol consumption and drug use among adults. The likelihood that a person who tends to drink alcoholic beverages will also do drugs is eight times higher than the likelihood of a person who does not drink alcoholic drinks (Rahav, Teichman, Bar-Hamburger, et al., 1999).

The war against drugs is conducted on two primary fronts. First, it targets the supply: the authorities fight to reduce the amount of drugs available and the number of drug dealers in the market. Second, it targets the demand: reduction of the demand is possible primarily through the implementation of prevention programs.

In the beginning, the Authority for the War against Drugs directed its activity to the public at large, without distinction, working under the assumption that drug use is an affliction that is suffered by all strata in

the population. From 1994, the perception changed and the trend today is to address each target audience separately and to focus on specific and unique messages for each sector. It was decided to focus on the populations that are related, directly or indirectly, to a high risk of drug use, and primarily to the children and youth population and their parents (Baron-Appel, Peleg, and Weinstein, 2002).

Shuval and Anson (2001) indicate that, like any learned behavior, the patterns of the consumption of alcoholic beverages are linked to the social characteristics of the youth. The impact of the family, as the agent of social supervision that inhibits undesired behavior, is apparent in the relationship between alcohol consumption and the adolescent's age and the rate of alcoholic consumption in families of different types. The consumption of alcohol is related to the status characteristics of the youth: the lowest rate was observed among native born Israeli youth and the highest rate was among children of parents from a European-American extraction. In recent years, a very high percentage of youth who drink alcoholic beverages are new immigrants from the countries of the Former Soviet Union. Among the non-Jewish youth in Israel, there is a visible trend of an increase in alcohol consumption, although this is prohibited according to Islam.

Weiss (1992) focuses attention on the fact that another group at risk is the group of the elderly. The phenomenon of alcohol addiction during old age is well known in the industrialized world, as a consequence of loneliness, depression, decline in the physical fitness, etc.

3.1.5 Exposure to the Sun

Exposure to the sun is another behavioral pattern that influences the person's health and it has long-term impacts. The sun in Israel shines mightily for most of the year and its ultraviolet rays are strong. Prolonged exposure to this light entails many dangers to human health, some short-term and direct, such as burns and dehydration, but most long-term.

The primary long-term damage that the sun causes is malign lesions on the skin, especially melanoma, but harm to the immune system and degeneration of the retina (cataract) may also be caused by exposure to the sun. A person with fair skin and light eyes is found in the

highest risk group in this context and his chances of contracting skin diseases and eye damage are increased.

The datum that states that the highest percentage of melanoma in Israel is found among native born Israelis is commensurate with the finding that prolonged exposure to the sun rays from an early age increases the risk to suffer malign skin lesions. Melanoma is ranked eighth in incidence on the list of skin cancers among Jews. The rate of mortality rises over the years.

The realm of health promotion for the prevention of the damages of sun exposure is not included in the government mandated health 'basket' of Israel. The encouragement of early diagnosis of skin cancer is accomplished through actions to increase the personal awareness of the populations at risk (Baron-Appel, Peleg, and Weinstein, 2002).

3.2 Material Living Conditions

Harsh residential conditions and a polluted environment are examples of physical living conditions that may influence the health and thus the level of mortality. Cold and dampness, for example, may influence heart disease and respiratory illness. Air pollution caused by industry is linked to mortality from malignant respiratory tract diseases. The exposure of non-smokers to second hand smoke, namely, passive smoking, increases mortality from heart disease. (Blane, 1985).

Skelkens (1994) notes that the socioeconomic status may influence the physical living conditions. For example, the inability to heat the home may cause a rise in mortality caused by heart disease. Workers with relatively low status are more exposed to dangerous chemicals, dust, and noise – which may detrimentally impact their health.

3.3 Psychosocial Living Factors

Different researches have shown that supportive social frameworks positively influence the level of health and the life span. In this aspect, too, the individual's socioeconomic status has impact. It is possible that there are more frequent situations of tension among the lower class, for instance, as a result of economic problems. In addition, people from the lower class also have fewer occupations for their leisure time and fewer supporting frameworks (Skelkens, 1994).

3.4 Accessibility to Health Care - Supply / Use

There are differences in the access to health care services and their use among the different groups in the population. These differences influence the health situation and the high level of risk for illnesses and mortality.

Here, too, the economic means may enable better services and the individual's education may influence the awareness and optimal use of health services. In addition, among those of a high status there is a prominent tendency to seek a doctor's counsel to avert medical problems (Skelkens, 1994).

Shuval and Anson (2001) show that the distribution of human personnel in the health services can be analyzed in terms of the central region and the periphery, not necessarily in terms of geography alone, but in terms of relative proximity of the different social groups to the centers of power and influence in society. The residents of development towns need the health services that are located in the nearby urban centers, since services such as expert medicine, imaging tests, and complex laboratory examinations are not available in these cities. The use of them entails, therefore, financial expenditure from the family budget – a price that reduces the accessibility and contributes to the increase of social inequality.

3.5 Early Life Conditions

There is evidence that the life conditions in childhood have a major impact on adult mortality. There is, for example, a relationship between nutritional level in childhood and mortality from heart disease. There is evidence of the fact that the rate of mortality from certain illnesses in the respiratory tracts is higher among those who were born in regions where there is relatively higher infant mortality (Elo and Preston, 1992).

Skelkens (1994) concludes that there are genetic factors that influence the mortality. Another example is the degree of impact of the level of cholesterol on illness from heart disease and it possible that it is related to genetic factors.

This chapter showed that not only the person's behaviors, such as smoking, nutrition, physical activity, exposure to sun, and alcohol consumption, but also different aspects, such as living conditions, social and mental-emotional factors, access to health services, and genetic factors, influence his state of health. The following chapter presents different theories and models in health education.

4. Theories and Models in the Field of Health Education

In the past two decades, there has been a steadily increasing awareness around the world and in Israel, too, of the importance of health education as a means of the promotion of the health of the individual in society. Health promotion, as aforementioned, is a process that is supposed to encourage the individual and the community to adopt a healthy lifestyle and healthy behaviors, which will avert the development and worsening of risk factors of illness, physical limitation, and early mortality (Barnea, 1998).

In the realm of health education, there are different theories and models that attempt to follow up after the person's behavior for his health. The present chapter describes theories and models in the field. First, the chapter presents the integration theories, the model of prevention, and the radical model. Then the chapter presents psychological theories in the health promotion and presents three primary models, health belief model, the theory of reasoned action, and the theory of planned behavior.

4.1 The Integration Theory

The integration approach addresses health promotion and health education as an ongoing process and not as a series of actions that are not related to one another. According to this approach, the promotion of health is supposed to measure which activities can be performed to prevent premature and untimely illnesses, handicap and limitation, and death, and therefore this aspect also includes health education. Health promotion is an integral part with the goal of directing and achieving health for all (Pike and Forster, 1995).

The integration approach to health education and promotion addresses four different levels: environmental, social, organization, and individual. These four levels need to be examined every time when health education and promotion are addressed. The integration model requires that every action for health promotion be examined on the basis of these four levels and not according to one or two levels (Kelly, Charlton, and Hanlon, 1993).

In addition, according to the integration theory, actions of health promotion should focus on three areas: health protection sphere, health education sphere, and prevention sphere. According to the proponents of the integration theory, it is necessary to focus on efforts to improve and increase positive health and to avert illness – through education for health, prevention, and protection.

1. Health Protection Sphere

This area of health protection refers to the legal and financial means in the analysis of the environmental level and the social level to achieve a regime of the objective of positive health. The way to accomplish this is to emphasize the importance among people of examining their state of health.

The goal of this sphere is to accredit people to make healthy choices. The goal is for people to pressure the regime / the country to help them in the health promotion and education. For instance, on the environmental level, it is necessary to help physically handicapped and limited people by facilitating access to schools and public areas – and this will increase equality in the population and will emphasize the normality of handicapped and limited people as opposed to their difference. In addition, it is necessary to encourage the prohibition of smoking, especially in public places. On the environmental and social levels, it is necessary to encourage giving refuge to the homeless so as to lead to social equality and the increase of health (Cowley, 1994; Pike and Forster, 1995).

2. Health Education Sphere

Health education is an important component in health promotion. There are overlapping elements between health education and health promotion. For instance, on the individual level, every person attempts to achieve the social skills that will help him attain a normal state of health (Tannahill, 1985).

In education for health, the efforts are directed to encourage people to learn how to protect themselves and how to prevent illnesses. Schools for nurses are at the front of the realm of health. They are the factors that influence in the determination of the health goals of the

generations of the future. The efforts in health education help also promote the preventative services (Pike and Forster, 1995).

3. The Preventative Sphere

This realm includes health supervision and prevention by several factors: nurses, midwives, nursing care schools, nurses' help of people with learning problems, and other people who belong to the health maintenance staff. This sphere includes the supervision of sick people, the rehabilitation of alcoholics and drug addicts, extended explanation of AIDS and how to prevent it, supervision of the homeless, etc. (Cowley, 1994; Pike and Forster, 1995).

How Is the Integration Theory Expressed in the Field?

This theory is expressed by a number of factors: first aid staff, hospitals, schools, different educational institutions, workplaces, and regional councils. The integration theory can be implemented with the following populations: the elderly, the unemployed, parents, and different minority groups (Pike and Forster, 1995).

4.2 The Preventive Model

The prevention model addresses not only the lengthening of the person's life but also the goal is to add life to the years, namely, to improve the level of life with the minimum of illnesses and limitations, to promote a healthy lifestyle, to improve the social and physical environment, and to improve social skills. The prevention model is expressed on three levels: primary, secondary, and tertiary.

1. Primary Prevention

The intention of primary prevention is to prevent the start of the illness, for example, through immunization of children to measles, mumps, rubella, tetanus, and lung disease. In addition, primary prevention also refers to genetic counseling for couples who want to have children so that they will know whether they are in a risk group for any given disease, such as sickle cell anemia, Down syndrome, etc.

In the realm of mental health, the intention is promote the participation in social groups – support groups in different topics, such as bereaved families, the physically handicapped and limited, the elderly,

the socially isolated, people who fear chronic illnesses, and those who suffer from pains – all to prevent depression.

The support groups in the framework of individual work in groups, run by volunteers, function in a number of dimensions, for instance, workshops for weight loss, workshops to prevent diabetes and high blood pressure, workshops to quit smoking, and workshops to prevent lung cancer and heart disease. In addition, there is education against overexposure to the sun, so as to prevent melanoma. It is possible to work towards this aim by planting trees besides pools so that there will be shade.

In primary prevention, the intention also refers to advertisements for safer driving on the roads, through the improvement of the transportation infrastructure on the roads (Pike and Forster, 1995).

2. Secondary Prevention

Secondary prevention refers to finding the problem before it appears or a situation that can be healed. This sphere involves the identification of the situation by sensitive people before the sufferers themselves are aware of the problems. An example is the identification of breast cancer or prostate cancer.

For some illnesses, if the indications of the illness are identified early, then it is possible to recover from the illness completely. For example, regarding the illness called phnylketonuria, correct nutrition can completely prevent its appearance. Another example is a problem thyroid: the moment the patient is given iodine, there is a real improvement in his situation.

In the past, these problems and others resulted in the situation in which the patient had to cope with a limitation, but today, because of the follow-up after the development of the illnesses, these illnesses rarely appear, since people know how to treat them. The follow-up after the patient is performed both on the individual level and on the social level.

Another example is melanoma (skin cancer). When the awareness of melanoma is raised in the first stage, there is a possibility of obtaining more effective and better treatment. A successful campaign can show the indications of the illness and encourage the search for immediate treatment.

In secondary prevention, the intention is that when follow-up after children is conducted, the follow-up needs to be not only towards the child himself but also in regards to society as a whole. Mortality among children of different ethnic groups is caused buy lack of awareness or lack of attention, such as crib deaths, falls, and injuries suffered inside and outside of the home. When a group at risk is identified, then it is necessary to implement for the group different preventative programs according to its needs (Pike and Forster, 1995).

According to Armstrong (1993), in the topic of mental health as well the different questions that people ask are very important when the answers to these questions can indicate a disrupted or distorted mental situation. There are three questions that need to be asked so as to examine whether a person is mentally balanced.

1. How do you feel in your mind?
2. Are you often worried?
3. How much do you sleep?

There are different ethnic groups that describe a greater number of physical symptoms as a response to psychological situations and therefore there can be specific problems in the identification of depression in different ethnic groups, since the indications change from group to group. Therapists must be tolerant of these cultural changes.

3. Tertiary Prevention

The use of tertiary prevention is to prevent complications in the situation of an existing illness, to promote rehabilitation, and to prevent a worsening in the situation, so that the highest level of health can be achieved in the framework of the possible situation. Health education and counseling can help patients and their families adjust to the illness and to the existing situation and to attempt to derive from it the positive maximum. This prevention includes ongoing help around the clock, follow-up after the symptoms, rehabilitation, support for relatives and care-givers, encouragement to speak about fears and emotions, to answer directly, etc.

Treatment with sedatives is supposed to help the patient function and acquire for himself everyday skills that will make it easier for him to cope with his new situation. In addition, there is reference to learning disabilities: correct treatment of the person can boost his self-image,

reduce his uncertainty regarding his ability, and improve his general health situation. The treatment includes social training programs, strategies for the improvement of skills, preventative education, improvement of interpersonal communication, inculcation of survival skills, and rehabilitation.

When there is governmental intervention and different researches are conducted, then the prevention shifts from tertiary prevention to primary prevention. In other words, instead of treatment, it is possible to simply prevent. (Pike and Forster, 1995).

Beattie (1991) proposed a model of health persuasion in which it is necessary to professionally shape the individual's behavior through health education. He proposes to place the clients with professional power in a position of negotiations. As the client is more actively involved in the restoration of his mode of living, he can change for the better his health situation. This model is related to the holistic approach in medicine. This is an equality-oriented model based on community cooperation and empowerment.

4.3 The Radical Model

The radical model copes with health and illness on the social level and not on the individual level. According to this model, there are different minority groups that live in different regions that constitute risk factors of different illnesses. In addition, their residential conditions themselves do not allow a maximal health situation: this refers to overcrowding and poor living conditions.

According to the approach, the focus is not on the individual and on his behavior but on social, economic, and political factors that ignore places that are harmful to the health where different people live. The policy should attempt to reduce poverty and encourage correct and healthy nutrition. For instance, it is necessary to fight the manufacturers of food that want to add fat and calories. In addition, it is necessary to record correct nutritional information on the product and to provide medicine to prevent different diseases, such as dysentery in developing countries.

The supporters of this model address the fact that the children of different minority groups who emigrate to the large cities are found at a

higher risk of being involved in traffic accidents, since they are not accustomed to the busy roads. Therefore, it is necessary to educate them how to behave on the road in teeming cities, as opposed to the places from where they came. Another improvement can also be accomplished through the creation of secure and safe places for play and the adjustment of the homes to the children's age. (Pike and Forster, 1995; Tones and Tilford, 1994).

4.4 Psychological Theories in Health Promotion

4.4.1 Health Belief Model

This model was developed in 1950 and is one of the oldest models in health behavior and education. The object of the model is to explain changes in health that are attributed to behavior and to act as a guiding framework for intervention in health behavior. (Glanz, Rimer, and Lewis, 2002). This model aims at explaining and predicting health-attributed behavior in the attempt to cause the person to be willing to act to change his health related behavior. A person engaging in health promotion should take into consideration a number of aspects:

1. The value of the person's health, in comparison to other aspects of his life.
2. The person's subjective perception, taking into account his health problems.
3. How the individual perceives his health problems.
4. How the person plans his life plans according to his medical problems.
5. The belief in diagnosis and possible treatment.

Thus, for example people can adopt a diet with fewer fats if they are aware of the implications of fat-rich nutrition, if they are at risk of suffering a heart attack (Pike and Forster, 1995).

Anderson and Wilkie (1992) proved that people should undergo the stage of the change of approach and internalize information, before they change their behavior. This approach asserts that the ability to succeed in change is also influenced by the society and the ethnic groups to which the people belong. If the caregivers are from the same ethnic/cultural group, then there is a higher chance that the message will be transferred in a better manner (Pike and Forster, 1995).

The following table presents a summary of this approach.

Table Number 1:
Key Concepts and Definitions of the Health Belief Model

Concept	Definition	Application
Perceived susceptibility	One's belief regarding the chance of getting a condition	Define population(s) at risk, risk levels
		Personalize risk based on a person's characteristics or behavior
		Make perceived susceptibility more consistent with an individual's actual risk
Perceived severity	One's belief of how serious a condition and its sequelae are	Specify consequences of the risk and the conditions
Perceived benefits	One's belief in the efficacy of the advised action to reduce risk or seriousness of impact	Define action to take: how, where, when; clarify the positive effects to be expected
Perceived barriers	One's belief about the tangible and psychological costs of the advised action	Identify and reduce perceived barriers through reassurance, correction of misinformation, incentives, assistance
Cues to action	Strategies to activate one's 'readiness'	Provide how-to information, promote awareness, employ reminder systems
Self-efficacy	One's confidence in one's ability to take action	Provide training, guidance in performing action
		Use progressive goal setting
		Give verbal reinforcement
		Demonstrate desired behaviors
		Reduce anxiety

To conclude, demographic and socioeconomic variables, as well variables related to societal structure, influence the individual and his perception of the situation (Glanz, Rimer, and Lewis, 2002).

4.4.2 The Theory of Reasoned Action

This approach was developed in 1967. It addresses the relationship between the beliefs, approaches, and intentions and the behavior. The assumption of the theory is that the person is a 'rational actor'. Therefore, a person will attempt to behave according to this aspect. This model assumes that there are many basic reasons that determine the person's behavior (Glanz, Rimer, and Lewis, 2002).

This approach intends to explain the relationship between the approach and the behavior, which asserts that the behavior is influenced by two primary realms:

1. The person's approach to a certain behavior – The person's approach is based on his beliefs and values. For instance, smoking can cause cancer: does the person ignore this or avoid smoking?
2. The person's ideas regarding what others think about certain behaviors.

These two impacts (the person's belief and thoughts about what others think) are what influence the person's behavior. A good example is smoking. It was found that a person who knows that smoking is harmful to his health would smoke with other people so that they wouldn't think that he is a coward.

This theory also addresses the indices of social norms, as they influence the behavior. The proponents of the theory argue that the person's intent is the primary cause of his behavior. If a person holds the belief that positive values will be the result of a certain behavior, then he will be positive in behavior, and the opposite is true, as well. In other words, the more the person knows what is expected of him, the more he will tend in this direction (Pike and Forster, 1995).

Both this theory and the following theory focus on theoretical structures that are related to the individual's motivation as a cause of the appearance of a certain behavior.

4.4.3 The Theory of Planned Behavior

This theory addresses the person's control over his behavior. The achievement of the control of the person's behavior depends on the control of the person's beliefs. Therefore, a person who holds strong

beliefs regarding his existence and regarding the possibilities of helping himself will have greater and stronger control over his health behaviors.

This approach addresses the subjective norms regarding the act. In other words, if the person thinks that it is easy for him to perform a certain behavior, then he will do so, and if not – then it is likely to assume that the action will not be accomplished. For instance, in a restaurant where smoking is prohibited, some people will rejoice that there is such a law and will tell themselves 'now I am not in a dilemma whether or not to smoke'. These people find it easy to stop smoking. However, other people find it difficult to stop smoking and they will be angered about the issue and will hold negative emotions (Glanz, Rimer, and Lewis, 2002).

Ajzen (1991) adds that this theory addresses the individual's judgment in different situations, which are not necessarily pleasant or comfortable.

This chapter presented different theories that addressed health education from different aspects. The integration theory addresses health education as an ongoing process that relies on different levels, environmental, social, organizational, and individual, and additionally focuses on three different spheres – the health protection sphere, the health education sphere, and the prevention sphere. In addition, the chapter also presented the model of prevention, which addresses the improvement of the level of life with the minimum of illnesses and limitations according to three different levels, primary prevention, secondary prevention, and tertiary prevention. Then the chapter described psychological approaches in health education. The health belief model aims at explaining and predicting health attributed behavior, or in other words, the attempt to bring the person to be willing to act to change his health related behavior. The other two theories – the theory of reasoned action and the theory of planned behavior, focused on the theoretical aspects related to the individual's motivation as a cause of the appearance of a certain behavior.

After the present chapter has described different theories and areas in health education, the following chapter presents the research population of the present research study – the elderly population.

5. The Elderly Population

In 1909 Ignatz Leo coined the term ‘geriatrics’. He maintained that old age is a defined period in life and supported the establishment of geriatrics as a special branch of medicine (Hogan, 2000).

According to Hazan (1984), from time immemorial old age and the status of the old man were topics of cultural tensions and problems of identity and definition. Moreover, the perception of the old person as a separate human entity, vulnerable and exposed on the one hand, but possessed of unique indications that accord him esteem on the other hand, is not the province of the accepted image only in industrialized Western society but is anchored in the human existence in almost all forms of life.

Old age is first and foremost a social-cultural phenomenon. The process of aging is the product of culture and behavior.

The definition of the elderly accepted in the world is aged 65 and above. However, it should be noted that this definition includes a very broad range of ages and as known, there is a strong relationship between age and the person’s other characteristics and needs. (Brudasky, Shenor, and Be’er, 2001).

This chapter presents the elderly population in the world in general and in Israel in particular and the characteristics of this population. The elderly are characterized by a number of universal traits, as follows:

1. In every society the elderly constitute a minority in the population.
2. In every society the number of elderly women is greater than the number of elderly men their age.
3. Widows constitute a relatively high percentage of the elderly population.
4. In every society part of the population is classified as ‘elderly’, a classification that dictates certain rules of behavior towards them.
5. In every society there is, with the coming of old age, a transition from active involvement in the processes of manufacture to roles of counseling, supervision, and occupations that do not demand physical activity.

6. In every society there are elderly who continue to hold positions of leadership.
7. The relations between the elderly and their adult children are characterized in every society by a system of customs and norms that determine reciprocal responsibility.
8. Every society esteems life and there is frequently the aspiration to extend this life as long as possible, in old age as well. (Cowgill and Holmes, 1972).

The number of the elderly in the world in the year 2000 reached 420 million people and the elderly constituted approximately 7% of the world population. By the year 2025 the number of the elderly in the world will double: the number of the elderly will reach 830 million people and will constitute more than 10% of the world population. The highest percentage of the elderly is found in European continent (15% of the population), and in 2025 more than one-fifth of the population in the European continent will be aged 65 and above. In 2000 52% of the elderly of the world lived in Asia, in 2025 58% of the elderly will live in Asia. In 2000 a little more than one-quarter of the elderly lived in Europe, in 2025 in Europe there will be 18% of the elderly. (Brudasky, Shenor, and Be'er, 2001).

Israel is a relatively young country and the percentage of the elderly in the population at large is the lowest of all the developed countries. The percentage of the elderly in Italy and in Sweden is the highest (more than 17%) and in Sweden the percentage of people aged around 75 and 80 is double that of Israel. According to the prediction, in 2010 and 2025 the percentage of the elderly in Japan will be the highest and will reach 21.5% and 26.7% of the population, respectively. (Brudasky, Shenor, and Be'er, 2001).

In the developing countries, an especially meaningful rise in the percentage of the people aged 75 and above in the population is anticipated. In the developed European countries the percentage of people around the age of 75 will reach in 2025 11% or more and this percentage will be especially high in Japan, where the percentage of this age group will reach about 15% of the population. (Brudasky, Shenor, and Be'er, 2001).

In Israel 43% of the elderly are men and the percentage of men in the other developed countries is lower. The ratio of the genders among

the elderly in Israel is high in comparison to other developed countries; for every 100 women there are 75 men. Among the countries, the lowest ratio is found in Russia: for every 100 elderly women there are 45 elderly men. (Brudasky, Shenor, and Be'er, 2001).

5.1 The Elderly Population in Israel: Classification

Israel is one of the developed countries where the life span at birth reached high levels, more than 76 years for men and close to 81 for women. At these levels of life span, both the mortality rates of infants and the mortality rates between the age of 1 and 64 are necessarily low. Therefore, most of the mortality in these countries occurs during old age. The decline in the mortality of the elderly is a new process in historical perspective and has most important implications – demographic, social, and economic. In the past, the decline in the mortality was primarily among people who were younger and led to the increased youth of the population. In contrast, today the decline in mortality is primarily among the elderly and leads to an aging of the population and to a considerable rise in the economic dependence of the elderly generations on the younger generations. In welfare countries, this rise in dependency constitutes a heavy burden on the public. (Friedlander and Tamir, 1994).

According to Rasoli and Shemesh (2003), at the end of 2000 the population of Israel was 6.4 million people and the population of the elderly (65+) consisted of 622,900 people. The people 65+ constitute 9.8% and the people 75+ constitute 4.4%. Since the establishment of the state of Israel until 2003, the size of the population of the country has grown by a factor of eight, while the population of the elderly aged 65+ has increased by a factor of sixteen.

The rate of increase of the elderly aged 75+ was more rapid than that of the elderly aged 65+. The women always constituted a majority in the population aged 65+. (Brudasky, Shenor, and Be'er, 2001). Among the women, the rage of 65+ was 11.1% while among the men 8.4%. This finding expresses differences in the life span at birth between the sexes, which is 80.9 years for women and 76.7 years for men (Rasoli and Shemesh, 2003).

Brudasky, Shenor, and Be'er (2001) add that the non-Jewish population is younger than the Jewish population. At the end of 2000, people aged 65+ constituted 3% of the Arab population, as opposed to

11% of the Jewish population. The elderly Arab population is also younger: one third are 75+, in comparison to 45% of the Jewish elderly.

One of the important developments in Israel in the 1990s was the great wave of immigration that entered the country, primarily from the countries of the former Soviet Union. This wave of immigration contributed significantly to the rise of the population of Israel in general and of the elderly population in particular (Brudasky, Shenor, and Be'er, 2001).

Brudasky, Shenor, and Be'er (2001) show that at the end of the year 2000 in Israel there were about 124,000 immigrants from the countries of the former Soviet Union aged 65+, who constitute 16% of the immigrants and 20% of all the elderly. The number of the elderly immigrants from Ethiopia reached at the end of the year 2000 4,300, constituting 5.3% of the general population of Ethiopian extraction and 0.7% of the elderly population in Israel.

The decisive majority of the Jewish elderly are foreign born. The primary countries of birth of the foreign born Jewish elderly are the countries of the former Soviet Union, Poland, Romania, Morocco, and Iraq. The elderly who were born in Europe and America are older than the elderly who were born in Asia and Africa.

It is possible to divide the elderly population into three groups, when each one of them has different patterns of behavior and consumption of services.

1. The native born and long time resident Jews, including immigrants from all the countries with the exception of immigrants from the countries of the former Soviet Union who have immigrated since 1990.
2. The immigrants from the countries of the former Soviet Union who have immigrated since 1990.
3. The non-Jews.

The Central Bureau of Statistics includes within the non-Jewish population the Christian immigrants from the countries of the former Soviet Union, whose part in the immigrant population is estimated at 8.5% at the end of 1994. However, statistically the Christian immigrants from the countries of the former Soviet Union are included in the Jewish population, since it is reasonable to assume that their behavior patterns

are more similar to those of the Jewish immigrants than to those of the non-Jewish long time resident population in Israel (Be'er, 1996).

The Tel-Aviv district and the Haifa area are characterized by the highest percentage of the elderly (15% of the general population in each of the regions are elderly), while the Northern region is the youngest district (7% of all the population in the district are the elderly). A considerable percentage of the non-Jewish elderly (50%) lives in the Northern district, the large majority in the Acre area and the Yizrael area and 20% in the Jerusalem district. (Brudasky, Shenor, and Be'er, 2001).

The dependence ratio of the elderly, namely, the ratio between the number of the elderly aged 65+ in the population and the number of the people of work age (20-64) was at the end of 1999 185. (In other words, 185 elderly for every 1000 people of work age.) This ratio has almost doubled itself, from 1960, when it was 97. (Brudasky, Shenor, and Be'er, 2001).

The percentage of the elderly who live alone constitutes an important datum for the planning and design of services for the elderly population. One-quarter of the elderly aged 65+ live alone. The percentage of the elderly women who live alone is three times as high as the parallel percentage among men. (Brudasky, Shenor, and Be'er, 2001).

There are differences between households according to religion. The percentage of households of the elderly aged 65+ in the Jewish sector is twice as high as the parallel percentage in the non-Jewish sector (26% and 13%, respectively). Households in the non-Jewish sector are larger. This is expressed in the average number of people in the household of those aged 65+ in the non-Jewish sector, which is higher by 1.6 than the mean in the Jewish sector (3.70 and 2.11, respectively). (Brudasky, Shenor, and Be'er, 2001).

According to the population-oriented predictions, the percentage of the elderly aged 65+ is expected to increase in the population to 12% in 2020. The proportion of the elderly aged 75+ of all the elderly will rise to 46% by the year 2010, but towards 2020 it will decline to 28% (today this percentage is 44%). Till 2020 the Arab elderly will constitute 9-10% of the elderly population in Israel (as opposed to 6% today) (Brudasky, Shenor, and Be'er, 2001).

Shuval and Anson (2001) note that although the elderly are reserved a place of honor in all cultures, this is one of the weakest social groups. As such, its needs are very great.

In Jewish tradition, a place of respect and esteem is granted to the members of the community who have achieved a long life. The attitudes that glorify the elderly can be found in the Bible and in the *Talmud* and *Mishnah*[*], where the elderly person is a synonym for a leader, for a wise man, and for a judge. The Commandment "Honor thy father and thy mother" is an expression of the esteem of the elderly and is a determination of the social commitment to care for them. The plea in *Psalms* 71:9, "Do not cast me away when I am old; do not forsake me when my strength is gone", represents the fear based on accumulated social-cultural knowledge. The continuation of the psalm emphasizes the value-based commitment to support the elderly at the end of their days. (Shuval and Anson, 2001)

This tradition was preserved in Jewish society throughout many generations. Until the middle of the 18th century, it was accepted to care for the elderly in the framework of the family, usually in a multigenerational household. This pattern was not unique to the cohesive Jewish family but was accepted among the Christians and Muslims and is widespread until today in Asia and Africa. (Shuval and Anson, 2001)

The extra-family institutions for the care of the elderly among the members of the Jewish communities began to appear only in the second half of the 18th century, with the commencement of changes in the traditional Jewish society and with it, the weakening of family cohesiveness. (Shuval and Anson, 2001)

Prominent changes in the elderly person's condition have occurred in the Western world, as a result of processes of industrialization, emigrant, secularity, and as a consequence, the decline of the centrality of the traditional perceptions. These processes did not overlook the Jewish communities that lived in these parts of the world. In addition to the processes of modernization in the surrounding society, unique processes of social change occurred in the Jewish communities, processes that led to the redefinition of the place of the elderly person in Jewish society. (Shuval and Anson, 2001)

[*] The *Mishnah* and the *Talmud* define the codex of traditional Jewish religious law, including Biblical rulings as well as oral tradition.

One of these processes was the wave of emigration of Jews from the countries of Europe to America at the close of the 19th century. The emigration harmed the cohesion of the traditional Jewish family on both continents: on the continent of origin generally there remained the elderly family members, both because of the tendency to emigrate is more widespread among the younger members and because of the emigration policy of the United States. In the absorbing country, the process of assimilation caused many of the members of the second and third generations of the emigration to become alienated from the first generation, to which the indications of the traditional Jewish life style imported from Europe still adhered. (Shuval and Anson, 2001)

The development of the new Jewish settlement in the land of Israel also was tied to the changes in the perception of the status of the elderly and their place in developing society. The classic pioneering ethic, as it developed in the beginning of the 20th century, emphasized youth, physical labor, independence, the conquering of the desert, and the drying of the marshes, all the while rejecting the traditional Diaspora values of education and the broadening of the horizons, materialism, and the admiration of the elderly. Many of the founders of the new Jewish settlement left their parents' homes and immigrated to the land of Israel, leaving behind in their countries of origin their parents and grandparents, so as to build a new society. (Shuval and Anson, 2001)

Shuval and Anson (2001) show that in the first years of the development of the new Jewish settlement, the pioneering ethic played a major role in the formation of the culture of the pioneering society. Emphasis was placed on the values related to youth. Among some of the pioneers, an indifferent attitude developed to the elderly, and even contempt. Because of the revolutionary character of the first waves of immigration, the population of the new Jewish settlement was relatively young and the elderly did not constitute a prominent social group until the 1970s. While the pioneering ethic dissipated to a certain extent and Western values, such as personal achievement and materialism, took its place, the myth of the young and reinvigorated society survived. It constituted, and to a certain degree still constitutes, a fertile ground for the growth of stereotypes, negative perceptions, and attitudes towards the elderly, similar to those that exist in other industrialized countries.

The Second World War and the Holocaust that the Jews suffered during it left survivors of all ages without relatives with whom to build a

new family life. The elderly among the survivors had fewer resources and opportunities to re-establish a supportive family than did the young survivors. A significant number of the elderly in Israel consists of Holocaust survivors, who carry the scars of the Second World War. The vulnerability of this population is especially prominent in a time of crisis, as was evidenced in the Gulf War of 1991. The population of Holocaust survivors is characterized by small families, a structural factor that increases their social loneliness and limits the resources of non-formal social support at their disposal when needed. (Shuval and Anson, 2001)

Lutzki (1986) adds that the home, the community, and the State constitute the life realm and activity of the elderly. This is its territory. Society deliberates many problems, to provide the needs of its elderly, so that they will be comfortable and will live their lives peacefully and happily. The argument, therefore, is between the encouragement of the elderly person to live his life at home, in his family framework, or in an old age home or in any other framework of living.

The family, as it was, no longer exists. The children have become adolescents and have left the family nest. The mates grow old and become lonely. If only one remains, after the death of his mate, then the situation is exacerbated even further. (Lutzki, 1986)

The elderly person must cope or adjust to four types of pressure that cause him problems in his life (Lutzki, 1986):

1. The conflict with himself and his character.
2. The coping with his family and in his family.
3. The friction with his immediate environment.
4. The struggle for his place in the national population.

The status of the elderly person, the attitudes towards him, and the patterns of the care of the elderly are influenced by the family patterns accepted in the different social groups that comprise Israeli society. These, as aforementioned, are rather congruent to the positioning on the traditional – modern continuum. The rural non-Jewish population in Israel holds the most traditional attitudes towards the elderly and the care of the elderly. People of European and American extraction were exposed in their countries of origin to the processes of modernization and secularism, which weakened the cohesion and traditional family commitment, earlier than were people of Asian and African descent. Therefore, they were more influenced by these processes. However, all

in all, in the comparison to other developed societies, Israel is noteworthy as a 'family society', which is expressed in the non-formal support that the elderly enjoy (Shuval and Anson, 2001).

Like other industrialized countries, in Israel there is also a prominent and difficult dilemma regarding the need to resolve between social values and immediate needs, between moral principles and economic constraints. In all industrialized societies, the constant rise in the number of the elderly and their part in the population, including their multiple needs, was accompanied by the pressure to reduce the expenses of the health and welfare services. In Israel, for example, the elderly constitute one-tenth of the population, but their needs require about 40% of the social services. According to the experience of other developed societies, the trend to the rise in the relative part in the population of the elderly population may continue for many years, and with it their need for services. (Shuval and Anson, 2001).

As in every society, the demographic structure of the State of Israel is influenced by changes in the patterns of fertility, mortality, and emigration. Israel is unique in its commitment to the assimilation of immigration. The waves of immigration at different periods – the size, patterns of fertility in the country of origin, and the distribution of the immigrants' ages – have a significant impact on the stratification by age of the Jewish population in Israel (Friedlander, Ben Moshe, Skelkens, and Feldman, 1990).

In spite of the social values that emphasize the respect and concern for the elderly, poverty is one of the characteristics of the elderly population in Israel, as it is in many other developed countries (Shuval and Anson, 2001).

5.2 Rates of Physical Limitation among the Elderly

According to estimates prepared by the Joint – Brookdale Institute, in 1994 in Israel there were about 68,000 elderly, who were limited physically. In other words, these elderly were limited in at least one activity of the activities of daily living (ADL) – eating, bathing, and getting dressed. These elderly constituted 13% of all the elderly in Israel. About one-quarter of the limited population stayed in institutions for prolonged care (about 16,500 people) and three-quarters (51,600 people) lived in the community. The number of limited elderly in the community

constituted about 10.5% of the entire elderly population living in the community (Beer, 1996).

In the years 2000 and 2005 the number of limited elderly is expected to increase to 85,000 and 101,000, respectively. This means that there is a rise of 48% in the period 1994-2005, namely, a rate of increase double that of the general elderly population (about 25%) (Beer, 1996.

The rate of bodily limitation in the community changes between different population groups: 9-10% among the long time resident Jewish elderly were limited in 1994, in comparison to 13% among the elderly from the countries of the former Soviet union and about 22% of the non-Jewish elderly (Beer, 1996).

5.3 Social Characteristics of the Elderly

Education

In most societies, the percentage of those who lack a formal education is higher among the elderly than any other age group. In Israel, for example, among those aged 15 and above in the general population, the number of people lacking a formal education has declined from 16% in 1961 to 4% in 1995. However, the elderly population still is characterized by a relatively high percentage (14%) of people who lack a formal education. There is a great gap between men and women and between different ethnic groups. The percentage of women lacking an education is twice as high as that of the men (17% and 8%, respectively). Among the elderly in the Arab sector, there is a considerable percentage of elderly lacking formal education, primarily among women (70%) but also among men (37%). However, a manifest improvement has occurred in the level of education among the elderly. The percentage of the elderly without an education has declined from 34% in the 1960s to 14% in 1994. It is possible that this decline indicates an improvement in the socioeconomic situation of the elderly and this may have important implications regarding the scope of the need for welfare services and regarding the type of services required. (Brudasky, 1998).

The gap in education between Jews and Muslims should also be noted: 18.2% of the Jews aged 60 and above had up to 4 years of study, as opposed to 88.9% of the Muslims (Rasoli and Shemesh, 2004).

Participation in the Work Force

Although the percentage of the elderly who participated in the work force was found to be in decline, it is still rather high in comparison to other Western countries. In 1995 11% of the population aged 65+ were employed (18% of the men and 6% of the women), among elderly 65-69 this percentage was higher, 18%. Nevertheless, the participation of the elderly in the work force is experiencing a process of change. As in other Western countries, the percentage of men in the work force has declined, not only among those aged 65+ but also among those aged 55+. In the 1960s, about 80% of the men aged 55-64 participated in the work force, as opposed to 66% in 1994, a decline of 17%. In contrast, the percentage of women aged 55-64 in the work force increased to 83% since the 1960s. The participation of the elderly in the work force is important not only because it is a significant source of income but also since work allows the elderly person to feel that he is contributing to society and dissipates feelings of loneliness and disengagement.

The values of society are based to a steadily increasing extent on productive work, and therefore the elderly lose an important part of their social status when they retire. This situation confronts society in Israel with a new challenge, with which it must cope in the coming years. (Brudasky, 1998; Rasoli and Shemesh, 2004).

The Informal Support System

The existence of a family and the relationships with it considerably influence the elderly person's welfare, providing support and preventing, postponing, or reducing the need for formal services. The degree of the informal support provided to the elderly person depends on a number of factors, including the elderly person's family situation, living arrangements, proximity to the family, and accessibility of the primary caregiver in the family. Elderly men have greater access to informal support, at least potentially, than do elderly women. Of the entire elderly population, about 60% are married. The number of married men is twice as high as the number of married women (80% in comparison to 40%, respectively). It is not surprising, therefore, that the percentage of elderly women who live alone is three times greater than that of elderly men. All in all, the percentage of the elderly who live alone has increased from 12% in 1961 to 24% in 1995. Most of the elderly in Israel enjoy an informal support system, most have at least one

child, and the large majority has a close relationship with their children (Brudasky, 1998).

Brudasky, Shenor, and Be'er (2001) emphasize the fact that the process of aging is accompanied by different physiological changes and certain health phenomena become more common with the rise in age. The health situation of the elderly does not only depend on physiological and hereditary factors but also is influenced by environmental factors, by the level of life, and by the lifestyle. The health services have an important role, but not an exclusive role, in the encouragement and maintenance of the health of the elderly.

5.4 The Elderly and Health

The realm of health greatly influences the lives and welfare of the elderly. The deterioration of the health situation, and especially the appearance of a limitation or handicap, strongly impairs the elderly person's quality of life. Therefore, concurrent to the considerable rise in the life span, it is important to identify and emphasize the ways of improving the lives of the elderly and of giving them not only long life but also quality of life (Brudasky, Shenor, and Be'er, 2001).

The life span at birth is, as aforementioned, 80.9 years for women and 76.7 years for men. The life span of Jews is higher than that of Arabs: in 1996 the gap between the groups in the population was 2.6 years among women and 2.1 years among men. The life span at the age of 65 is 18.6 years for women and 16.5 years for men. In other words, a woman who reaches the age of 65 is expected to live to the age of 84, on the average, and a man to the age of 81. (Brudasky, Shenor, and Be'er, 2001; Rasoli and Shemesh, 2004).

About one-third (36%) of the elderly aged 65+ engage in physical activity on a regular basis, men more than women (41% and 31%, respectively). The engagement in physical activity declines with the rise in age. The physical activity commonly found among the elderly is walking: about 24% of all the elderly, and about 67% of the elderly who engage in physical activity, reported walking on a regular basis. (Brudasky, Shenor, and Be'er, 2001; Rasoli and Shemesh, 2004).

9% of the elderly smoke. The percentage of men who smoke is double that of women who smoke (13% versus 5%). The percentage of

the elderly who smoke among members of other religions is higher than that of Jewish elderly (12% versus 8%). Only 5% of the immigrants from the countries of the former Soviet Union smoke. (Brudasky, Shenor, and Be'er, 2001; Rasoli and Shemesh, 2004).

Slightly more than one-third of the elderly (34%) reported vision problems (28% of the men and 39% of the women). The percentage of the elderly who suffer from vision problems rises with the rise in age and reaches 47% among those who are 80+. 28% of the elderly reported hearing problems (31% of the men and 26% of the women). The percentage of the elderly who suffer from hearing problems reaches 48% among those who are 80+. (Brudasky, Shenor, and Be'er, 2001; Brenner, 2003).

17% of the elderly reported problems with deficient urinary control (13% of the men and 19% of the women). The percentage of those suffering from deficient urinary control among those who are 80+ reaches 26% for men and 39% for women. (Brudasky, Shenor, and Be'er, 2001; Brenner, 2003).

About one-fifth of the elderly in the community have fallen during the past half year. The men suffer less from falling (14%) than do the women (24%). The percentage of the elderly who have fallen reaches 31% among those who are 80+. (Brudasky, Shenor, and Be'er, 2001; Brenner, 2003).

Among the elderly aged 65+ who live in the community (outside of an institution), 11% cannot bathe or shower without help. 6% need help to get dressed and 3% need help to eat. In addition, the percentage of the elderly who reported difficulty performing these actions, although they can perform them without help, reached 13% in bathing, 14% in getting dressed, and 6% in eating. (Brudasky, Shenor, and Be'er, 2001; Brenner, 2003).

When the percentage of the limited elderly who live in the community is examined, or namely, when the elderly who need help in at least one of the activities of daily living (bathing or showering, getting dressed, eating, sitting and getting up from a chair, going in and out of bed, moving about the house) are examined, it becomes clear that this percentage is 12% (9% among the men and 14% among the women). (Brudasky, Shenor, and Be'er, 2001; Brenner, 2003).

The percentage of the limited population increases sharply with the rise in age: 32% among those 80+ versus 6% among those 65-74. The percentage of the limited elderly among the Arab population is about three times as high as the population among the Jewish population (30% and 11%, respectively). A relatively high percentage of the limited is found among the Jewish elderly born in Asia and Africa. Between the years 1990-1999, the number of the limited elderly in Israel grew by 52% and reached about 88,000 people at the end of 1999. 22% of the limited elderly are residents of institutions for prolonged care and 78% live in the community (Brudasky, Shenor, and Be'er, 2001).

Examination of the mobility ability of the elderly outside of the home shows clearly that nearly three-quarters of the elderly who live in the community can walk outside of their home for a distance of 400 meters, without any aid (Brudasky, Shenor, and Be'er, 2001).

The percentage the hospitalization of the elderly in the hospitalization divisions is three times as greater as the percentage of hospitalization among the population at large. The distribution of the hospitalizations of the elderly in the divisions of hospitalization indicates that hospitalization in the internal medicine ward is the most commonly found and constitutes slightly more than one half of the hospitalizations. The average stay of the elderly is greater than that of the general population, both among men and among women. Examination of the mean looking in the different divisions indicates a relatively higher than average stay in the critical geriatric and neurosurgery wards.

An elderly person visits the doctor for at least fifteen times a year, of which 11.5 times are with the family physician and 3.6 are with an expert physician. The average of visits to the physician in a year in the population as a whole is about seven visits. (Brudasky, Shenor, and Be'er, 2001).

The present chapter presented the elderly population around the world, while focusing on the elderly in Israel. Emphasis was placed on the social aspects, such as education, participation in the work force, the informal support system, and a relationship of elderly and health. The next chapter presents aspects of health education among the elderly.

6. Health Education of the Elderly

The rise in the life span has caused an increase in the number of the elderly in the population. The elderly population finds it difficult to cope with certain situations of pressure and suffers from different types of disease. Therefore, health among the elderly becomes a main element in thought, everyday activity, nutrition, and medical actions for the identification and prevention of illnesses. (Brenner, 2003).

Is health education worthwhile at an advanced age? Is it not too late? For young people, the primary object of health education is to avert illnesses and extend the life. After the age of eighty, in contrast, there is a different goal – to preserve the elderly person's level of functioning and to prevent limitation and handicap. In the Western countries, the number of the elderly above the age of eighty is steadily rising, and therefore, the prevention of limitations and handicaps in this population is a most important challenge in the medicine of the future. Certainly, the preventative treatment should be commenced before the age of eighty, but this is not a reason to deny the elderly the last possibility of preserving their quality of life and independence (Shen, 2000).

This chapter presents different aspects of the health education among the elderly, for example, nutrition, physical activity, muscle loss, calcium loss in the bones, smoking, drugs, alcohol consumption, intellectual activity, falls, social activity, and immunizations. In addition, the chapter presents the psychological-mental aspect among the elderly. Emphasis is placed on trends and issues in the development of services among the elderly and the adjustment of the elderly in institutional placement and hospitalization. Last, the chapter presents how health is promoted in different countries around the world.

The question of what is the place of prevention services and health promotion services for adult and elderly people is complex. On the one hand, we have witnessed in recent decades the essential change in society's perception of old age. Aging is no longer considered the end of the period of a productive and contributing life and a period of an unavoidable decline in the state of physical and mental health. The use of concepts such as 'successful aging', 'productive aging', and 'healthy aging' is becoming more common. Conversely, some assert that it is difficult to influence the health situation after changes have already occurred therein, it is not possible to change the results of ongoing and

accumulative exposure to risk factors, and it is difficult to influence and change behavior patterns at an old age (Bentor, 2001).

Brudasky and Sobol (1990) direct attention to the fact that health promotion is intended first and foremost to enable the elderly to remain independent and to avoid dependence, through the maintenance of a reasonable quality of life and level of activity. Health promotion also seeks to reduce as much as possible the impact of situations of illness on their functioning in all areas of life.

Brenner (2003) adds that health promotion encourages the maintenance of the lifestyles that preserve the abilities of the person in general and of the elderly person in particular. Health promotion is an educational process that leads to a healthier life style and to the reduction of health risks. The process relies upon knowledge that is accumulated in the areas of health but is not a therapeutic process like processes of healing and prevention of illnesses.

Most of the elderly are healthy in general and can live independent lives in the community. However, one of the prominent characteristics of aging is the increase of chronic illnesses. Many of the elderly aged sixty and above suffer from chronic illnesses, such as high blood pressure, diabetes, arthritis and other problems with the joints, cardiovascular diseases, and respiratory diseases. Approximately 80% of the elderly aged 65 suffer from at least one chronic illness. The rise in the number of illnesses and the chronic situations frequently lead to limitations in functioning and to the need to receive help from the environment (Bentor, 2001).

It should be remembered that health promotion programs need to be different between relatively health elderly and elderly with chronic and terminal illnesses (Morley and Flaherty, 2002).

There is a close relationship between the elderly person’s life style and the appearance of problems characteristic to old age. The very process of aging necessitates a change in the elderly person’s life style. For example, if a person did not engage in initiated physical activity in his youth, then it is important that he begins such activity in his old age, since the decline in the everyday activity may impair his functioning ability.

The existence of health problems and their degree of severity are influenced not only be the elderly person's behavior in health issues but also by psychosocial and environmental factors. The elderly are more vulnerable to environmental risks such as traffic accidents or accidents in the home.

Brudasky and Sobol (1990) note that with the rise in age the frequency of social problems such as loneliness and loss of beloved ones also increases. Moreover, the combination of social problems and health problems increases the negative impacts of the health problems on the elderly person's functioning.

In addition, it was found that people who think or know that they are at high risk to suffer from a chronic illness are willing to change their behavior in regards to their health (Ness, Gurney, and Ice, 2003).

6.1 Different Aspects in Health Education among the Elderly

Nutrition

Nutrition is a main element in health promotion at all ages. As a rule, the diet must be diverse and balanced and must inspire appetite. The meals must be consumed at regular times.

In general, elderly after the age of 75 tend to lose weight, about one to two kilograms every two to three years. It is not clear whether this is a healthy response to the elderly person's lower metabolism or whether the cause is a covert illness (Cohen, 2000).

The main objectives of nutrition for health promotion in old age are:

1. Maintenance of diversity and adequate quantity of all components of nutrition: water, energy, proteins, minerals, and vitamins.
2. Follow-up after changes of weight and changes in the eating habits. Excess weight has less significance at an advanced age as a cause of risk of illness. In contrast, changes in weight, whether increases or decreases, can be the initial indication of physical or mental illness.
3. Maintenance of regular eating habits as part of the lifestyle.

4. Frequent consumption of fruits and vegetables and foods rich in fibers (whole breads, whole grains, etc.)
5. The diet should be rich in calcium, such as milk products, leafy green vegetables, sardines, etc.
6. The diet should contain a minimum of fatty foods and the addition of salt and sugar should be restricted.
7. Water should be imbibed frequently (Brenner, 2003; The Committee for Health Promotion, 2003).

Researchers presented another strategy for the examination of nutrition among the elderly population. They suggested inviting the elderly person for a process of three stages. First, the elderly person's diet is reviewed with him. Then, the problems n his nutrition are identified and last individual treatment is provided (Drewnowski, Monsen, Birkett, Gunther, Vendeland, Su, and Marshall, 2003).

According to Bar-Tor (1997), the active or passive engagement in food during old age constitutes a main world of content. The elderly people tend to hold eating rituals, during which they painstakingly uphold a regular menu and eating schedule.

Physical Activity

Maintenance of the body and its functioning through controlled physical activity can slow the aging process (Becker, 1989).

The good feeling induced by physical activity derives from metabolic changes that occur during the activity. In addition to the improvement of tolerance, physical activity causes positive metabolic changes, such as the increase of the sensitivity of the insulin receptors to their action, change in the hormone secretion and in the sensitivity of the receptors to them, and the reduction of the visceral fat that appears on the inner organs and that is linked with cardiovascular disease.

The main risk of physical activity is the multiplicity of different types of accidents, ranging from falls to abrupt death, the rate of which rises among elderly exercisers. However, the benefit of physical activity still exceeds its possible harm. The improvement in the physical and physiological dimensions leads to a most important secondary benefit: improvement in the functioning ability and primarily in mobility, stability, coordination, ability to withstand effort, and better feeling. As a

result of these advantages, there is an improvement in the life span of 20%-50% of the people who are significantly active (Brenner, 2003; The Committee for Health Promotion, 2003).

Cohen (2000) adds that physical activity has many and diverse advantages. These include, for example, 'healthy' tiredness and improvement of sleep, increase of the appetite, and improvement of the intestinal activity, reinforcement of the bones, and prevention of calcium loss, and the retention of body heat control.

Different researches have found that there is a direct positive relation between society's attitude towards the elderly person and his physical activity. In other words, the more positive the attitude is, the more physically active the elderly person is and the greater his motivation (Drewnowski, Monsen, Birkett, Gunther, Vendeland, Su, and Marshall, 2003).

Sarcopenia (Age Related Muscle Loss)

Until not long ago, the degeneration of the muscle was thought to be an irreversible phenomenon during the aging process. Today, however, it is known that, even among people aged ninety and above, it is possible to strengthen the muscles through appropriate exercises. The problem is that till now much has not been done to derive benefit from this information and thus many elderly obtain nursing care treatment unnecessarily.

It is necessary to increase the awareness of the family physicians of the importance of physical activity among the elderly (aged eighty and above). It is recommended that the elderly perform aerobic exercises such as walking every day and to strengthen their muscles through easy power exercises such as getting up off a chair, sitting down, and then getting up again (Shen, 2000).

Calcium Loss from the Bones

Over the years, it was accepted to begin treatment with the female hormone estrogen immediately after the cessation of the monthly menstruation and to continue for only a short period. Now it is clear that to retain the bone strength, this is not enough and it is necessary to continue treatment throughout the life. However, very few physicians have begun hormonal treatment among elderly women.

Roughly, the risk of bone breakage during old age is doubled every five years. If the fact that most bone fractures in the thighbone occur after the age of eighty is taken into account, it is clear that calcium loss should be halted even at an advanced age.

It is possible to prevent or reduce the decline in the bone density through calcium rich nutrition, calcium additives, vitamin D, and physical activity. It should be emphasized that even the elderly above the age of eighty tend to suffer from calcium loss and bone fractures. Till now very little has been done to prevent fractures among elderly men. (Shen, 2000; The Committee for Health Promotion, 2003).

Drugs and Alcohol

The elderly are especially sensitive to alcohol due to two main reasons. First, the elderly tend to weigh less than do adults and they have less of a muscular system and less liquids in the body. Alcohol is not diluted in the body liquids. Therefore, the elderly generally have a lower tolerance of alcohol, since the consumption of a certain amount of alcohol leads among them to a high level of alcohol in the blood.

Another reason is that the elderly population takes many medications. This fact makes them a group with high risk regarding the interaction between alcohol and different medications, especially sleeping pills and sedatives.

The elderly population is divided into four groups in regards to alcohol consumption.

1. The elderly who drink and who succeeded in reaching the age of 65 and above, despite their exaggerated drinking over many years. These elderly are characterized by severe health problems, such as brain damage, liver disease, digestive tract illnesses, and mental problems.
2. The elderly who drank exaggeratedly at different periods in the past and who now do not drink alcohol or who drink moderately. This group is at risk of returning to the practice of exaggerated drinking due to different reasons, such as loneliness or economic difficulties.
3. The elderly who began to drink exaggeratedly at an advanced age because of different reasons, such as

retirement, which induced boredom, change in the social and/or economic status, death of a spouse or death among friends and relatives, deficient health and loneliness.

4. The elderly who did not drink alcohol in the past or who drank moderately and who persevere in this drinking pattern in their old age (Weiss, 1990).

Intellectual Activity

Intellectual activity, with its different types, has impact that reduces the risk of cognitive decline. Intellectual activity can be of different types: secular studies, religious studies, card games, crossword puzzles, etc. Different researches have shown that this type of activity reduces the risk of cognitive decline (Brenner, 2003).

Becker (1989) adds that the older learner should see his studies not as a continuous and continual substitute but as the study of selected issues in changing periods of time that are adjusted to his needs.

In addition to the intellectual and cultural stimuli, the studies at an advanced age supply a broad range of the learner's needs. The cultivation of the expressive needs contributes to the enrichment of the 'self', to the improvement in the learner's self-image. Studies at an advanced age may also enrich the learner's cognitive repertoire and equip him with new ways of thinking and consideration. The more the learner can absorb them, the greater his chances to choose for himself new solutions that will be more suited to his situation than the solutions that he determined for himself in the past. Therefore, the studies will constitute a factor that promotes his process of adjustment to the changes dictated by time and the conditions.

Smoking

Smoking is harmful to the health. It is necessary to refrain from smoking and to avoid, as much as possible, second-hand smoke – the inhalation of smoke in the environment of smokers (The Committee for Health Promotion, 2003).

Cohen (2000) notes the difference between the harms of smoking and other forms of air pollution. The first difference is the personal responsibility that the person bears in regards to smoking. Another

difference is the excess proximity to the source of harm. Regarding cigarettes, there are two primary detrimental factors. First, nicotine causes the person to feel good after a short period of adjustment difficulties. However, for most people, these materials cause heart rate disorders, excess stomach acids, etc. The second factor is the group of carcinogenic materials, which impair the respiratory system and the health.

Brenner (2003) shows that smoking causes cardiovascular disease, lung cancer, and chronic bronchitis. However, above the age of 75, the impact of smoking as a cause of cardiovascular disease and cancerous tumors declines. Nevertheless, the influence of smoking on respiratory tract diseases remains. In light of the tendency to infections, which is increased in old age, the cessation of smoking has positive impact on short-term lung disease, and therefore it is necessary to encourage people to stop smoking even at an advanced age.

Falls

Falling is an event that the person who falls reports himself or that witnesses report. Falling causes the person to unintentionally attain a change of position and to find himself on the floor or on a lower surface, without or with the loss of consciousness. (Rubinstein, 1999).

The danger from falling increases with the rise in age. Therefore, the efforts to prevent falls should be concentrated on the elderly age 75 and above. Falls are an important cause of fractures. It is very important to instruct physicians and nurses how to explain to the elderly what can be done to prevent falls. For instance, the elderly should be reminded to be careful when going down a flight of stairs, to wear appropriate shoes, to install in a shower a handhold and an anti-slip surface, etc. (Shen, 2000).

The fear of falling causes many elderly to minimize their physical activity, which then causes a decline in the general functioning. Correct physical activity may balance the body and the muscles and even reduce the risk of falls (Less, Clark, Nigg, and Newman, 2005).

Social Activity

The social activity and involvement of the elderly man in community activity, in the framework of his capability, is very valuable

in the maintenance of his abilities. Social isolation constitutes an independent risk factor of cardiovascular disease at any age. Social isolation may cause a sense of loneliness, which may deteriorate to endogenic depression.

The active involvement of treatment factors and of community representatives is a simple and inexpensive means of preventing depressive illnesses and of improving the esteem and ability of the elderly to cope with different limitations and problems (Brenner, 2003; Shen, 2000).

Periodic Immunization

There is no doubt that, with the exception of an improved level of living (residence, dress, correct nutrition, and public and personal hygiene), the greatest impact on the extension of the life span and the quality of life can be ascribed to the immune system that people acquire as children (Cohen, 2000). Periodic immunization is very valuable in the prevention of infectious diseases and reduces the risk of a functional decline and the exploitation of the functional reserves following an illness.

For the elderly, it is recommended to ascertain that they receive the following immunizations: immunization against influenza, every year, during the autumn, one-time immunization against pneumonia for the elderly aged 65 and above, and immunization against tetanus and diphtheria once every ten years. (Brenner, 2003; The Committee for Health Promotion, 2003).

6.2 Psychological-Mental Aspect among the Elderly

Medicine has contributed most significantly to the extension of the life of the elderly person. Technological progress and the awareness of the importance of good health and proper nutrition have added many years to the life span. However, treatment of the person’s body is no guarantee of his mental health and a good quality of life, and sometimes the reverse is true. What will the healthy elderly person do in a society that does not appreciate him and where the frameworks where he can continue to function are limited? (Bar-Tor, 1998).

Cohen (2000) notes that the modern man has experienced three crises with the approach of his old age. These crises can come one after another and their sequence is not fixed. The first crisis is, for the most part, the crisis of retirement. In this stage, the elderly person discovers that he is tied to his workplace with binds of love-hate and although he seeks to disengage from it, its absence in his life creates a void. The second crisis may be the loss of a relative, for the most part, his mate. The third crisis, perhaps the most severe, is created with the disconnection from his regular place of residence.

According to Bar-Tor (1998), the contribution of the psychology of old age is thus the attempt to find how it is possible to add life to the years that medicine has provided. This is a difficult and complicated task, which requires awareness of the inseparable combination between body and mind and the openness to treat 'pains of the heart' and the 'weaknesses of the self' without feeling shame, guilt, or anxiety of madness.

The poorer mental ability constitutes a burden on the public health system and one of its characteristics is depression. Therefore, it is important that the elderly person have somebody with whom to talk and somebody with whom to be. (Drewnowski, Monsen, Birkett, Gunther, Vendeland, Su, and Marshall, 2003).

The elderly population is a population that also needs somebody who listens to them, emotional support, direction, help in the rehabilitation of the harmed soul. However, this population rarely receives the appropriate emotional treatment. Most of the elderly do not appeal directly to psychological treatment. Moreover, very few family physicians refer this population to the appropriate mental treatment.

Old age homes are equipped with all the innovative means to care for the quality of life of its elderly residents, but these means do not include psychological treatment.

The following question must be asked. What is psychological treatment during old age? Psychological treatment is perhaps the last opportunity for the elderly person to have an intimate encounter with another person and with himself. It is the possibility for a true dialogue in which the elderly person once again connects to himself, liberated from the bounds of age and years. The therapy is adapted to each person

according to his needs. For some people a short session is sufficient to resolve a current problem or to seek counsel regarding ways of coping. Others are interested in therapy that focuses on a certain issue, such as a terminal disease of himself or his spouse, the painful process of mourning and grief over the death of a loved one, life in retirement, family problems, adjustment to the old age home, or a new limitation or handicap. Others are interested in therapy related to coping with a new love, a new relationship during old age. (Bar-Tor, 1998).

The psychologist can fill for the elderly person many roles. He can be the mirror, in which the elderly person examines himself and grows stronger. He can be a walking stick, when the elderly person has difficulties functioning independently. The psychologist can act as a good friend (one that for a long time he has not had or perhaps has never had). The psychologist can be the ideal child, that the elderly person always wished he had, or he can be a parent, a mother or father. (Bar-Tor, 1998).

According to Bar-Tor (2002), the mental welfare, both in sickness or in health or independence, is considerably related to the emotional, social, and physical sources of support that the environment provides for the elderly person.

In the realm of successful aging, in recent years the prevalent conclusion has been that successful aging depends, above and beyond the person himself and his different characteristics, primarily on the community in which he lives, on the social, ecological, and cultural resources that exist in his residential environment. These allow the elderly person to continue to be active, to develop, to learn, to be in the company of people, and to receive the utmost nursing care services he requires. (Bar-Tor, 2002).

The question is: Is sufficient emphasis also placed on the elderly person’s mental health? The answer is a resounding negative. More than a few elderly still seek for a solution to physical, social, or mental distress in the health care clinics. The treatment they receive is medical and focused. (Bar-Tor, 2003).

The borders between mind and body more than once become blurred. The body can express the emotional distress and the emotional distress influences the body. A strong relationship has been found

between social loneliness and life span. Social isolation raises the chance of death. (Bar-Tor, 2003).

In recent years, research studies have begun to indicate the relationship between recovery from an illness and emotional relations, social support, personal traits, religious belief, etc. All these are important psychosocial elements that are part of positive health. The connection between physical health and mental health, with their different components, a connection that expresses an integrative perception, has engendered the term 'positive health'. In other words, positive health is the combination of physical and mental health. (Bar-Tor, 2003).

Schaie and Willis (1996) proposed to define mental health in old age as appropriate adjustment to and coping with the real world. In their opinion, mental health among the elderly has many elements that are implemented among young people, such as release from symptoms of psychopathology, satisfaction from life, self-acceptance, basic control, and the ability to work, to love, and to play. However, with the rise in age the emphasis is placed on the person's ability to adapt to his environment and to fill the tasks that develop in this same stage. During old age, the adjustment to the institution such as an old age home or nursing care framework is an important developmental task (Bar-Tor and Lomerantz, 1997).

Shalev (2003) focuses attention on the fact that the standards for the classification of the elderly, according to which the organizational responsibility is determined, are not unequivocal. Thus, the elderly may in many cases slip between the cracks. For instance, there are three types of patients with chronic old age illnesses for hospitalization purposes:

1. Nursing care patient – This elderly person is not independent in his functioning and needs help to conduct most of the basic daily activities and to manage the home.
2. Complex nursing care patient – This nursing care patient suffers from at least one health problem that necessitates medical treatment, in addition to the personal care and help in running the home.
3. Feeble-minded patient – This elderly person suffers from a decline in his mental functioning, confusion, and difficulty in orienting himself in time and in place. However, he is not limited in his everyday physical activities.

6.3 Trends and Issues in the Development of Services among the Elderly

The Focus of Medical Treatment: Chronic Illnesses vs. Acute Illnesses

It is important to discover frequent problems and to begin to treat them early so as to prevent exacerbation or complications. Chronic situations, which cause functional deterioration for many years, are today the most common illnesses that impair the health situation and quality of life of the elderly. Nevertheless, the health systems continue to emphasize the treatment of acute illnesses. The goal of the treatment of acute illnesses is to restore to the elderly person his equilibrium and the utmost health in a short period of time.

In contrast, the focus of chronic illnesses is the handicap and not the illness. This situation requires a different treatment.

1. Treatment of the different expressions of the situation: functional, physical, emotional, social, environmental, etc., which require an interdisciplinary approach.
2. Instead of focusing on a specific event at a given time, as in the case of acute treatment, intervention in chronic illnesses requires reference to a variety of needs of the person and his family, on a continual basis, not for merely a few days but for weeks, months, and years.
3. The health services that aim at the treatment of chronic illnesses focus on the prevention of the limitation or handicap and on rehabilitation as primary objectives.

Today the aim should be to exploit the tremendous advancement in technology and medicine to increase the elderly person's welfare and life span, without limitations or handicaps, and to reduce the existing, expected burden on the system of services. (Brudasky, 1998; The Committee for Health Promotion, 2003).

Manner of Providing Service to the Elderly Person: Independence and Control vs. Protection (The Elderly as a Consumer)

Changes in the outlook and social norms necessitate constant adjustment of the policy to the changing reality and influence the principles that guide the systems of health and welfare. In recent years,

more and more elderly know the health services and their rights. As a result, new requirements may arise and changes can occur in the elderly population's patterns of use of the different services; in other words, their power as consumers increases.

The traditional approach of the services system addresses the elderly as people who need help. According to this approach, they can best be served by a standard system of services determined by professionals and according to the needs perceived by the professionals. Over the years, the expectations and requirements of the system of services have changed, and the elderly are today perceived as consumers who demand quality, the possibility of choice and information, so that they can make decisions related to the treatment and the services they require. The perception today is that it is possible to give the elderly more control and independence. For the elderly to realize their rights, it is necessary to establish systems of information and consultation, both for the elderly and for their family members. (Brudasky, 1998; Shalev, 2003).

Pluralism in the Provision of the Services – Voluntary and Private Public Sector

Another trend that is manifest, in Israel and in other places in the world, is the multiplicity of the service providers. This is related to the perception of efficiency in the system, of the elderly as a consumer, of the need to provide choice options, etc. The systems of the services reach the conclusion that the public-governmental sector must ensure that services are provided, without their exclusive responsibility to provide them. This process, along with the rise in the familiarity of the elderly with the system of the services and in the awareness of their rights, may raise new demands and creates changes in the elderly population's patterns of use of the different services.

Another trend that should be addressed is the decentralization in the system of health and welfare services. This trend is a response to the need of the system to boost effectiveness and efficiency (Brudasky, 1998).

Activity Aimed at Improving the Quality of the Services

With the increase of the system of public and private services and following the trends of decentralization, the need to ensure appropriate coverage and to develop mechanisms of quality control and inspection again arises. (Brudasky, 1998).

Search for Solutions to Problems of Division in the System – Combination, Coordination, Management of Treatment

One of the problems that characterize almost all the systems that address the elderly is the division between the health and welfare systems and the division within the systems themselves. The problems of division are especially serious in light of the trends of pluralism in the service provision and of trends of decentralization. Different models are developed to overcome the problems of division: creation of one address, development of coordination mechanisms, case management, etc. All these reflect attempts to allow the person to orient himself in the system, to prevent excess harassment and bother between the different systems, and to realize his rights (Brudasky, 1998).

Balance between Treatment in the Community and Institutional Treatment

One of the main issues that will continue to accompany the development of the services for the elderly is the appropriate balance between the development of services for treatment in the community and the development of institutional solutions. The sharp rise in the number of limited elderly and with it the strengthening of the policy of providing possibilities for the elderly person to live in his natural environment and postpone the institutional solution for as long as possible raise a number of issues regarding the development of the services in the future.

- Effective integration of the informal systems.
- Need to develop hospitalization services for the short-term, for acute treatment, for rehabilitation, and for recovery and vacation purposes.
- Flexibility in the providing of personal services for the utmost adjustment to the needs of the elderly person and his family.
- Development of frameworks for day care.

- Exploitation of the technological development and the development of innovative home services, such as home hospitalization.
- Residential arrangements in the community for limited elderly as well: protected housing, collective housing, supportive neighborhood, etc. (Brudasky, 1998).

Shuval and Anson (2001) show that support of the elderly, especially the older ones, is provided, both on the social level, by formal agencies and organizations, and on the informal family level.

In Israel there is a broad range of geriatric institutions or hospitalization institutions for prolonged care, protected housing, day clubs, and home assistance systems, all aimed at elderly people of different levels of functioning. As in other Western societies, in Israel the welfare policy is directed at allowing the elderly to remain in their regular environment in the community even at the end of their days, while providing supportive services to prevent institutionalization for as long as possible. The accepted opinion is that the disengagement from the environment and from the family and the shattering of the elderly person's life habits detrimentally influence his health, his functioning, and his ability to orient himself. In addition, some believe that home care is less expensive than institutional care. (Shuval and Anson, 2001)

It appears that the 'family' nature that characterizes Israeli society, the attitude towards the elderly person, and the support services in the community combine together to prevent the institutionalization of many elderly in Israel. Most of the economic support of the elderly is provided through the National Insurance Institution[*] and therefore it is not especially influenced by the outcomes of political struggles that lead to annual changes in social investment in services aimed at the elderly in the State budget. (Shuval and Anson, 2001)

Health promotion and prevention of limitations and handicaps among the elderly today are a focus of special attention in Israel and in the world. Health promotion is intended, first and foremost, to allow the elderly to remain independent and avoid dependence, while preserving their quality of life and a reasonable level of activity. In addition, the

[*] This institution provides economic support for different populations. It is similar in function to the American Social Security.

goal of health promotion is to reduce as much as possible the impact of situations of illness on the functioning of the elderly in all areas of life. These goals can be achieved only through a comprehensive approach and a variety of treatment means, which include, in addition to appropriate medical treatment, social support and improvement of the elderly population's environmental conditions. (Brudasky, Sobol, Neon, King, and Lipshitz, 1991).

The program 'Supporting Community' was established at the initiative of *Eshel* (a private, non-profit organization for elderly services) and the Ministry of Labor and Welfare and it has been funded and operated by them since 1989, with the collaboration of associations for the elderly, the municipalities, the local authorities, and private companies (for-profit business companies). The program is aimed at the elderly who live in the community and today more than seventy communities and more than 11,000 elderly are members in it. In the services 'basket' of the program there are four components.

1. Distress call line, operated by *Yad Sarah* (a private, non-profit organization that provides social services) or by a commercial company at all hours of the day.
2. Medical services – home visits of a physician and ambulance calling.
3. Neighborhood 'father' – help in making repairs in the home, accompaniment to treatment sessions or medical check-ups, etc.
4. Variety of social activities and social support.

The goal of the program is to improve the quality of life of the elderly people, to allow them to continue to live in their homes, and to provide specific services that are not provided in the framework of other services in the community. (Berg-Verman, 2003). This perception, which is at the basis of the program, is commensurate with the preferences of the elderly, as different researches conducted in Europe and in the United States found. It was found that the consumers of the service feel that the program contributes to their personal security, makes it easier for their children, and allows them to continue to live in their homes (Berg-Verman, 2003).

6.4 Transfer and Adjustment of the Elderly to Institutional Frameworks

The institutional services for the elderly were the first constellation in the range of services for prolonged care developed in Israel. The first old age home was established in 1878 in Jerusalem: "The United Elderly Settlement". The need for institutions for the elderly and the possibilities of alternative treatment in the community to reduce this need have become in recent decades a focus of public and professional discussion, since professionals today ascribe considerable importance to 'keeping the person in his natural environment, in the community, for as long as possible'.

This discussion is further validated following both the changes in the demographic composition of the population and the high costs of the construction and maintenance of old age institutions and the problems of the quality of care in some of these places. (Levenshtein, 1998).

Old age institutions are residential environments characterized by the same traits that Goffman (1961) used to describe 'total institutions'. The 'total institution' refers to the place of residence and work where a large number of people live, when these people are found in similar situations, are disconnected from society at large for a lengthy period, and conduct a closed lifestyle with a formal management framework.

Goffman (1961) divided the total institutions into five groups, according to the degree of totality. In the first group, he addresses institutions established for people considered helpless but not harmful, for instance, clubs for the blind, the poor, and the elderly. The second group includes helpless people who are harmful to society, for instance, institutions for the mentally ill. Another group includes the population harmful to society, for example, institutions for delinquents and prisons. The fourth group is institutions for the populations about whose welfare society is concerned and for the populations who choose voluntarily to enter. These include hospitals, boarding schools, etc. The last group includes the population that chose voluntarily to disengage from society, such as monks.

Levenshtein and Yakovitz (1995) added that comprehensive institutions have four primary traits:

1. Life in the group: Every stage in the person's everyday activity is performed adjacent to the large group of others. Everybody is treated equally and is required to perform different things together. This is the antithesis of private life. This framework is characterized by a bureaucratic form of management, a system of formal procedures, and a rigid daily schedule, which does not allow the resident freedom of movement between different social groups and independent choice of friends.
2. Management – In total institutions there are two groups of people: the managers and the managed. Thus, two different cultural worlds develop, alongside one another, with official juncture points. The staff tends to feel superior and just and the residents tend to feel inferior, weak, and worthless.
3. The resident's role – There is a process of the reduction of roles and the focus on one role, the role of the resident. To be accepted as a resident, it is necessary to disconnect from the past and from everything it symbolizes.
4. Institutional perspective – There are rituals and formal events, the goal of which is to strengthen the institution and allow the staff and the residents to live alongside one another.

According to Levenshtein (1998), it can be seen that the institutions for the elderly in Israel are classified according to the level of treatment they offer.

- Old Age Homes: These institutions are intended for an independent population (independent in everyday functioning but with a certain limitation in the management of housework) and for the feeble population (with partial limitation in everyday functioning and suffering from mobility difficulties). These institutions are licensed and inspected by the Ministry of Labor and Welfare.
- Nursing Care Institutions: These institutions are intended for the population defined as needing nursing care (people who need help in most everyday activities, are almost not mobile, and are generally incontinent) and for the mentally feeble population. These institutions are licensed and inspected by the Ministry of Labor and Welfare. Among the

institutional population today, 27% are independent, 24% are feeble, 41% are nursing care, and 8% are feeble minded. Aside from them, approximately 9,000 residents live in different frameworks of protected housing.

Among the non-Jewish population the rates of limitation and handicap are higher than among the Jewish population.

Be'er (2004) shows that the percentage of institutionalization, namely, the percentage of people in institutions, reached among the population aged 65 and above, 4.1% at the beginning of 2000. Namely, about four of every one hundred elderly in Israel stayed in an institutional framework: old age home, hospital for chronically ill, or nursing care ward. The rate of institutionalization of women is almost twice the rate of institutionalization of men.

Different Aspects in Institutional Placement

The Relationship between Socio-demographic Variables and Institutional Placement

Age:

The institutionalized population today in the Western World (in the different types of institutions, old age homes and nursing care institutions) is, on the average, relatively old (85+). This is in contrast to the relatively high institutionalization rates in a considerable many of the European countries, which reach 8%-10% among those aged 65+ (Levenshtein, 1998).

Sex:

Most of the people who live in institutions are women, primarily because of the longer life span of the woman as opposed to that of the man (in Israel, an average of 76 for men and 81 for women). In Israel 71% of the residents in institutions are women, and the situation is similar in the Western world (Dwyer and Coward, 1992; Hanley, Alecxih, Wiener, and Kennel, 1990).

The Relationship between Health Variables and Functioning and Institutional Placement

Health and Functioning:

In the examination of the health situation the variable of functioning ability and physical and mental health are addressed. The multiplicity of chronic illnesses, the decline in the functional situation and in the ability to perform everyday activities, the decline in the mental-cognitive situation, the rise in the rate of dementia and mental problems (found at a higher percentage as a person grows older), and repetitive hospitalizations in hospitals are all factors that influence the placement (Levenshtein, 1998).

The Relationship between Informal Support Systems and Institutional Placement

Characteristics of Informal Support Systems:

The main perception at the basis of this concept is the giving of help at a time of crisis and the impact on the individual's personal welfare (Chappel, 1990; Gottlieb, 1983; Kosberg, 1992). Levenshtein (1998) emphasizes that among informal support system the main figures that care for the limited elderly are first and foremost the mates and then the children.

Personal Status and Family Structure

Naturally, the personal status, family structure, and residential arrangements are primary considerations in the institutional placement. Hence, the chances of institutional placement of a person who lives alone, without a spouse and without additional support systems, especially when he is childless, are higher. In Israel 81% of the residents are unmarried, while in the community only less than 20% of the elderly live without a mate (Be'er and Factor, 1993). In the United States, the situation is similar – 84% of the residents in institutions live without a mate (Foley, Ostfeld, Branch, Wallace, McGloin, and Cornoni-Huntley, 1992).

The Process of Making the Decision of Institutional Placement and the Impact on the Family Relations

The decision of institutional placement is not made in one day and not even in one week. This type of decision is the result of a lengthy process of deliberation and for the most part is one of most difficult decisions in the life of the elderly person and his family. It is frequently a source of stress and even crisis in the family system. The decision is for the most part accompanied by mixed emotions of uncertainty, frustration, feelings of guilt, and fears that the elderly person and his family members experience. Nevertheless, this decision is part of what occurs in the cycle of the family life.

Many families, although they may feel an easement after the decision is made, still feel feelings of guilt and ambivalence regarding the very decision. The elderly, for the most part, feel that they are abandoned by their families and they are confused, angered, and feel lost (Levenshtein, 1998).

Gamliel and Hazan (2003) assert that it is accepted to present the leaving of the elderly from their home and their community and their entrance into institutional-treatment framework as a crisis that leads to the considerable reduction in their self-worth and sometimes even death. Less extreme emotional responses to this significant transition are the lack of a sense of satisfaction, despair, and depression. Elderly who survive in institutions tend to present this life environment as a necessary, but not appropriate, solution to the deterioration in the physical abilities and to their loneliness. The perception of the institution as providing a solution to essential needs is combined simultaneously with the view of the institution as a place where people die.

It can be asserted that segregation and concentration – the two main elements of the life in institutions – are two decisive factors in the understanding of processes of the shaping of the identity of the elderly who live in the institutions. Segregation helps the affixing of stigmatic labels to the self, while one of the implications of the concentration of people in one place is the dispossession of freedom and autonomy to the point that there is no self. Unlike the elderly person who lives in his familiar home, the resident in the institution is compelled to some degree to recognize his identity as ‘protected’, as belonging to a group of peers, and as accepting the authority of those who run the institutional

arrangement. Hence, the discussion of the self-identity of the elderly who live in an institution is essentially different from the discussion of the self-identity of elderly who live in their own homes. The former reach not only social death but also self death, and hence their considerable verbal occupation with the topic of death should not come as a surprise. (Levenshtein, 1998).

The old age home presents its residents first and foremost as those protected by a public care institution. The residents are offered a one room or two room apartment, in many cases without a kitchen or shower. There is a restriction regarding the introduction of changes into the apartment. The kitchen, if indeed there is one, is not well equipped, and the residents, for the most past, are not permitted to cook by themselves. The institution offers three meals a day. Mealtimes are used by the staff to record and to follow-up after the residents' presence inside and outside of the institution and their health situation. A nurse walks around with a cart of medications and gives treatment to the residents in public. The residents' movement in the private apartments and in the public areas is always under the staff's supervision. In all aspects of the provision of service, considerations of economy and resources are apparent. Residents are asked to participation in the social activities held around the mealtimes and in the areas near to the cafeteria. The group meetings and the face-to-face meetings are frequent and non-voluntary. The residents are compelled to accept the reality that does not allow them to avoid one another. Convergence in the private sphere is not legitimate and is not sufficiently defended. In the old age home there is thus a blurring of the spheres, private and external (Gamliel and Hazan, 2003).

At the end of 1994 in Israel there were ninety programs of protected housing for the elderly, with approximately 9,000 residential units. In other words, there were eighteen residential units for every one thousand elderly in the population. This number differs from region to region, when in the Jerusalem district, the number of residential units is double the national number (35 thousand) and in the North district there is an especially low number (five thousand). In the other regions, the supply of protected housing residential units is about the national number. (Be'er, 1996)

In recent years, the public system is planning the construction of about six thousand protected housing residential units for the elderly. This addition to the supply is supposed to solve the problems of the part

of the population lacking in means, both among the new immigrants and among the native population (Be'er, 1996).

Protected housing as a private institution duplicates into its walls private and public formats familiar from urban life. It offers the resident a private apartment, a private mailbox, and a constellation of services that pertain to his private sphere and establish the sense of familiarity of home. The resident is entitled to change the standard apartment as he sees fit, with a rather few restrictions. The validity of the feeling of the existence of the private sphere is not supported only by the residential conditions but also by a clear institutional message that, beyond regular payments and behavior appropriate to the arrangements of an apartment building, the resident is not obligated whatsoever to participate in the social activities. The architectural style of the public spaces in protected housing, such as the lobby and waiting areas, as well as the way in which the services and medical treatment are provided, encourage the development of interactions of ignoring and alienation. The resident's feeling of privacy may be protected and legitimate even when he is found in public areas. In protected housing there is a distinction between the private sphere and the public sphere. (Gamliel and Hazan, 2003; Katan, 2002).

The resident in a protected housing apartment depends on two types of discourse: social discourse external to the institution, which sees him as elderly, and discourse of the internal staff, which sees him as having appropriate social-consumer status and middle-aged. (Gamliel and Hazan, 2003; Katan, 2002).

6.5 What Is Home Hospitalization?

In the past twenty years in the Western world there has been a meaningful increase in the number of patients who receive medical treatment at home, in the scope and types of services provided in the home, in the number of agencies that provide these services and in the public expenditure for them. The primary reasons are the search for ways to economize in the health system and especially regarding the hospitalization costs, increase in the number of the elderly and chronic patients that exploit health services frequently, and technological innovations that allow medical services to be provided at the home (Bentor, 1999).

Home hospitalization or the other familiar names such as ‘medical home treatment’ or ‘hospital without walls’ is medical service that is provided in the patient’s home. A wide variety of services may be included in this definition, ranging from traditional home treatment that includes personal treatment and supervision to the use of technology that enables antibiotic treatment and intravenous sustenance, respiration, dialysis, and other medical treatments. The service gained momentum following the increase in the number of AIDS patients in the United States who preferred, along with the members of their family and their friends, to receive medical treatment at home, over hospitalization in the hospitals (Selinger, 1992).

Additional reasons for the rise in the scope of medical services provided in the home are the improvement in the residential conditions, the increase of the consumer involvement in the determination of priorities in the health services, and the preferences of some patients to obtain medical and nursing care treatment in their homes over a hospitalization, sometimes lengthy, in the hospital. This trend has not skipped the health system in Israel, although here the phenomenon is more limited in scope, in terms of the number of patients and in terms of the types of medical services provided at home. Four medical clinics examine today the patterns appropriate to them to provide medical treatment at home and in parallel provide medical, nursing care, and rehabilitative care in the home in different scope and patters (Bentor, 1999).

According to Bentor and Mu’alam (2001), the determiners of the health policy, the service providers, and the service funders throughout the entire world cope with the issue of whether medical treatment at home is ‘economical’ and ‘efficient’ in comparison to other medical treatment. Most focus on the question of whether home hospitalization can constitute an inexpensive alternative to hospitalization in the hospital. In other words, is it possible to prevent the hospitalization of the patient or to move him from the hospital to home hospitalization and thus to shorten the duration of the hospitalization? Or is this an additional service, which requires addition of resources and increases the health expenditures as opposed to reducing them?

Home hospitalization has especial status in the constellation of health services. While, for most of the services, the patient must come to the service and sometimes remains where the service is provided, for

home hospitalization the service provider comes to the patient's home. Consequently, the provider can only partially control the treatment conditions. The treatment is thus influenced by situations that do not characterize the other health services. Moreover, its efficiency depends not only on the experience and professional skill of the medical professions but also on the knowledge of the patient and his family members, on the response to the treatment program, on the conditions in the patient's home, and on their ability to communicate with one another (Bentor, 1999; Katan, 2002).

The treatment of the patient hospitalized in his home requires of the family members, and especially of the family member who acts as the primary care-provider, a tremendous amount of responsibility and devotion. This takes from him most of his time and leaves him with very little free time for himself, for the care of and reference to other family members, for work, and for leisure time activities. People, who care for patients who have severe diseases (even if the patient is stable) and who are hospitalized at home, must cope, in addition, with other difficulties, which derive from the patient's medical situation. 'Their' patients suffer frequent changes in the balance, in their medical situation, changes that necessitate the family members to constantly monitor the situation and be alert to the patient's state and possible changes. They live in a constant feeling of tension and anxiety: the state of the patient who is hospitalized at home can change rapidly, they may not know what to do, they will not manage in time to call for help, or they will lose control of the situation. In light of these aspects of the situation, it is not surprising that over one-half of the primary care-providers feel that the care of a sick family member in the home causes them to feel that they are being too heavily burdened (Bentor and Mu'alam, 2001).

In most Western countries, the home hospitalization service is found among the mandated services, although the definition of entitlement and the components of the treatment are not uniform and sometimes are not clearly defined. During the 1980s, and primarily after the commencement of the prospective payment system (PPS), which encouraged the hospitals to release patients as quickly as possible, in the United States, several laws were enacted. These laws increased the frequency of home hospitalization and increased the number of people entitled to receive it among people with Medicare insurance (health insurance for the elderly and for people with low incomes in the United

States). Among the main laws: the cancellation of the limit according to which only a person who is released from hospital hospitalization is entitled to home hospitalization, the provision of medical treatment at home also to patients with chronic illnesses, and the negation of the right of a physician in the community to cancel a referral to home hospitalization given by a hospital physician (Kenny, 1991).

In Canada, home treatment is included in the services 'basket' provided by most of the provinces, and in some provinces it is most advanced (Brown, 1995; Nixon, 1991). In the countries of Western Europe, too, where universal health insurance exists and the state health services are funded by the state and regional health taxes, the health services 'basket' includes all the ambulatory services, including medical treatment in the home. (Bentor, 1999; Katan, 2002)

In Israel, the service is not explicitly included in the services 'basket' that the medical clinics are required to provide according to the National Health Insurance Law. Nevertheless, the medical clinics today provide medical and nursing care treatment in the home for patients in severe situations, for terminal patients, and for patients who need rehabilitation after a severe illness (Bentor, 1999; Katan, 2002).

Examination of the characteristics of the patients who receive medical treatment at home delineates a diverse picture. It is possible to classify the patients with home hospitalization into two primary groups. The first and larger group includes chronic patients and people who are frequently ill, who frequently enter into difficult situations and are frequently hospitalized. Their main problems include the terminal stage of a malign disease, heart diseases and heart insufficiency, post-brain stroke problems, chronic illness of the respiratory tract, and degenerative diseases. The decisive majority are the elderly, aged 75 and above, and most are limited in their everyday functioning, in mobility, in urinary tract control, and in maintenance of the home. Consequently, they need nursing care and maintenance treatment, lengthy supervision, and regular visitations of the nursing care staff. The second group includes patients of different ages, who, following a one-time incident, need considerable short-term medical treatment, such as intravenous antibiotic treatment or considerable rehabilitation. However, they do not need prolonged nursing care and maintenance treatment (Mauser and Miller, 1984; Martine, Scheet, and Stegman, 1993).

It can be seen that the patients under home hospitalization are similar in their demographic, clinical, and functional characteristics to the patients who populate the internal medicine wards in the general hospitals. The composition of the medical staff that provides medical treatment at home is different among the different countries, service providers, and insurance options. In the United States, the staff to which the patient is entitled via Medicare includes a nurse, who adjusts the treatment, a physiotherapist, an occupational therapist, and a speech therapist, and it is possible to seek the counsel of a social worker. The involvement of physicians in the treatment process is minimal, although they are the sole factor that may refer the patient to the hospital. (Saondappan, Goodwin, Greegold, and Siegeler, 1997).

The number of physicians who conduct house visits and the number of visits they perform are found in constant decline and do not reach one percent of all the patients cared for by Medicare in 1993 (Saondappan, Goodwin, Greegold, and Siegeler, 1997). The reasons for this are related, according to Bentor (1999), primarily to the low recompense for a house visit, but also to the time and bother entailed by the home visit and the lack of technology that enables the patient to be assessed from his home. The communication among the people in the staff who care for the patient and the physician is for the most part conducted via the telephone and in writing. Sometimes the nurse conveys information between one specialist doctor and another and serves as a referring factor and treatment coordinator.

In the staff of the home hospitalization units in Israel, the physician plays a more central role than in other countries. Most of the treatment is provided by a physician and a nurse who work in cooperation. In some of the units, the physician acts as the treatment coordinator. The rehabilitative professionals are less involved, and only a few patients receive physiotherapy and occupational therapy treatments. (Bentor, 1999).

Why Do the Services for Home Hospitalization Develop?

In the past decade, the services for home hospitalization have developed more rapidly than has any other medical service. From 1987 to 1997, the public expenditure in the United States for these services has increased by a factor of nearly seven times, from two billion dollars to 13.6 billion dollars, while the public expenditure for prolonged

hospitalization services has ‘only’ doubled. In 1987, the expenditure for home treatment comprised only 10% of the Medicare expenses for prolonged treatment, while ten years later it constitutes about 24% of the expenditures (Selinger, 1992).

In the period 1989-1995, the number of agencies that provide home care rose by 50%. Although t up-to-date data on the expenditure for the services of home medical care in the countries of Europe were not found, it appears that the trend there is similar. In the past decade, there has been a significant increase in the expenditure for home care, in comparison to the expenditure for urgent treatment and prolonged treatment (Selinger, 1992).

In an era in which the need to reduce the health costs and to search for ‘economical’ ways to provide health services is a topic of considerable attention, the following question is asked. What are the reasons for the development of the services whose economic efficiency is controversial and regarding which it is possible that they add expense to the health system?

A number of reasons can be noted. The first factor is related to the complexity of the economic evaluation and the difficulties entailed by its execution. It is difficult to identify the many factors that may influence the costs of providing medical care at home, to agree upon the meaningful indices for measurement, and to identify appropriate sources of information for them. Thus, for example, the expectation that home hospitalization will shorten the duration of the general hospital stay may almost be insignificant in a period when the average duration of hospitalization has already been shortened to the point that a further significant shortening cannot be expected. Moreover, there is no consensus regarding the advantages of a further cut in the duration of the hospitalization, because of the risks, such as the emergence of complications, repeat hospitalizations, and the increase of the burden on the therapists to the point of the damage to the quality of treatment, that this entails. Differences in the cost of the treatment for different factors make the evaluation of the economic effectiveness difficult. Thus, for example, economizing for the insurers and funders of the services may bring about a rise in the expenses of the service providers and economizing for suppliers may arrive at the doors of the patients and their families (Bentor, 1999).

The second factor that may explain the extension of the scope of medical treatment provided outside of the hospital is related to the accessibility and availability of other health services. Geographic dispersion and differences between regions in the scope of services and primarily in services of hospitalization may accelerate the development of alternative services, including home hospitalization, which do not necessitate an expensive infrastructure. In other words, while this service is perceived as an 'inexpensive' alternative to hospitalization in the hospital, it serves as the only alternative for the provision of medical treatment, given the lack of other services or the poor access to them.

In the New Brunswick area of Eastern Canada, which has a dispersed rural population, a 'hospital without walls' has functioned for twenty years. In this framework, medical treatment was provided for patients who live in distant areas. The service provides rapid treatment for patients in difficult situations and thus prevents their transfer to distant hospitals, provides preserving treatment for chronic patients, and saves on costs for the system (Brown, 1995; Nixon, 1991).

Conversely, Bentor (1999) maintains that different researches found large differences between regions in the use of all the health services, differences that could not be explained in the rates of illness and handicap. The findings indicate that home hospitalization does not serve as a substitute for hospitalization in the hospital. It was found that in regions where home hospitalization is used extensively, the duration of the hospital hospitalization and the percentage of hospital hospitalizations were higher, while in urban areas, the use of all the health services, including home hospitalization, is higher than in rural regions.

Another factor that may facilitate the understanding of the accelerated increase in the home hospitalization services is the increase in the number of the elderly and in the number of chronically ill and limited who live in the community. Given the lack of possibility to provide care in the framework of the institutions for prolonged treatment, which are expensive and to which many of the elderly do not wish to go, we see the rise in the population that needs medical and nursing care treatment in the community as well as the rise in the amount and types of services that they need. Many researches have indicated that many of the patients in home hospitalization suffer from chronic health situations, frequent illness, and poor functional level and that only a few were

accepted to home hospitalization from hospital hospitalization, while most were released from the hospital before a long period of time had elapsed or were not hospitalized at all. In other words, while in theory this service was 'examined' regarding the question of whether it serves as an alternative for urgent treatment and general hospital hospitalization, in practice it serves to a large extent as a substitute for prolonged hospitalization and provides a solution to the increasing needs of the elderly population, which suffers from considerable illness, limitations in functioning, and social loneliness (Martine, Scheet, and Stegman, 1993).

According to Bentor (1999), additional factors exist that should be addressed in the understanding of the development of home hospitalization services. They include the preferences of the patients and their families and the willingness of the insurers and service providers to correspond to these preferences. In an era of the increase of consumer awareness, which is expressed in the preferences of many patients not to be hospitalized in the hospital but to receive medical treatment in their homes, even if this entails additional physical, mental, and economic burden for them and for the members of their families, the insurers and service providers are willing to respond accordingly, even if they do not perceive the home services as necessarily economical.

What Is the Place of Home Hospitalization in the System of Health Services?

Review of the possible factors of the accelerated growth of the services for home hospitalization leads to the understanding that it is not possible to address this service in disconnection, without tying it to the rest of the health services. In an era when there is agreement regarding the advantages of maintaining a broad variety of services, which can be adjusted according to the special needs of each and every patient, the service of home hospitalization also plays a role in the supply of the needs of some of the patients and their families. Therefore, this service should be addressed as a link in the chain of comprehensive services, when at one end is the system of hospitalization and at the other end is a series of services in the community. This type of view will help identify the appropriate place for a service that assumes some of the roles of the hospitalization service, although it functions outside of its walls. Examination of the home hospitalization service in the continuum of services and not as a solitary service will also facilitate the examination

of the cost benefit and the examination of the question of whether it may serve as a true alternative for hospital hospitalization and thus save the costs for the health system. As the units for home hospitalization provide treatment for more patients who otherwise would have required hospitalization and fewer patients who need ambulatory care, then the chances are great that they will provide a true substitute for hospital hospitalization and will save costs for the health system (Bentor, 1999; Katan, 2002).

6.6 Health Promotion of the Elderly in Selected Countries of the World

6.6.1 Health Promotion of the Elderly in Hungary

In 1965 in Budapest the Center for Old Age was established. The goal of the center was to identify the cause of the decline in the functioning at the age of seventy and the main illnesses with which the elderly person copes. According to the founders of the Center, today people are healthier than they were twenty years ago but the illnesses of old age are postponed and have not vanished. The main objective of the Center is to identify illnesses during old age and to know how to avoid them, primarily through the adoption of an appropriate lifestyle and the identification of risk factors. (Beregi, 1994).

The Center proposes four strategies to promote the health of the elderly (Beregi, 1994):

1. Medical examinations – Early diagnosis and treatment can lessen illness. In addition, it is recommended to adopt a healthy lifestyle and to identifying the risks.
2. Meetings for the elderly – In the Center in Budapest different meetings have been held for the elderly population since 1987. The sessions are directed by a physician and therapist, and the object is to discuss problems related to aging so as to prepare the elderly for a healthier old age. The participants are given counseling regarding a safe home, correct nutrition, correct pace of living, etc. The meetings are free of charge and in every meeting about forty to fifty elderly people, who can come and go freely, participate.

3. Courses for people who are about to retire from work – The courses are held with the collaboration of a number of organizations. The goal is to help people avoid negative psychological influences as a result of retirement. The courses emphasize the need to continue physical and mental activity with leisure time activity and to adopt a way of life appropriate to old age.
4. The Open University for the Elderly – This center was established in Budapest in 1983. At this time, 407 students began their studies and 280 completed their studies within four years. During the course, social relations were fashioned. At the end of the course, the participants received academic degrees and they established a club to continue their friendship. In another three cities in Hungary the Open University for the Elderly was also established.

To conclude, the proposed activities increase the health during old age (Beregi, 1994).

Health promotion and medical intervention can reduce the frequency of illnesses related to old age. It appears that, through control of the lifestyle and use of modern technology, it is possible to lengthen the individual's years of independence and activity. (Beregi, 1994).

6.6.2 Health Promotion of the Elderly in Britain

The method customarily used in Britain to care for the elderly is frequently proposed as a model for other countries, since this method emphasizes giving help to the elderly in their homes, through community treatment. The patient is not charged for the medical treatment, but there is a charge for the social services. However, the payment is determined according to the patient's income level. Patients who live alone and do not have relatives receive limited household help and the treatment must be conducted in the hospital (Isaacs, 1983).

Walker (1991) presents that in recent years the state has significantly increased the subsidies (through the National Insurance Institution) for the private sector and nursing care institutions for the elderly. These services generally are a substitute for family treatment, when following a crisis in the family relations or when there are no

relatives. Britain adhered to the method according to which support of limited elderly is provided by relatives.

Greengross (2000) directs attention to the fact that Britain has invested tremendously in 'Age Concern' in information technology. On a daily basis the organization receives more than two thousand calls from elderly people from all over Britain who seek counseling on different issues: access methods, transportation, stores, services, etc. The Age Resource Program, implemented by the Age Concern organization in the framework of the Active Age Program, empowers the elderly in that they are directly involved in social, cultural, and health activities in the community. The elderly participate in programs and manage them with volunteers. An example of such a program is the Aging Well Program, which integrates the elderly in health promotion programs as guides and instructors for others their age. Another program that runs in the framework of the Active Age Program is intergenerational activity. The program implements the elderly as 'adoptive grandfathers and grandmothers' of children who have difficulties at home or at school. Their role is to spend time with them and pay attention to them on a weekly basis.

6.6.3 Health Promotion of the Elderly in Pennsylvania, U.S.A.

The Community Nursing Centers are found in the community and serve vulnerable populations in general and the elderly population in particular. These centers provide medical services in the residential area of the patients. (Newman, 2005)

This approach of these community centers significantly lessens the cost of the medical treatments borne by the clients and reduces the anxiety deriving from the economic burden of the medical treatment. These centers propose a direct approach to holistic treatments and health services for the patient's welfare. The community nursing center allows the patient to decide upon the mode of treatment. The centers offer relative flexibility. In addition, these centers propose information that will allow the elderly to preserve their independence for as long as possible. (Newman, 2005)

The community nursing center offers the services of nurses and physicians and even hosts meetings among the members and neighbors

who come to the center. In addition, home visits are conducted, taking into consideration the elderly person's needs. (Newman, 2005)

It should be noted that these centers work in complete cooperation with the different authorities. (Newman, 2005)

These centers serve both the feeble elderly and the population with psychiatric needs, such as drugs, alcohol, and depression. The uniqueness of the community nursing center is the fact that it attempts to promote the different activities for health promotion of the elderly person in his cultural-social context (Newman, 2005).

This chapter presented different aspects in the health education of the elderly, such as smoking, nutrition, social and intellectual activity, and falls. Then the chapter presented another important factor in the health education of the elderly population – the psychological-mental aspect, which ties into the adjustment of the elderly when they are placed in an institution, when they enter into protected housing residences and old age homes, and when they experience home hospitalization. Last, the chapter presented the topic of health promotion of the elderly population in several different countries around the world.

The next chapter presents differences in health education between Jewish elderly and Arab elderly in Israel.

7. Differences in Health Education between Jews and Arabs

The health situation of the elderly in Israel, the widespread health practices among them, and the patterns of use of the health services are factors that reflect the place of the groups to which they belong in Israeli society. As in society at large, among the elderly, too, the level of health is different and behavior is related to health according to the elderly person's age, sex, ethnic origin, and religious affiliation (Shuval and Anson, 2001).

This chapter presents the primary differences between Jewish elderly and Arab elderly in different aspects. First, the chapter presents the difference and uniqueness of each and every sector, and then it presents how Jews and Arabs perceive the imagery of old age, details the welfare services in Israel, and addresses the willingness for institutional placement. Last, the chapter presents different data that indicate the differences between the Jewish elderly and the Arab elderly in regards to different behaviors related to health, such as smoking, nutrition, physical activity, depression, etc.

Suleiman (1998) presents that the rate of the elderly in the Arab population is low (3.1%), but the rate of those limited in the everyday activities is high (21.4% of all the elderly). According to the Arab tradition, a limited and ill Arab elderly person is kept in his home and is cared for by the members of his family, while an old age home is perceived as a refuge for neglected and terminally ill elderly.

In 1948, the Arab minority in the State of Israel constituted 13.6% of its residents. Throughout the years of Statehood, the relative proportion of this minority in the population was influenced by the fertility rates of the Jews and the non-Jews and was impacted to a greater extent by historical occurrences, namely, immigration and wars. (Reiss, 1991; Shuval and Anson, 2001).

It is possible to divide the Arab population of Israel into three primary groups: Muslims (79%), Christians (12%), and Druse (9%). The three groups are different from one another not only in their religious belief, but also in their level of life, education, and relations to Israeli society. The most prominent differences in these traits are found between

the Christians and the other two groups. Most of the Christian Arab population lives in urban settings, their level of education and lifestyle is higher than those of the other two groups, and their reproduction rate is relatively low. (Reiss, 1991; Shuval and Anson, 2001).

The Arab sector, especially the rural sector, is characterized by a traditional family structure and community structure and by an economic infrastructure and social services that are relatively undeveloped in comparison to those of the urban Jewish sector. The processes of modernization and development have created important changes in the level of lifestyle and education, in the social-occupational structure, and in the health of the Arab population during the fifty plus years since the State of Israel was established. However, the inequality between the Jewish sector and the Arab sector remains. (Reiss, 1991; Shuval and Anson, 2001).

According to Shuval and Anson (2001), there are two primary reasons for the uniqueness of the elderly in the Arab sector. The first reason is the relative gap in the development of the welfare and health services in the Arab sector as opposed to in the Jewish population, a gap that is expressed in the scope of the welfare services and in the difficulties in accessing specific health care services. The second reason is the unique characteristics and needs of this population and hence, the need to find unique solutions.

The welfare services are provided to the non-Jewish population through the two different organizational systems: the municipal system, administered by selected public representatives, and the governmental system (through the Ministry of Labor and Welfare). The first is responsible for providing services to residents who live in the region under its auspices and its actions are controlled by the residents. The second implements the welfare policy determined by the central government, without any relationship or formal commitment to the local community. The organizational difference is expressed in actuality in the resources and manpower and in the budgets for the implementation of the services, including services intended for the elderly. Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

The non-Jewish residents of Israel live, for the most part, in their own towns and in part in mixed towns, where the Jewish residents constitute the majority. In these mixed towns, the non-Jewish residents

enjoy the level of welfare services of the population at large, and the elderly frequently use them. The percentage of the Arab elderly in Jerusalem, Haifa, and Tel Aviv who turn to these services is higher than the percentage of the Jewish elderly who turn to these services and is also higher than the percentage of elderly in the Arab towns who turn to these services. Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

The settlements, whose population is not mixed, namely, cities, towns, and Bedouin settlements, are organized in three categories of municipal organization: city or local council, regional council, and lacking municipal status. In the first two categories the welfare services are provided by the local authority, and in the third category they are offered by a governmental bureau for social services (Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

Hence, due to these aforementioned reasons, different issues regarding the elderly in the Arab sector arise, as follows (Barnea and Haviv, 1992):

- Socio-demographic composition – The geographic dispersion along with the low percentages of the elderly result in the situation in which the needs of the elderly are pushed to the bottom of the list of priorities of the Arab community. In addition, most of the elderly have a low income and most lack a formal education.
- Language, religion, and culture – Limitations related to language, religion, and culture make it difficult to use the general services or the unique services of a certain population sector and justify the creation of separate frameworks.
- Non-formal support system – The broad social network and tradition of mutual assistance are expressed in extensive informal help.
- Attitudes towards the formal services – The use of the formal services is influenced by the combination of traditional and modern approaches to them.
- The municipal status of the settlements and structure of the welfare services – The status of the settlements influences

the pattern of the development and supply of welfare services on the local level.

- The non-uniform use of the formal services – The accessibility of the services and ideological factors influence the use of the formal welfare services.
- Prominent areas of lack – Among the elderly in the Arab sector, problems of poor residential infrastructure and lack of basic home equipment are prominent. In addition, budgets to cover the travel expenses of the medical treatments are lacking.
- Lack of information – Information on the needs and on the response to these needs is absent among the elderly in the Arab sector.

In the past decade, there has been considerable progress in the development of services for the elderly in the Arab sector. The public awareness of the elderly person's situation in Arab society has increased. (Barnea and Haviv, 1992)

Shuval and Anson (2001) maintain that the problematic status of the Arabs in Israel has implications on the health situation. First, the maintenance of traditionalism in many areas of life, primarily among the rural population, influences behaviors and attitudes related to health and the use of the health services. Second, Israeli Arabs as a collective are characterized by chronic pressure that derives from discrimination, social and political alienation, and a profound sense of deprivation. It can be hypothesized that the rise in political awareness and the encounter with Israeli society and the patterns of consumption accepted therein will exacerbate the sense of inequality and will emphasize the disappointment from the limitations the Israeli Arabs face in the realization of the citizen rights and in the attainment of social and economic achievements similar to those of the Jews. Third, the low level of living is strongly related to the low level of health. In spite of the trend of the reduction of the gaps of education, the level of education of Israeli Arabs is lower than that of the Jewish citizens and the expectations of those with a higher education to translate it into a rise in the standard of living are disappointed. The low level of living is expressed in crowded residential conditions and low income. Last, Arab society in Israel is characterized by a minority of resources of coping that derive from an undeveloped infrastructure of welfare, sanitation, and health services.

The issue of whether the elderly are willing to participate in health promoting activities and in prevention programs has been raised. Different researches show that there is no difference in willingness between young people and elderly people (Carter, Elward, Malmgren, and Martin, 1991).

The status of the elderly, the attitudes towards the elderly, and patterns of treatment of the elderly are influenced by the family patterns accepted in the different social groups that comprise Israeli society. These, as aforementioned, are rather congruent to the place on the continuum of traditionalism-modernism. The non-Jewish rural population in Israel holds attitudes that are more traditional towards the elderly and the care of the elderly (Barnea and Haviv, 1992; Shuval and Anson, 2001).

As aforementioned, the percentage of the elderly in the non-Jewish population in Israel is far lower than that of the Jewish population, especially as a result of the differences in the reproduction rate and, to a lesser extent, as a result of the differences in the life span. The rates of handicap among the elderly in the Arab sector are higher than those in the Jewish sector. The relative scarceness of resources of coping, as a result of differences in the social status of the Israeli Arab and inequality of the access to resources, such as income, education, health services, residential conditions, etc., is one of the main factors for the high percentages of limitation among the elderly in the Arab sector. Another factor is the especially low rate of institutionalization, which is the result of the avoidance of the use of the institutionalization services in the Jewish sector, which are distant, geographically and socially, from the non-Jewish population in Israel, and of the lack of institutionalization services in the Arab sector. Only in the beginning of the 1990s did designated formal support services develop in the Arab sector and these have a long way to go to supply the multitude of needs. (Reiss, 1991; Shuval and Anson, 2001).

Most of the needs of the elderly in the Arab sector are provided by the extended family, due both to the force of tradition and to the state of reality. The values of traditional family among Israeli Arabs dictate the respect of the elderly parents, while the relative scarcity of geographic mobility and the rather accepted pattern of shared residence encourage this supportive behavior. (Reiss, 1991; Shuval and Anson, 2001).

The Image of Old Age

A relationship was found between the type of image of old age and three variables – sex, formal education, and subjective evaluation of the economic situation. People lacking education, women, and people who evaluate the economic situation as bad tend not to perceive positive components in the image of the old age; in other words, they tend to see old age only in a negative light. These variables are related to one another: most of those who lack education are women and the economic situation of elderly women, as a group, is lower than that of men in this population too. (Vale, 1991).

The health situation and the image of health refer to the subjective feeling (how the person perceives his health situation) and these influence the image of old age. Not surprisingly, old age is perceived in a negative light when these are poor. (Vale, 1991).

The Muslim elderly tend more than do their Christian colleagues to note only negative aspects. The image of old age of the elderly is influenced by socioeconomic factors, namely, by the level of education and the income of the researched population. (Vale, 1991).

The relationship between the nature of intergenerational interaction and the perception of the positive aspects in old age should be noted, since it indicates the importance of the feeling of the involvement of the elderly parents in the lives of their children to the feeling of 'morale' at old age. Parents who feel that they fill defined family roles tend to note positive aspects in old age (Vale, 1991).

In regards to the self-reporting on the general state of health, significant differences were found between the Arabs and the Jews, when the Arabs more than the Jews tend to report that the situation of their health was 'not so good', 'not good', or 'bad', as opposed to among the Jews, who reported 'good' or 'very good'. The Arabs use the mental health services and emergency health services less than do the Jews. In addition, it was found that among the Arabs there is less tendency to receive from the health clinics preventative services such as blood pressure tests and information about complementary health insurance (Farfel, Rosen, Berg, and Gross, 1997).

The findings of different research studies indicated significant differences between Arabs and Jews in the degree of their ability to perform actions related to managing the household work. One difference derives from the higher percentage of Arabs who answered that they are not accustomed to performing these actions. The following question must then be asked. Why are they not accustomed to perform these actions? The explanation lies, apparently, in the structure of the household in Arab society. The manner of residence most typical in the Arab family is the residence of the old man or old woman with their mate and their children in the same home. Approximately 35% of the Arab elderly live in this type of household. Indeed, this percentage of elderly noted that they are not accustomed to performing tasks of cleaning, laundry, and cooking. (Yakovitz and Nir, 2001).

The pattern of multigenerational residence embodies also the division of roles within the extended family, in which the members of the young generation bear the burden of the housework tasks. Therefore, even if the elderly person is capable of performing actions related to the household care, he is not required to do so. In contrast, in Jewish families the pattern of a married couple is more prevalent and 53% of the elderly live with their mates or live alone. Hence, difficulty in the household tasks can be expected to be more common among the Jewish population. The existing policy, which encourages the elderly person to remain in his environment and grow old there, requires help in housework to be provided to such an extent and a manner to ensure the elderly person's quality of life and sense of well being (Yakovitz and Nir, 2001).

The data of researches in the world show that ethnic minority groups less use the formal services, including institutional services (Kait, 1991).

The welfare services in Israel, both health related services and social welfare services, are not organized according to age categories. Therefore, there are very few services exclusively intended for the elderly (with the exception of services provided due to the Nursing Care Provision Law and clubs and daycare centers for limited elderly) (Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

The Nursing Care Provision Law caused the needs of many elderly people that had not been recognized by the welfare services to be raised. It was necessary to address not only the elderly who were entitled to a

stipend but also those whose entitlement was not recognized. Hence, the number of the elderly who turned to the social services increased greatly and thus the awareness of this topic grew. (Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

The welfare policy in place in Israel, which ensures a basic income stipend during old age for every resident, promotes the process of the change of the children's commitment towards their parents, in the Arab population and obviously in the Jewish population as well. It makes it easier for the children in the area of the economic obligation and thus induces changes in the entire commitment system. The parent's economic independence grants him an independent status in other aspects as well. (Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

It is important to note the change that has occurred in the status of the Arab woman. This young woman has obtained a basic or more advanced education, has become more independent, and does not behave towards her husband's parents as having to serve them in all things. In the past, the brides and their daughters were the 'manpower' who served the elderly in the family and hence, if there is a process of change in their attitude, the need for extra-familial services in the future can be expected. (Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

The processes of change that the Arab family is experiencing are similar to those that many families in Israeli Jewish society experienced, when they came from a background of a traditional society similar to that of Israeli Arabs (Kurazim and Trechtenberg, 1988; Shanit, 1988; Vale, 1990).

It can be said that the personal welfare services – health and social welfare – are today accessible to the entire population, including the residents of settlements without municipal standing and even in 'places' that are not recognized as settlements. However, because of different limitations, as aforementioned, physical accessibility to all of them does not exist (Vale, 1990).

The phenomenon of the institutionalization of the elderly population was contradictory to the norms in the Arab population in Israel and especially in the Muslim population. However, the processes of change and modernization that the Arab population is experiencing

have also left their mark on the social values. The perception that the family members are the only care-providers of limited elderly is changing and losing its importance. In parallel the willingness and ability to receive the assistance of the formal services in the care of the limited elderly is being perceived in a more positive light than in the past. (Kait, 1991)

Today, in the Arab sector, there are two old age homes. The institutions for the elderly are the first constellation in the range of services for the prolonged care of elderly developed in Israel. The phenomenon of sending Arab elderly to old age homes is new and is occurring on the background of the changes that have occurred in Arab society in Israel in different areas: society, economy, education and culture, status of the woman, structure of the family, and status of the elderly person. The percentage of institutionalization among Arab elderly is still low in comparison to this percentage in the Jewish population (0.7% and 4.4%, respectively). (Kait, 1991)

Following the change of the approach to institutionalization, the demand to establish modern old age homes was raised. The first old age home was established in the village of Dvoriya in 1993. During the planning stage, cultural elements of the Arab elderly were taken into account and the demand that the old age home be situated in the heart of the community was raised. (Kait, 1991).

The characteristics of the elderly in the two old age homes that exist in the Arab sector differ from the characteristics of the residents in the Jewish sector in Israel and in the modern world. First, in the old age homes young and handicapped residents live (under the age of 65+), since appropriate solutions were not found for them in the framework of the community. Second, in the old age homes there is a relatively high percentage of men as opposed to women (in the new old age homes) and there is a high percentage of unmarried residents or residents without children. This finding reflects problems of the lack of informal support systems. Be’er, 2004; Aza’iza, Levenshtein, and Brudasky, 2001).

It appears that the use of community services for this population constitutes an intermediate stage before placement. When the elderly person’s health and mental state deteriorates, he is institutionalized. Evidence of this trend is the relatively high percentage of residents who came to the institution directly from the hospital. In essence, the primary

community services that exist in the Arab sector are the services of the Nursing Care Law. The daycare centers were developed later and are not available in every settlement (Be'er, 2004; Aza'iza, Levenshtein, and Brudasky, 2001).

The differences between Jewish elderly and the Arab elderly in different behaviors of health education are as follows:

- Physical Activity

The benefit of a physically active lifestyle is independent of age. Regular physical activity lowers the level of risk of chronic illnesses and improves the aerobic tolerance, and the flexibility improves the quality of life. Physical activity lowers the level of LDL and plasma viscosity and thus improves the blood flow, reduces the blood pressure, and lowers the risk of obesity and diabetes type 2 (Simpolos, 2002).

Physical activity is one the most beneficial interventions in health promotion, in the prevention of illnesses, and in the enhancement of the sense of welfare. Its effectiveness also exists among the elderly and it may avert deterioration and bring about an improvement in people with chronic illnesses and limitations and handicaps. In particular, physical activity is recommended for the prevention and treatment of illnesses such as diabetes, high blood pressure, heart diseases, osteoporosis, etc. Among the elderly, regular physical activity is supremely important to preserve the power of the muscles and the mass, to increase stability, and to prevent falls. Survey data of the Central Bureau of Statistics show that 35.6% of people aged 60 and above reported that they perform some physical activity. The highest percentage is found among men (40%) as opposed to women (32%). Among the Arabs, the percentage of those who engage in physical activity is most low (3%). It was also found that the percentage of those who engage in physical activity rises with the rise in the level of education and level of income (Rasoli and Shemesh, 2003).

- Nutrition Habits

Correct, development-appropriate nutrition, balanced in essential fatty acids, is necessary to growth and development throughout all the life cycles. Western societies recommend reducing the consumption of

saturated fats. It is also necessary to increase the daily consumption of fruits and vegetables (Simpolos, 2002).

Intelligent nutrition is based on the principles of variety between and within the different food groups, on adjustment to age, sex, and health situation, and on the aspiration to achieve the desired weight. Drinking liquids regularly is included among the recommendations for intelligent nutrition. Intelligent nutrition influences the quality and span of life. Conversely, deficient nutrition is sometimes related to illness and handicap. The survey data of the Central Bureau of Statistics shows that, as the person grows older, the frequency of the consumption of fruits and vegetables declines. The percentage of people aged 65 and up who eat fruits and vegetables everyday or almost daily is higher among the Jews (74%) than among the Arabs (67%). The percentage of those who eat meat, poultry, and fish or eggs at least five times a week is higher among Jews (62%) than among Arabs (33%) (Rasoli and Shemesh, 2003).

- Smoking

Many researches in Israel and around world indicate the damages of smoking to the public health and the relationship between smoking and diseases such as cancer, respiratory illnesses, and cardiovascular diseases. The survey data of the Central Bureau of Statistics shows that 12.4% of the interviewed subjects reported smoking cigarettes in the present. A higher percentage of smokers was found among Jews than among Arabs (Rasoli and Shemesh, 2003);

- Falls

According to Rasoli and Shemesh (2003), falls constitute a prevalent problem among the elderly. The falls sometimes cause broken bones and other severe injuries and eventually handicap, lack of confidence in movement, and even premature death. The survey data of the Central Bureau of Statistics shows that falls outside or at home are more frequent among Jews than among Arabs.

- Demoralization

Demoralization is defined as a state of mental distress from which the person sees no way out. The level of demoralization constitutes an indicator of mental and physical illness and may serve as a valid index of

the state of mental health of the population. The elderly population constitutes a high risk group for situations of demoralization following the increased frequency of physical illness, functional difficulties, loss, and social isolation. The survey data of the Central Bureau of Statistics shows that there is a higher level of demoralization among Jews (39.85%) than among Arabs (21.4%) (Rasoli and Shemesh, 2003).

- Self Evaluation of Health and Sense of Loneliness

Depression increases with aging and is prominent more among people who are older than 75. It was found that among people with clinical depression there is a high risk of heart diseases decades after the commencement of the depression (Simpolos, 2002).

The self evaluation of loneliness is considered to be a variable that best predicts the health situation, illness, and mortality. The survey data of the Central Bureau of Statistics shows that the reporting of better health is more prevalent among men with high education and among Jews. The frequency of complaint of loneliness is higher among women, Arabs, and those with low education (Rasoli and Shemesh, 2003).

This chapter presented the main differences between Jewish elderly and Arab elderly in Israel. Emphasis was placed on differences in the perception of old age, in the willingness for institutional placement, in formal and informal support, and in different behaviors related to health education, such as physical activity, nutritional practices, smoking, falls, and mental-psychological situation.

8. Summary

Education and the promotion of health education embrace all the methods known today that contribute to the change of behavior. The basis is the inculcation of knowledge and awareness of change of attitudes towards the acquired behavior (Baron-Appel, 1997). The attitude helps the person organize his world and serves for him as a guide that directs his behavior. To function effectively and efficiently in the physical and social world, the person must adopt for himself a system of realistic and adjusted attitudes, hence, his tendency to examine the correspondence of his attitudes and to resolve conflicts among them (Rucks and Shwarzald, 2000).

In the theoretical section, we saw that health education is supposed to give the person in general and the elderly person in particular another look at his behavior in different aspects of life. In addition, there is a correlation between the person's knowledge, the attitudes he holds, and his behavior in actuality.

In the present research study, the objective was to examine this relationship between knowledge, attitudes, and behavior of the Jewish and the Arab elderly person in different areas of health education.

The rise in the life span causes the rise in the number of elderly people in the population. The elderly population finds it difficult to cope from certain situations of pressure and suffers from different types of illness. Therefore, health among the elderly has become a main component of thought, everyday activity, nutrition, and medical actions for the identification and prevention of illnesses. (Brenner, 2003)

As aforementioned, the primary objective of health education is to prevent illnesses and extend the life span. After the age of eighty, in contrast, the goal is different – to retain the functioning of the elderly person and to prevent disability (Shen, 2000).

The theoretical section reviewed the elderly population and its characteristics in general and in the separation between the Jewish elderly and the Arab elderly. In the present research study the goal is to see whether there are significant differences between the population of the Jewish elderly and the population of the Arab elderly in different areas of health education. For instance, since there are different patterns

of behavior that influence the health situation, such as smoking, nutrition, physical activity, drug use, alcohol consumption, immunizations, avoidance of falls, psychological-mental state, participation in recreational classes, intellectual behavior, social behavior, are there significant differences in these patterns of behavior between Jewish and Arab elderly?

The theoretical part presented different theories, each of which addresses health education in a different way. The integration theory addresses health education as an ongoing process that is based on different levels – environmental, social, organizational, and individual. In addition, it focuses on three different spheres – health protection sphere, health education sphere, and the prevention sphere (Kelly, Charlton, and Hanlon, 1993). The prevention model addresses the improvement in the level of life with a minimum of illnesses and disabilities according to three different levels: primary prevention, secondary prevention, and tertiary prevention (Cowley, 1994; Pike, and Forster, 1995). There is also the radical model, which, in contrast to the previous theories, addresses health only on the social level and not on the individual level (Cowley, 1994; Pike, and Forster, 1995).

After the research analysis, the research study examines which theory or model is suitable for the explanation of the differences in health education between Jewish elderly and Arab elderly.

Thus, the research described psychological approaches in health education. The health belief model explains and predicts the behavior ascribed to health; in other words, the attempt to bring the person to the willingness to act to change the behavior related to his health (Glanz, Rimer, and Lewis, 2002). The following two theories, the theory of reasoned action and the theory of planned behavior, focus on the theoretical aspects related to the individual's motivation as a reason for the appearance of certain behavior (Glanz, Rimer, and Lewis, 2002). Here, too, the research examines how the different psychological approaches and models suit the explanation of the differences in health education between the Jewish elderly and the Arab elderly.

In the review of the literature, several questions arose and will be examined in the research study.

- The population of the elderly: In the theoretical section much was written on the population of elderly, in all its different varieties in regards to health education. The following question arises. Does the elderly person have the awareness and ability to change different patterns of behavior in his life, knowing that this will bring him a better quality of life and a longer life span?

- The population of the elderly, Jews and Arabs: In the theoretical section there is a very broad reference to the differences between these two populations. These differences are profound and their roots derive from the founding of the country and even from outside of Israel. The differences between these two populations lie in family tradition and the different reference to it on the part of Jews and Arabs. From the review conducted in the theoretical section, the following question arises. Does the essential difference between these two groups influence the different reference to education and health promotion during old age?

- Patterns of behavior that influence the person's health: In the theoretical review there is an extensive reference to the individual's different patterns of behavior, which influence his health, for example, nutrition, water consumption, smoking, drug use, alcohol consumption, avoidance of falls, taking calcium additives, immunizations, psychological-mental state, participation in social activity, participation in intellectual activity, institutional placement, and physical activity. The following question arises. Do the Jewish elderly and the Arab elderly, who know that these patterns of behavior influence their health, change their behavior accordingly? In other words, the present research study seeks to examine the relationship between knowledge, attitudes, and behavior of the Jewish and Arab elderly in regards to these realms.

The Research Method

1. The Pre-Test

A pre-test (see appendix number 1) was conducted on twenty research subjects (ten Jewish elderly and ten Arab elderly). Following the pre-test, several questions, which were found to be slightly problematic, were altered.

- Question number 8 (religion): In the beginning there wasn't the option of 'religion: Bedouin' and afterwards the option was added: E: Bedouin.

- Question number 29 (visit to a doctor): In the beginning there wasn't the option of 'less than once every half a year' and afterwards the option was added: E: less than once every half year.

- Questions number 118-130 (list of actions to be performed): In the beginning there was the option of choosing from four options, 1-4, but after the answers of the pre-test were read, another option, 5 – not relevant, was added.

2. The Research Sample

Number: In the present research 301 interviewees participated, of which there were 130 Jews (43.19%) and 171 Arabs (56.815%).

Gender: Most of the interviewees, both among the Jewish subjects and among the Arab subjects, are women (58.46% and 53.80%, respectively).

Age: The average age of the entire sample is 72.57 years.

Personal status: The rate of married subjects is higher among the Arabs than among the Jews (63.54% and 47.69%, respectively). The rate of divorced subjects is lower among the Arab subjects than among the Jewish subjects (1.18% and 7.69%, respectively). The rate of widowed subjects is higher among the Jews than among the Arabs (44.62% and 32.94%, respectively.)

Education: The rate of elderly without education is higher among the Arabs than among the Jews (61.76% and 20.00%, respectively). The rate of interviewees with a post-secondary school education is higher among the Jewish elderly than among the Arab elderly (30.77% and 3.53% respectively).

Residence: Most of the elderly live in their own residences. However, the rate of the Jewish elderly who live in a protected housing residence is higher than the rate of the Arab elderly (10.00% and 1.17%).

Religion among the Jewish subjects: Most of the Jewish elderly defined themselves as secular, 46.92%.

3. The Research Variables

- The dependent variables are the different areas of health education – nutrition, physical activity, smoking, drugs and alcohol, social activity, intellectual activity, mental psychological state, immunizations, safety measures, institutional placement, calcium loss, muscle loss, falls, level of functioning in the home, and level of functioning outside of the home.

- The independent variable is the nationality (Jewish/Arab).

4. The Research Instruments

The research is based on a questionnaire constructed by the researcher (see appendix number 2). The questionnaire includes 136 questions that are divided into different topics:

- 16 questions (1-16) were socio-demographic questions that provided a general background on the research subject, such as gender, age, family status, nationality, religion, education, economic situation, residence, primary income source, etc.

- 16 questions (17-24, 26-34) addressed the research subject's state of health, for example, has he fallen in the past year, does he smoke cigarettes, drink alcohol, or take drugs, how frequently does he see a doctor, his state of health today, etc.

- 7 questions (35-41) addressed the research subject's physical activity, for example, walking, swimming, etc.

- 14 questions (42-55) addressed the research subject's attitudes regarding different fields, such as nutrition, alcohol, institutional placement, etc. In these questions, the research subject had to choose the option that most suited him from five options when 0 – not relevant, 1 – don't agree at all, 2 – agree slightly, 3 – rather agree, 4 – agree greatly, and 5 – agree very greatly.

- 27 questions (56-83) addressed the research subject's knowledge in different fields, such as the consumption of water, physical activity, muscle loss, participation in social and intellectual activity, immunizations, mental-psychological state, etc. In these questions the research subject had to choose the option that most suited him from three options: correct / incorrect / don't know.

- 35 questions (84-117, 25-26) addressed the research subject's behavior in different areas, such as physical activity, participation in social and intellectual activity, smoking, drug use, falls, immunizations, mental-psychological state, etc. In these questions the research subject had to choose the option that most suited him from five options, when 1- never, 2 – infrequently, 3 – sometimes, 4 – frequently, and 5 – always.

- 13 questions (118-130) addressed the research subject's level of functioning outside of the home, for example, traveling on public transportation, climbing stairs, etc. In these questions the research subject had to choose whether he can or cannot perform these actions, when he must choose: Yes / No.

Expert Validation

The questionnaire was given to five experts in the field of health who also engage in research. (See appendix number 3.) In the questionnaire the experts were asked to examine whether the different questions indeed examine what they are supposed to examined. I received minor comments, but there was not need to change the questionnaire.

5. The Statistical Analysis

The research study performs the following statistical analyses and the findings are presented in the following chapter.

χ^2 Test

This test examines the significance of the difference between the number of groups in regards to the dependent variable that is on a name-category scale level. The present research compared between two groups, Jews and Arabs, in regards to the different parameters measured on the name-category scale, both in the section of the description of the sample and in the section of the findings. In the section of the description of the sample, the two groups were compared in regards to variables such as gender, residential area, family status, falls inside/outside the home, etc., In the section of the findings, the significance of the differences was examined between the two nationality groups in terms of their functioning inside and outside of the home.

t Test for Two Independent Samples

This test examines the existence of significant differences between two groups (with no relationship between them) in regards to the dependent variable measured on a relative continuous scale. The present research compares between Jews and Arabs in regards to different parameters measured on a relative scale both in the section of the description of the sample and in the section of the research findings. In the section of the description of the sample, the two groups were compared in regards to variables such as the interviewed subject's age, number of children, number of hospitalizations, number of days since the last visit to the doctor, etc. In the section of the research findings, significant differences were examined between the two groups (Jews and Arabs) in regards to the number of areas in which the elderly person can function inside and outside of the home, the elderly person's attitudes, knowledge, and behavior in regards to the different topics related to a healthy and balanced lifestyle.

Pearson Correlation

This test examines the existence of a significant linear relationship between two variables on a relative continuous scale, the strength of the

relationship (weak, moderate, or strong), and the direction of the relationship (positive or negative). The present research examines whether there is a significant linear relationship between the elderly person's general health situation, his mental health situation, and his knowledge on the mental health situation and attitudes, knowledge, and behavior of Jewish and Arab elderly in different topics.

MANOVA

This test examines the significance of the differences between a number of groups in regards to a dependent variable that is comprised of a great number of parameters, in other words, a dependent variable that is combined and calculated from a number of sub-variables. The present research study examines the significance of the differences between Jews and Arabs in regards to their knowledge, attitudes, and behavior. It is important to note that the three combined variables were created from a number of sub-variables that were directly examined in the research as questions asked of the interviewed subjects.

Multivariate Hierarchical Linear Regression

In general, regression examines the prediction of the independent variable of the dependent variables or in other words, the extent to which the independent variable predicts/influences the dependent variable. In the present research study, the dependent variable is continuous and hence the regression used here is linear regression (binomial), different from multinomial regression in which the dependent variables is name-category with three categories. In addition, this research study uses a number of independent variables and hence the name – multivariate regression. Last, the variables are entered into the regression in stages, when at first only the respondent's nationality is entered, which constitutes a main independent variable in the research, and then stage after stage additional variables, such as attitudes and knowledge, are entered. Hence, several models are created in analysis, when the last model includes all the variables whose influences on the variable of behavior are to be revealed in the study.

The Research Findings

1. Description of the Sample

Table Number 2:
Description of the Characteristics of the Research Subjects – the Entire Sample and according to Nationality (Number, Percentage)

		Entire Sample		Jews		Arabs	
		N	%	N	%	N	%
Nationality		301	100.00%	130	43.19%	171	56.81%
Gender	Male	133	44.19%	54	41.54%	79	46.20%
	Female	168	55.81%	76	58.46%	92	53.80%
	Total	301	100.00%	130	100.00%	171	100.00%
Birth country (only for the Jewish population)	Asia-Africa	46	35.38%				
	Europe-America	30	23.08%				
	Israel	22	16.92%				
	Former Soviet Union	27	20.77%				
	Ethiopia	5	3.85%				
	Total	130	100.00%				
Residence **	City	133	44.19%	111	85.38%	22	12.87%
	Town	158	52.49%	10	7.69%	148	86.55%
	Kibbutz	5	1.66%	4	3.08%	1	.58%
	Small town	5	1.66%	5	3.85%		
	Total	301	100.00%	130	100.00%	171	100.00%
Family Status **	Married	170	56.67%	62	47.69%	108	63.53%
	Widowed	114	38.00%	58	44.62%	56	32.94%
	Divorced	12	4.00%	10	7.69%	2	1.18%
	Single	4	1.33%			4	2.35%
	Total	300	100.00%	130	100.00%	170	100.00%
Religion	Jewish	130	43.19%				
	Christian	19	6.31%				
	Muslim	92	30.56%				
	Druse	49	16.28%				
	Bedouin	11	3.65%				
	Total	301	100.00%				

		Entire Sample		Jews		Arabs	
		N	%	N	%	N	%
Level of Education**	Without education	131	43.67%	26	20.00%	105	61.76%
	Pre-high school	106	35.33%	47	36.15%	59	34.71%
	High school	17	5.67%	17	13.08%		
	Post-high school	46	15.33%	40	30.77%	6	3.53%
	Total	300	100.00%	130	100.00%	170	100.00%
Definition of economic situation	Poor-very poor	47	15.67%	18	13.95%	29	16.96%
	Intermediate	104	34.67%	50	38.76%	54	31.58%
	Good-very good	149	49.67%	61	47.29%	88	51.46%
	Total	300	100.00%	129	100.00%	171	100.00%
Institutional placement **	Independent residence	286	95.02%	117	90.00%	169	98.83%
	Protected residence	15	4.98%	13	10.00%	2	1.17%
	Total	301	100.00%	130	100.00%	171	100.00%
Who do you live with **	Live alone	57	21.35%	36	27.91%	21	15.22%
	Live with relatives	196	73.41%	82	63.57%	114	82.61%
	Live in old age home	14	5.24%	11	8.53%	3	2.17%
	Total	267	100.00%	129	100.00%	138	100.00%
Religious self-definition (only for Jewish population)	Religious	29	22.31%				
	Traditional	40	30.77%				
	Secular	71	46.92%				
	Total	130	100.00%				
Primary source of income **	State stipend	223	74.83%	84	65.12%	139	82.25%
	Family help	21	7.05%	10	7.75%	11	6.51%
	Work	32	10.74%	25	19.38%	7	4.14%
	Other	22	7.38%	10	7.75%	12	7.10%
	Total	298	100.00%	129	100.00%	169	100.00%
Children	Yes	287	96.31%	126	97.67%	161	95.27%
	No	11	3.69%	3	2.33%	8	4.73%
	Total	298	100.00%	129	100.00%	169	100.00%
Do you have a telephone? **	Yes	243	91.01%	118	95.93%	125	86.81%
	No	24	8.99%	5	4.07%	19	13.19%
	Total	267	100.00%	123	100.00%	144	100.00%

**p<0.01

A total of 301 interviewed subjects participated in the research study, of which 130 are Jews (43.19%) and 171 are Arabs (56.81%).

- Most of the subjects, both among the Jews and among the Arabs, are women (58.46% and 53.80%, respectively).
- The highest rate among the Jewish subjects reported that they were born in the countries of Asia-Africa (35.38%), and the lowest rate in Ethiopia (3.85%).
- The average age of the entire sample is 72.57 years (standard deviation of 7.51).
- The research showed that the Jewish subjects are older than the Arab subjects, significantly (73.58 and 71.77, respectively, $p<0.05$, $t=2.07$).

Significant differences were found between the two groups of nationality in relation to the place of residence ($\chi^2=184.71$, $p<0.01$).

- The rate of Jewish subjects who live in the city was found to be significantly higher than that of the Arab subjects (85.38% and 12.87%, respectively).
- Conversely, the rate of Arab subjects who live in the town was found to be significantly higher than that of the Jewish subjects (86.55% and 7.69%, respectively).

Significant differences were found between the two nationality groups in regards to their personal status ($\chi^2=16.78$, $p<0.01$).

- The rate of married subjects was significantly higher among the Arab subjects than among the Jewish subjects (63.53% and 47.69%, respectively).
- The rate of divorced subjects was significantly lower among the Arab subjects than among the Jewish subjects (1.18% and 7.69%, respectively).
- The rate of widowed subjects is significantly higher among the Jewish subjects than among the Arab subjects (44.62% and 32.94%, respectively).

Significant differences were found between the nationality groups in regards to the level of education ($\chi^2=87.35$, $p<0.01$).

- The rate of the elderly without education was significantly higher among the Arab subjects than among the Jewish subjects (61.76% and 20.00%, respectively).

- The rate of the research subjects with a post-high school education was significantly higher among the Jewish elderly than among the Arab elderly (30.77% and 3.53%, respectively).

The research showed that most of the elderly live in independent residences. However, the rate of elderly who live in protected housing was significantly higher among the Jews than among the Arabs (10.00% and 1.17%, respectively, χ^2=12.16, p<0.01).

Most of the elderly live with other close family relatives (73.41%). However, the percentage of the elderly who live with other family members was significantly higher among the Arabs than among the Jews (82.61% and 63.57%, respectively, χ^2=13.46, p<0.01). Conversely, the percentage of the subjects who live alone was significantly higher among the Jews than among the Arabs (27.91% and 15.22%, respectively, χ^2=13.46, p<0.01).

Most of the elderly Jews defined themselves as secular (46.92%).

Most of the research subjects in the entire sample reported that their primary source of income was the national insurance stipend (74.83%). However, the percentage of subjects who receive the state stipends was significantly higher among the Arabs than among the Jews (82.25% and 65.12%, respectively, χ^2=18.89, p<0.01). In addition, the percentage who earn their livelihood from a job is significantly higher among the Jews than among the Arabs (19.37% and 4.14% respectively, χ^2=18.89, p<0.01).

The research showed that the elderly Jewish subjects have fewer children than do the Arab subjects (3.98 and 8.10, respectively, t=-12.20, p<0.01).

The percentage of the subjects with a telephone was significantly higher among the Jewish elderly than among the Arab elderly (95.93% and 86.81%, χ^2=6.76, p<0.01).

Figure number 1 presents the distribution of all the research subjects in the sample according to gender. Figure number 2 presents the distribution of the Jewish population in the sample according to country of birth.

Figure Number 1:
Distribution of the Research Subjects in the Sample according to Gender – in Percentage (N=301)

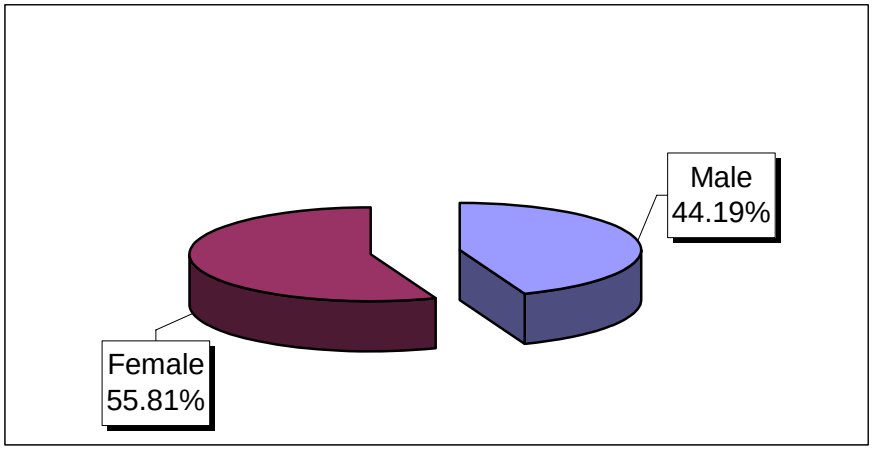


Figure Number 2:
Distribution of the Jewish Population in the Sample according to Birth Country – in Percentage (N=130)

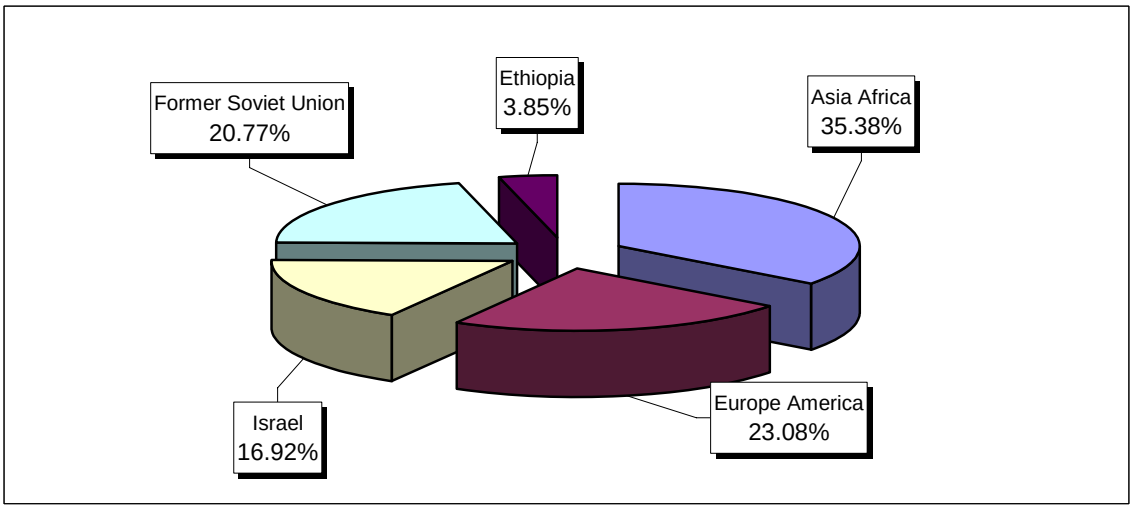


Figure number 2 shows that the highest percentage of Jewish subjects were born in Asia and Africa (35.38%) and the lowest percentage in Ethiopia (3.85%).

Figure number 3 presents the distribution of the research subjects in the sample according to religion.

Figure Number 3:
Distribution of the Research Subjects in the Sample according to Religion – in Percentage (N=301)

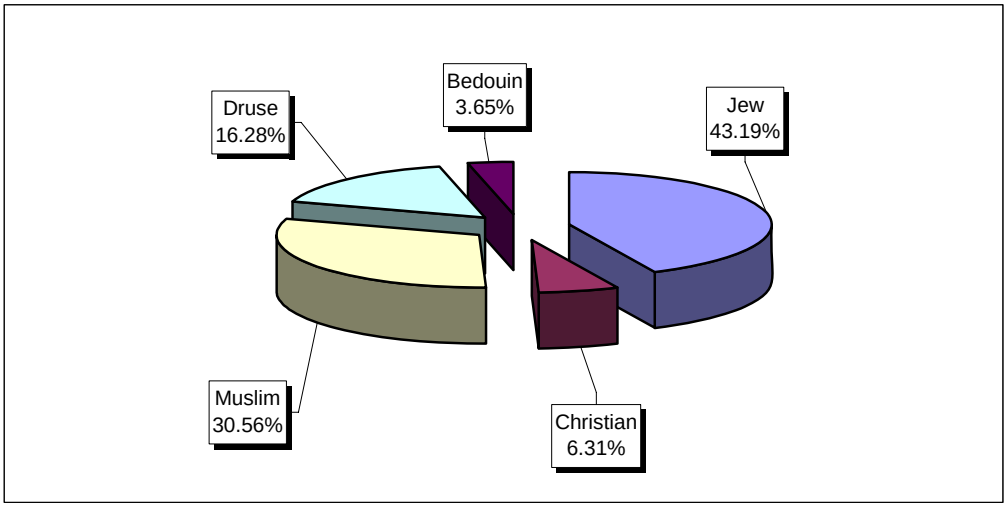


Figure number 3 shows that the Jews constitute 43.19% of the sample and the Arabs are divided into Muslims, Christians, Druse, and Bedouin and constitute 56.81% of the sample.

Figure number 4 presents the distribution of the research subjects in the sample according to education.

Figure Number 4:
Distribution of the Research Subjects in the Sample according to Level of Education – in Percentage (N=300)

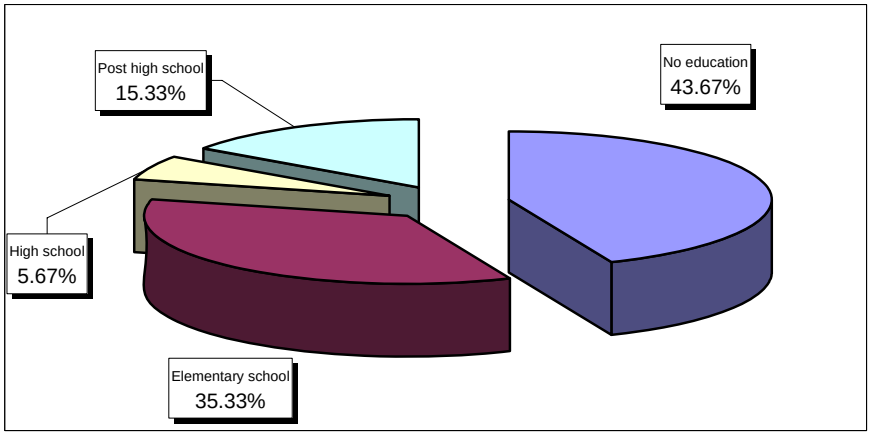


Figure number 4 shows that most of the research subjects are not educated (43.67%).

Figure number 5 presents the education of the research subjects according to nationality.

Figure Number 5:
Percentage of the Jewish Elderly (N=130) and the Arab Elderly (N=170) according to the Level of Education (N=300)

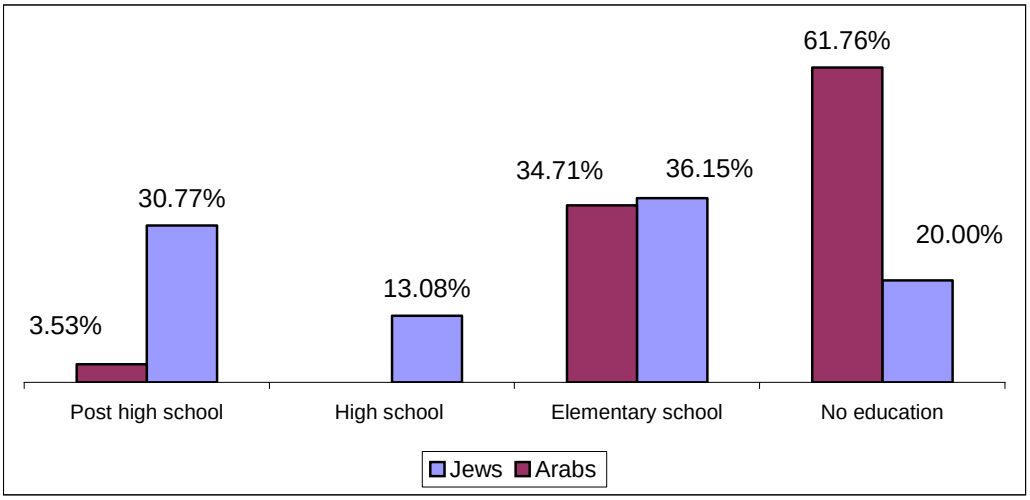


Figure number 5 shows that there are more elderly Arabs without an education than there are elderly Jews and that more elderly Jews have a post high school education than elderly Arabs.

Figure number 6 presents the distribution of the entire sample according to the institutional placement.

Figure Number 6:
Distribution of the Research Subjects in the Sample according to the Institutional Placement – in Percentage (N=301)

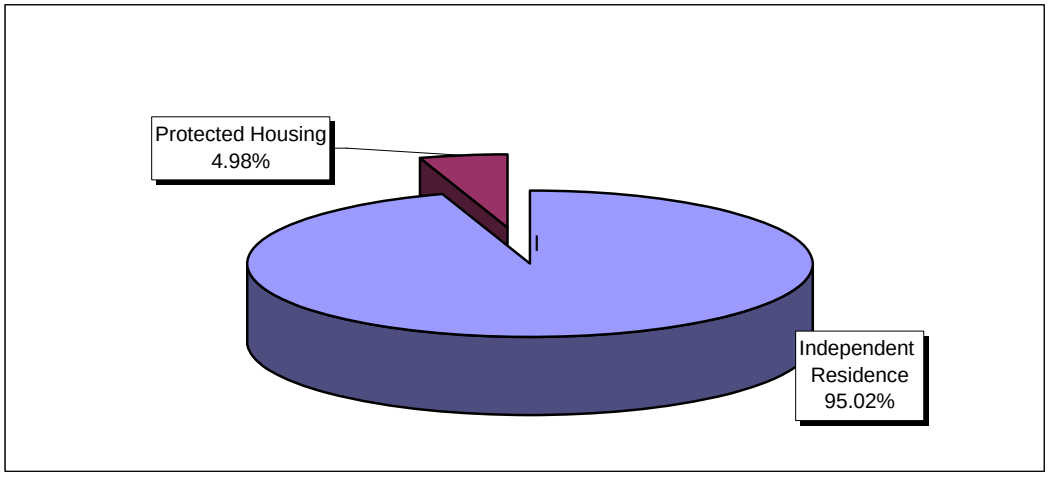


Figure number 6 shows that most of the interviewees (95.02%) live in independent residences and only a small percentage of the respondents live in protected housing (4.98%).

Figure Number 7:
Percentage of the Jewish Elderly (N=130) and the Arab Elderly (N=171) according to the Institutional Placement

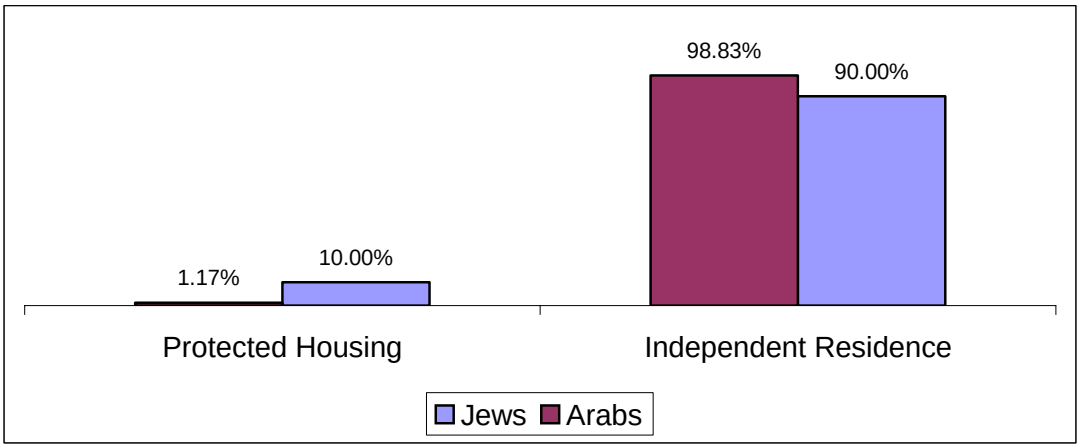


Figure number 7 shows that 1.17% of the Arab elderly and 10% of the Jewish elderly live in protected housing.

2. Functioning Level and Living Habits of the Elderly

Table Number 3:
Description of the Living Habits of the Elderly – the Entire Sample and according to Nationality (Number, Percentage)

		Entire Sample		Jews		Arabs	
		N	%	N	%	N	%
Have you fallen in the past year in the home?	Yes	117	38.87%	57	43.85%	60	35.09%
	No	184	61.13%	73	56.15%	111	64.91%
	Total	301	100.00%	130	100.00%	171	100.00%
Harm as a result of the fall in the home (only for those who fell)	Yes	69	23.15%	43	33.59%	26	15.29%
	No	229	76.85%	85	66.41%	144	84.71%
	Total	298	100.00%	130	100.00%	170	100.00%
Have you fallen in the past year out of the home? **	Yes	69	23.15%	43	33.59%	26	15.29%
	No	229	76.85%	85	66.41%	144	84.71%
	Total	298	100.00%	128	100.00%	170	100.00%
Harm as a result of the fall out of the home (only for those who fell)	Yes	51	73.91%	31	72.09%	20	76.92%
	No	18	26.09%	12	27.91%	6	23.08%
	Total	69	100.00%	43	100.00%	26	100.00%
Smoking cigarettes	Yes	70	23.33%	26	20.00%	44	25.88%
	No	230	76.67%	104	80.00%	126	74.12%
	Total	300	100.00%	130	100.00%	170	100.00%
Smoking in the past (for those who do not smoke today) **	Yes	69	30.00%	42	40.78%	27	21.26%
	No	161	70.00%	61	59.22%	100	78.74%
	Total	230	100.00%	103	100.00%	127	100.00%
Drinking alcohol **	Yes	40	13.33%	29	22.47%	11	6.43%
	No	260	86.67%	100	77.52%	160	93.57%
	Total	300	100.00%	129	100.00%	171	100.00%
Doing drugs (in the past)	Yes	2	0.66%	2	1.54%		
	No	299	99.34%	128	98.46%	171	100.00%
	Total	301	100.00%	130	100.00%	171	100.00%

		Entire Sample		Jews		Arabs	
		N	%	N	%	N	%
Belonging to a club for the elderly **	Yes	44	14.67%	28	21.54%	16	9.41%
	No	256	85.53%	102	78.46%	154	90.59%
	Total	300	100.00%	130	100.00%	170	100.00%
Do you suffer from a chronic illness **	Yes	148	50.00%	75	59.52%	73	42.94%
	No	148	50.00%	51	40.48%	97	57.06%
	Total	296	100.00%	126	100.00%	170	100.00%
Hospitalization during the past year	Yes	105	34.88%	52	40.00%	53	30.99%
	No	196	65.12%	78	60.00%	118	69.01%
	Total	301	100.00%	130	100.00%	171	100.00%
Walking **	Yes	153	52.04%	76	61.29%	77	45.29%
	No	141	47.96%	48	38.71%	93	54.71%
	Total	294	100.00%	124	100.00%	170	100.00%
Swimming **	Yes	24	8.76%	22	21.15%	2	1.18%
	No	250	91.24%	82	78.85%	168	98.82%
	Total	274	100.00%	104	100.00%	170	100.00%
Running **	Yes	9	3.30%	2	1.96%	7	4.09%
	No	264	96.70%	100	98.04%	164	95.91%
	Total	273	100.00%	102	100.00%	171	100.00%
Bike Riding **	Yes	10	3.65%	9	8.74%	1	.58%
	No	264	96.35%	94	91.26%	170	99.42 %
	Total	274	100.00%	103	100.00%	171	100.00%
Participation in courses **	Yes	50	17.36%	45	38.46%	5	2.92%
	No	238	82.64%	72	61.54%	166	97.08%
	Total	288	100.00%	117	100.00%	171	100.00%
Fitness Club **	Yes	6	2.20%	6	5.88%		
	No	267	97.80%	96	94.12%	171	100.00%
	Total	273	100.00%	102	100.00%	171	100.00%
Frequency of visits to the doctor **	At least once a month	152	51.18%	55	42.31%	97	58.08%
	Once every 2-3 months	59	19.87%	27	20.77%	32	19.16%
	Once every 4 months or less	86	28.96%	48	36.92%	38	22.75%
	Total	297	100.00%	130	100.00%	167	100.00%

		Entire Sample		Jews		Arabs	
		N	%	N	%	N	%
Comparison of today's health state to health 5 years ago	Worse – by far	184	61.13%	77	59.23%	107	62.57%
	No change	101	33.55%	45	34.62%	56	32.75%
	Better – by far	17	5.32%	8	6.15%	8	4.68%
	Total	301	100.00%	130	100.00%	171	100.00%
Definition of state of health today	Good	96	32.32%	42	32.56%	54	32.14%
	Intermediate	140	47.14%	63	48.84%	77	45.83%
	Bad	61	20.54%	24	18.60%	37	22.02%
	Total	297	100.00%	129	100.00%	168	100.00%
Interference of medical problems with doing desired things	Not at all	88	29.53%	39	30.71%	49	28.65%
	Slightly	114	38.26%	46	36.22%	68	39.77%
	Greatly	96	32.21%	42	33.07%	54	31.58%
	Total	298	100.00%	127	100.00%	171	100.00%
Comparison of health state of interviewee to that of other people his age **	Better	110	36.79%	58	45.31%	52	30.41%
	Similar	127	42.47%	54	42.19%	73	42.69%
	Worse	62	20.74%	16	12.50%	46	26.90%
	Total	299	100.00%	128	100.00%	171	100.00%

**p < 0.01 * p <0.1

38.87% of the interviewed subjects of the entire sample reported that they have fallen in the home during the past year.

- Of the elderly who fell, 69.57% suffered injury as a result of the fall.
- 23.15% of the elderly in the entire sample reported that they fell in the past year outside of the home.
- The percentage of the elderly who fell in the past year outside of the home was significantly higher among Jews than among Arabs (33.59% and 15.29%, respectively, χ^2=13.74,p<0.01).
- 73.91% of those who fell outside of the home reported that they suffered injury as a result of the fall.

23.3% of all the elderly reported that they smoke cigarettes.

- Among those who do not smoke today, 30% reported that they smoked in the past.

- The percentage of smokers in the past among the elderly who do not smoke today was significantly higher among the Jews than among the Arabs (40.78% and 21.26%, χ^2=10.32,p<0.01).

13.33% of the elderly in the sampler reported that they drink alcoholic beverages.

- The percentage of alcohol drinkers was significantly higher among the Jewish elderly in comparison to among the Arab elderly (22.48% and 6.43% respectively, χ^2=16.39,p<0.01).

0.66% of all the elderly in the sample noted that they did drugs in the past.

- The percentage of the elderly who did drugs in the past was significantly higher among the Jews than among the Arabs (1.54% and 0%, respectively, χ^2=2.65,p<0.1).

14.67% among the elderly in the sample reported that they belong to a club for elderly.

- The percentage of elderly who belong to a club for elderly was significantly higher among the Jews than among Arabs (21.54% and 9.41%, χ^2=8.66,p<0.01).

Half of the interviewees in the entire sample said that they suffer from chronic illnesses.

- The percentage of elderly who suffer from chronic illnesses was significantly higher among the Jews than among Arabs (59.52% and 42.94%, χ^2=7.96,p<0.01).
- Chronic illness that had the greatest number of mentions in the entire sample of the elderly:
  - Diabetes (29.89% of the mentions of different illnesses)
  - Blood vessels (blood pressure, cholesterol, fats, blood disease, ischemia, anemia) (25%)
  - Heart disease (16.30%)
- The percentage of those who suffer from diabetes was higher among the Arab elderly than among the Jewish elderly (32.69% and 25%, respectively).
- The percentage of elderly suffering from blood vessel diseases was higher among the Jews than among the Arabs (27.48% and 18.27%, respectively).

About one-third of the elderly reported that they were hospitalized in the past year (34.88%).

- The percentage of the elderly who were hospitalized in the past year was significantly higher among the Jews than among the Arabs (40.00% and 30.99% respectively, χ^2=2.64,p<0. 1).
- The number of times the elderly were hospitalized was significantly higher among the Arabs than among the Jews (2.04 and 1.57, respectively, t=-2.46, p<0.05).

About one half of all the elderly noted that they visit the doctor at least once a month (51.18%).

- Significant differences were found in the two nationality groups in regards to the doctor visits (χ^2=8.72,p<0.01).
  - The percentage of visits to the doctor at least once a month was significantly higher among the Arab elderly than among the Jewish elderly (58.08% and 42.31%, respectively).
  - Conversely, the percentage of visits to the doctor once every four months and less was significantly higher among the Jewish elderly than among the Arabs (36.92% and 22.75%, respectively).
- The number of days that has passed since the last visit to the doctor was significantly higher among the Jewish elderly than among the Arab elderly (an average of 95 days and an average of 56 days, respectively, t=2.33, p<0.05). Hence, the Jewish elderly visit the doctor or the doctor visited them about three months ago while for the Arab elderly – about two months ago.

61.13% of all the elderly define their state of health today as less good – much less good in comparison to their state of health five years ago.

- About one half of all the interviewees defined their state of health today as moderate (47.14%).

About one-third of the elderly asserted that their medical problems interfere with their performance of desired actions to a considerable extent (32.21%).

42.47% of all the elderly defined their state of health as similar to the state of health of other people their age.

- Significant differences were found between the two nationality groups in the definition of their state of health in comparison to the state of health of other people their age (χ^2=11.75,p<0.01).
  - The percentage of people who defined their state of health as better in comparison to the health of other people their age was significantly higher among the Jewish elderly than among the Arab elderly (45.31% and 30.41%, respectively).
  - The percentage of the elderly who defined their state of health as less good than that of other people their age was significantly higher among the Arabs than among the Jews (26.90% and 12.50%, respectively).

Physical Activity

- About one half of the elderly walk at least fifteen minutes a time (52.04%).
- 8.76% of all the elderly swim. 3.30% of the elderly run. 3.65% of the elderly ride bicycles. 17.36% participate in different courses. 2.20% go to a fitness club.
- However, significant differences were found between both the nationality groups in the different physical activities they perform.
  - The percentage of the elderly who walk (for at least fifteen minutes) is significantly higher among the Jews than among the Arabs (61.29% and 45.29%, respectively, χ^2=7.35,p<0.01).
  - The percentage of the elderly who swim was significantly higher among the Jews than among the Arabs (21.15% and 1.18%, respectively, χ^2=32.22,p<0.01).
  - The percentage of the elderly who ride bicycles was significantly higher among the Jews than among the Arabs (8.74% and 0.58%, respectively, χ^2=12.15,p<0.01).
  - The percentage of the elderly who take courses was significantly higher among the Jews than among the Arabs (38.46% and 2.92% respectively, χ^2=61.15,p<0.01).
  - The percentage of the interviewees who go to a fitness club was significantly higher among the Jews than among the Arabs (5.88% and 0%, χ^2=10.29,p<0.01).

- However, significant differences were not found among the participants in these activities in the two groups in the number of times (a week) they are performed.

Figure Number 8:
Percentage of the Jewish and the Arab Elderly Who Fell in the Past Year inside and outside the Home and according to the Consequent Injury Suffered (The Response of 'Yes')

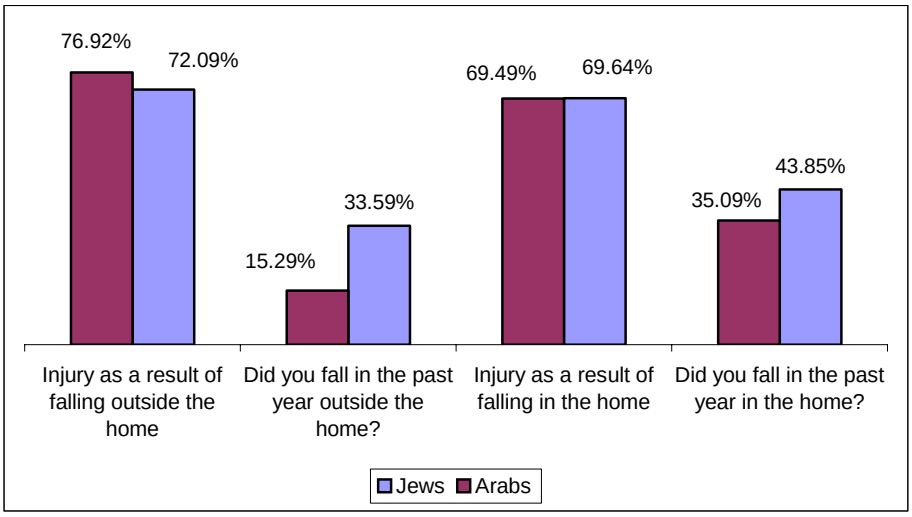


Figure number 8 shows the comparison in the falls and injuries as a result of the falls of Jewish and Arab elderly inside and outside of the home. The Jewish elderly fell more in and outside the home than did the Arab elderly, but the injury as a result of falling outside of the home is higher among the Arab elderly.

Figure Number 9:
Percentage of the Jewish and the Arab Elderly who Smoke Cigarettes Today or in the Past (The Response of 'Yes')

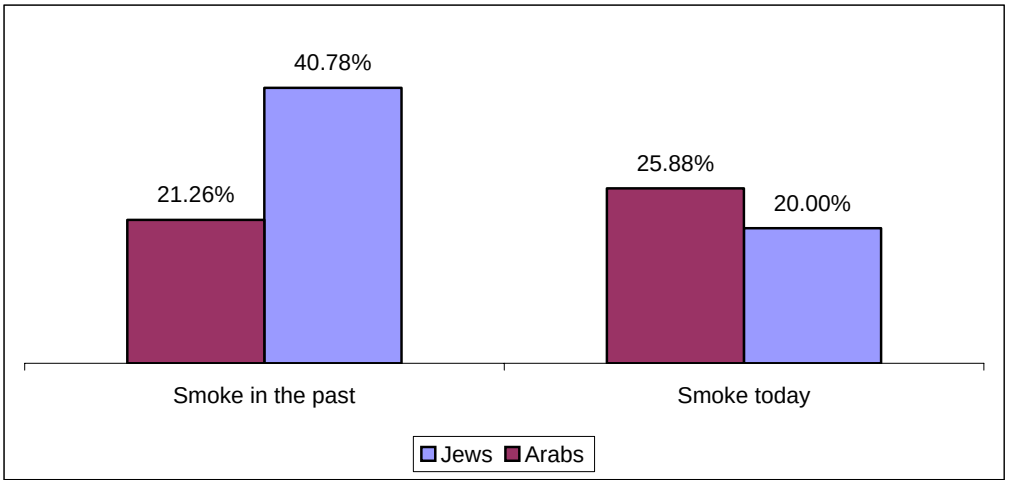


Figure number 9 shows that the Arab elderly smoked in the past less than did the Jewish elderly but today they smoke more.

Figure Number 10:
Percentage of the Jewish and the Arab Elderly Who Drank Alcohol and/or Did Drugs in the Past (The Response of 'Yes')

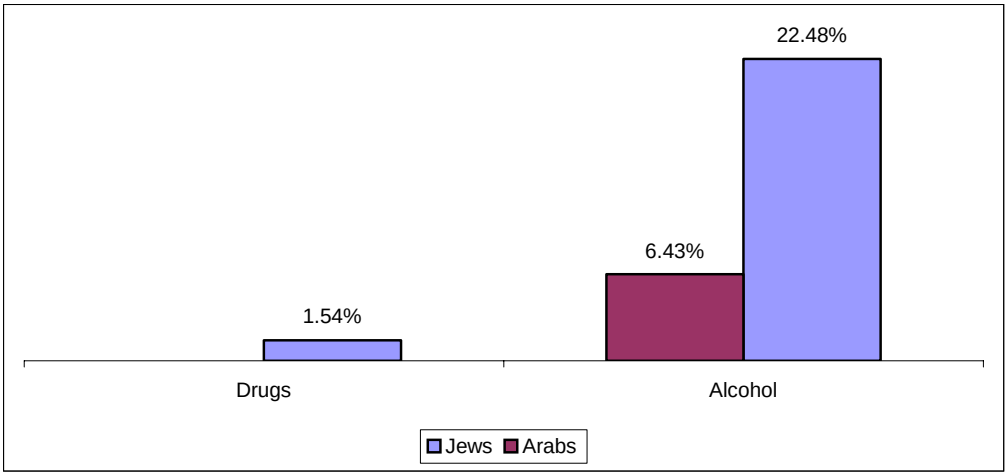


Figure number 10 shows that among the Jewish elderly the percentage of alcohol consumption and drug doing in the past as higher than among the Arab elderly.

Figure Number 11:
Percentage of the Jewish and the Arab Elderly Who Belong to an Elderly Club (The Response of 'Yes')

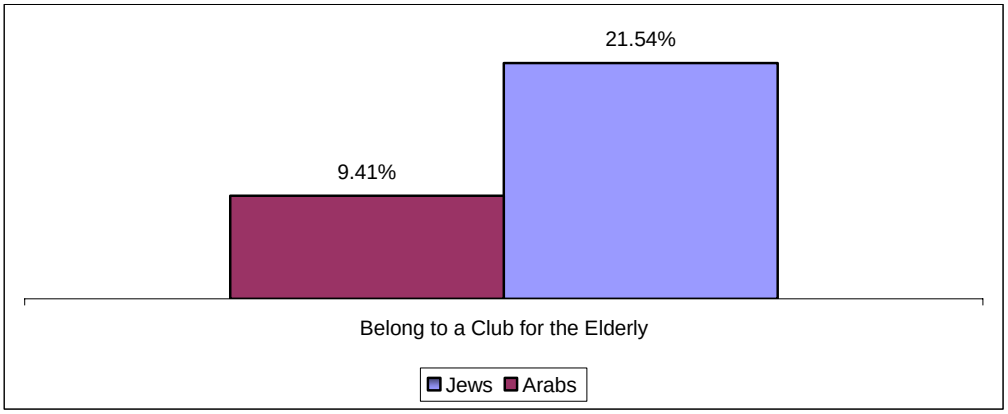


Figure number 11 shows that the percentage of the Jewish elderly who belong to a club for the elderly is higher than the percentage of the Arab elderly.

Figure Number 12:
Percentage of the Jewish and the Arab Elderly Who Are Sick with Chronic Illness and Those Who Have Been Hospitalized in the Past Year (The Response of 'Yes')

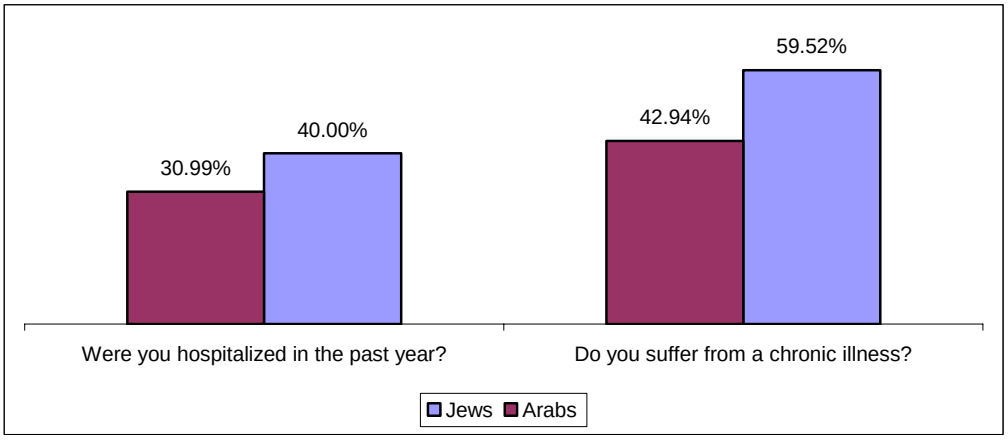


Figure number 12 shows that the percentage of the Jewish elderly who suffer from chronic illness is higher than that of the Arab elderly. In addition, the Jewish elderly were hospitalized in the past year more than were the Arab elderly.

Figure Number 13:
Percentage of the Jewish and the Arab Elderly Take Part in Different Physical Activities (The Response of 'Yes')

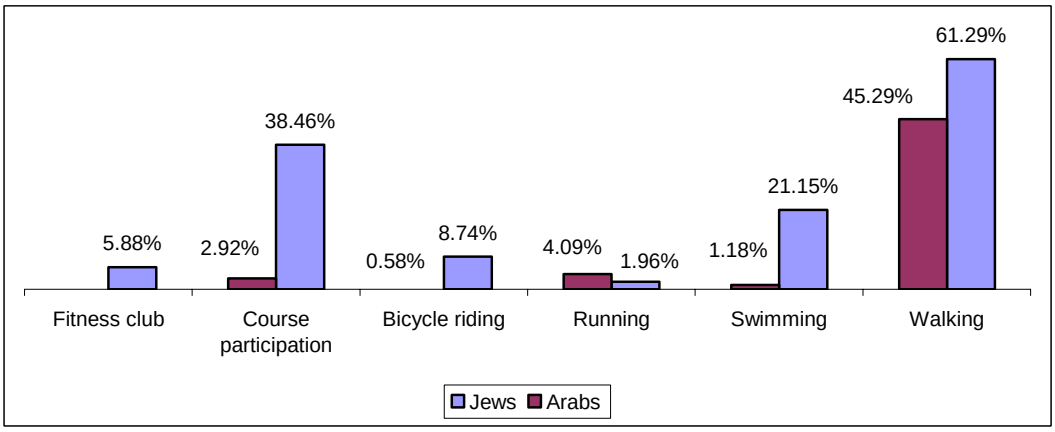


Figure number 13 shows the differences between the Jewish elderly and the Arab elderly in the physical activities, when the Jewish elderly perform more physical activities (walking, swimming, bicycle riding, participation in courses, fitness club) than do the Arab elderly.

Figure Number 14:
Percentage of the Jewish and the Arab Elderly according to Visits to the Doctor

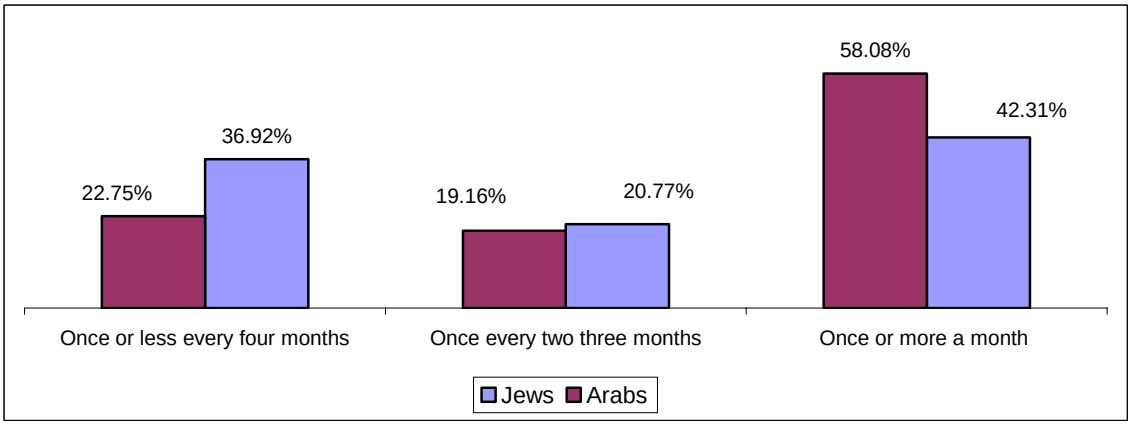


Figure number 14 shows the differences in the frequency of the visits to the doctor of the Jewish and the Arab elderly, when the Arab elderly visit the doctor more frequently than do the Jewish elderly.

Figure Number 15:
Percentage of the Jewish and the Arab Elderly according to the Comparison of Their Health State Today and Five Years Ago

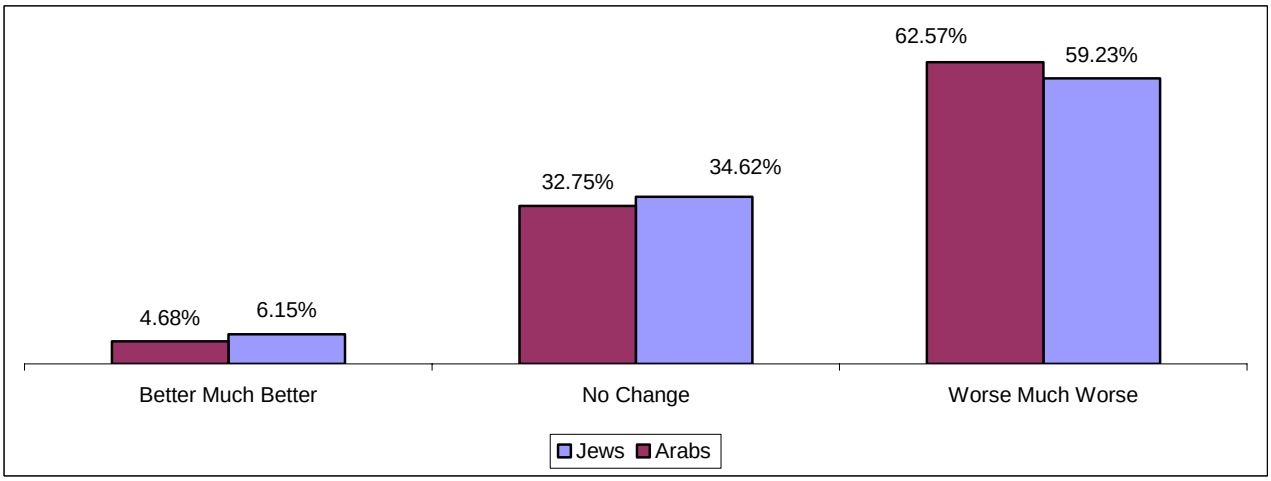


Figure number 15 shows that the percentage of Arab elderly who report that their health today is less good than their health five years ago is higher than that of the Jewish elderly.

Figure Number 16:
Percentage of the Jewish and the Arab Elderly according to Their Health State Today (Self Report)

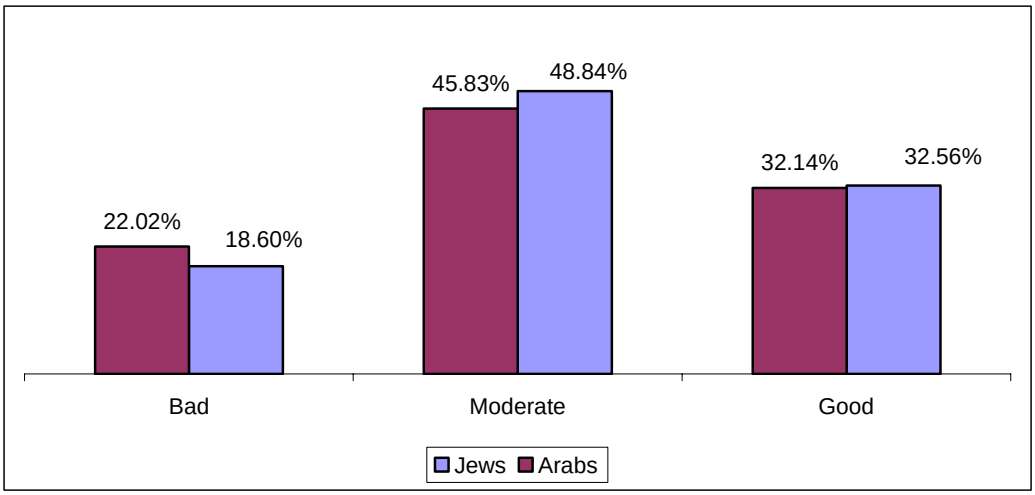


Figure number 16 presents the minimal differences in the percentage of the Jewish and Arab elderly in regard to their self-reporting of their state of health today.

Figure Number 17:
Percentage of the Jewish and the Arab Elderly according to the Interference of Their Health Problems with the Performance of Desired Actions

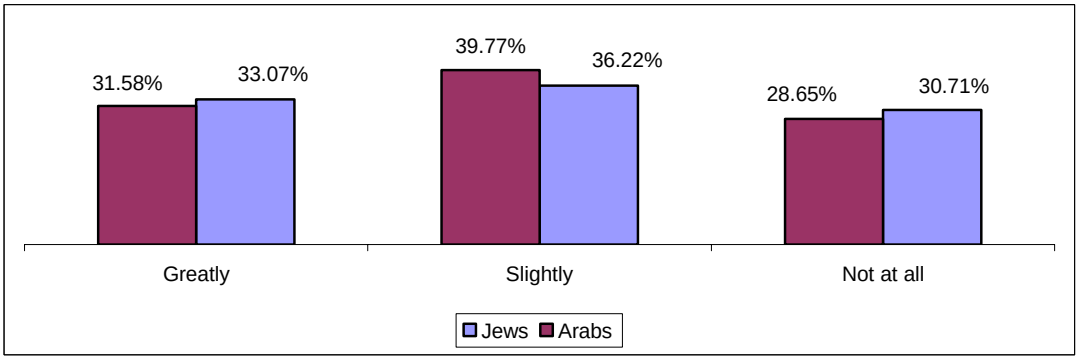


Figure number 17 shows that there are minimal differences between the Jewish and the Arab elderly in regards to the extent to which their medical problems interfere with their performance of desired actions.

Figure Number 18:
Percentage of the Jewish and the Arab Elderly according to the Comparison of Their Health State to that of Other People Their Age

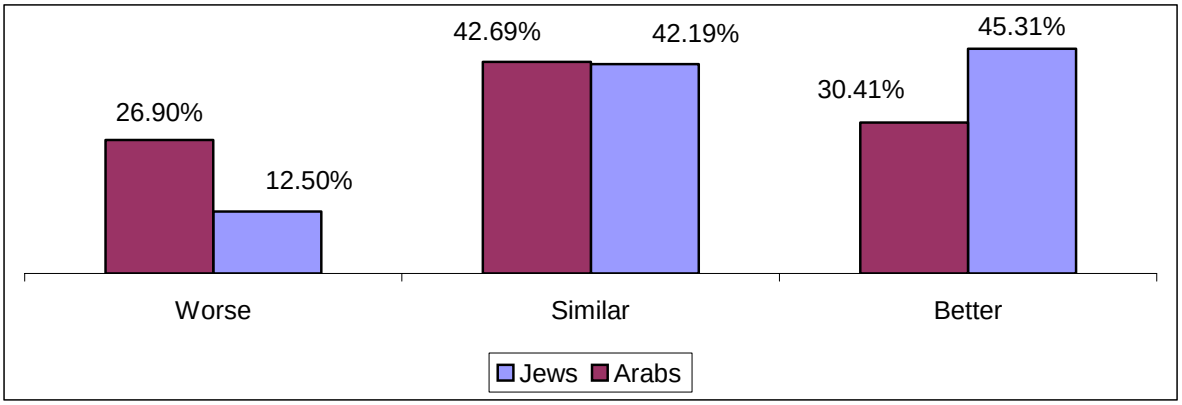


Figure number 18 shows that the percentage of Jewish elderly who think that their health state is better than that of other people their age is higher than the percentage of Arab elderly who think this.

Table Number 4:
Description of the Everyday Level of Functioning of the Elderly in the Home for the Whole Sample and according to Nationality (Percent, Number)

	Entire Sample			Jews			Arabs		
	Can't do	Can do[1]	Total	Can't do	Can do	Total	Can't do	Can do	Total
Wash *	8.16%	91.84%	294	3.94%	96.06%	127	11.38%	88.62%	167
Manage in bathroom *	5.74%	94.26%	296	.78%	99.22%	128	9.52%	90.48%	168
Get dressed **	5.72%	94.28%	297	.78%	99.22%	128	9.47%	90.53%	169
Eat **	4.04%	95.96%	297		100.00%	128	7.10%	92.90%	169
Walk in home **	5.72%	94.28%	297	1.56%	98.44%	128	8.88%	91.12%	169
Go shopping	20.64%	79.36%	281	19.67%	80.33%	122	21.38%	78.62%	159
Clean the home	27.47%	72.53%	233	27.78%	72.22%	108	27.20%	72.80%	125
Cook	20.50%	79.50%	239	18.42%	81.58%	114	22.40%	77.60%	125
Set the table	16.81%	83.19%	238	13.91%	86.09%	115	19.51%	80.49%	123
Use phone	7.99%	92.01%	288	4.76%	95.24%	126	10.49%	89.51%	162
Answer the door **	6.19%	93.81%	291	1.56%	98.44%	128	9.82%	90.18%	163
Handle finances	18.86%	81.14%	281	14.63%	85.37%	123	22.15%	77.85%	158
Take medications*	3.17%	96.83%	284	.81%	99.19%	123	4.97%	95.03%	161

[1] The category 'can do' was created as a result of the re-coding of the three existing categories in the original questionnaire: 'do without difficulty', 'do slight difficulty', 'do with difficulty'.

* $p<0.05$, ** $p<0.01$

Most of the elderly in the entire sample reported that they can function and perform essential actions in their life outside of the home.

- However, the highest percentage of the elderly stated that they can go around their neighborhood (81.27%) and can go down stairs (81.61%).
- Conversely, the lowest percentage of the elderly reported that they can take public transportation outside of their city/village (57.09%).

Significant differences were found between Jews and Arabs in regards to the functioning essential in their lives in a number of dimensions.

- The percentage of the elderly who reported that they can travel on the public transportation outside of the city/village was

significantly higher among the Jewish respondents than among the Arab respondents (67.44% and 49.10%, respectively, χ^2=9.99, p<0.01).

- The percentage of the respondents who report ability to go around the city/village was significantly higher among the Jewish respondents in comparison to the Arab respondents (79.23% and 67.26%, respectively, χ^2=5.26, p<0.05).
- The percentage of the elderly who reported that they can go around in their residential neighborhood was higher among the Jewish respondents in comparison to the Arab respondents (86.92% and 76.92%, respectively, χ^2=4.83, p<0.05).
- The percentage who report the ability to climb up stairs was significantly higher among the Jewish elderly than among the Arab elderly (92.25% and 72.35%, respectively, χ^2=18.82, p<0.01).
- The percentage who report the ability to go down stairs was significantly higher among the Jewish elderly than among the Arab elderly (92.25% and 73.53%, respectively, χ^2=17.12, p<0.01).

Most of the elderly among the entire sample reported that they can perform all the everyday activities in the home by themselves.

- Nevertheless, the highest percentage of the elderly noted that they can take medications by themselves (96.83%) and eat by themselves (95.96%).
- Conversely, the lowest percentage of the elderly reported that they can clean the home (72.53%), go shopping (79.36%), and cook (79.50%).
- Significant differences were found between the Jews and the Arabs in regards to the everyday functioning in a number of areas.
  - Thus, the percentage of the elderly who reported that they can wash themselves was significantly higher among the Jews than among the Arabs (96.06% and 88.962%, respectively, χ^2=5.33, p<0.05).
  - The percentage of those who report the ability to manage in the bathroom was significantly higher among the Jewish elderly and the Arab elderly (99.22% and 90.48%, χ^2=10.26, p<0.05).

- The percentage of the elderly reporting the ability to get dressed was significantly higher among the Jews than among the Arabs (99.22% and 90.53%, respectively, χ^2=10.18, p<0.01).
- The percentage of the elderly who reported that they can eat by themselves was significantly higher among the Jewish respondents than among the Arab respondents (100.00% and 92.9%, respectively, χ^2=9.47, p<0.01).
- The percentage of the elderly who report the ability to walk around the apartment was significantly higher among the Jewish elderly than the Arab elderly (98.44% and 91.12%, respectively, χ^2=7.22, p<0.01).
- The percentage of the elderly who reported that they can use the phone to make and receive calls was significantly higher among the Jewish respondents than the Arab respondents (95.24% and 89.51%, respectively, χ^2=3.17, p<0.1).
- The percentage of the elderly who reported that they can answer the door was significantly higher among the Jewish interviewees and the Arabs interviewees (99.19% and 95.03%, respectively, χ^2=3.93, p<0.5).

- Figure Number 19:

- Percentage of the Jewish and the Arab Elderly according to Their Functioning in Different Areas in the Home (Response of 'Can Do')

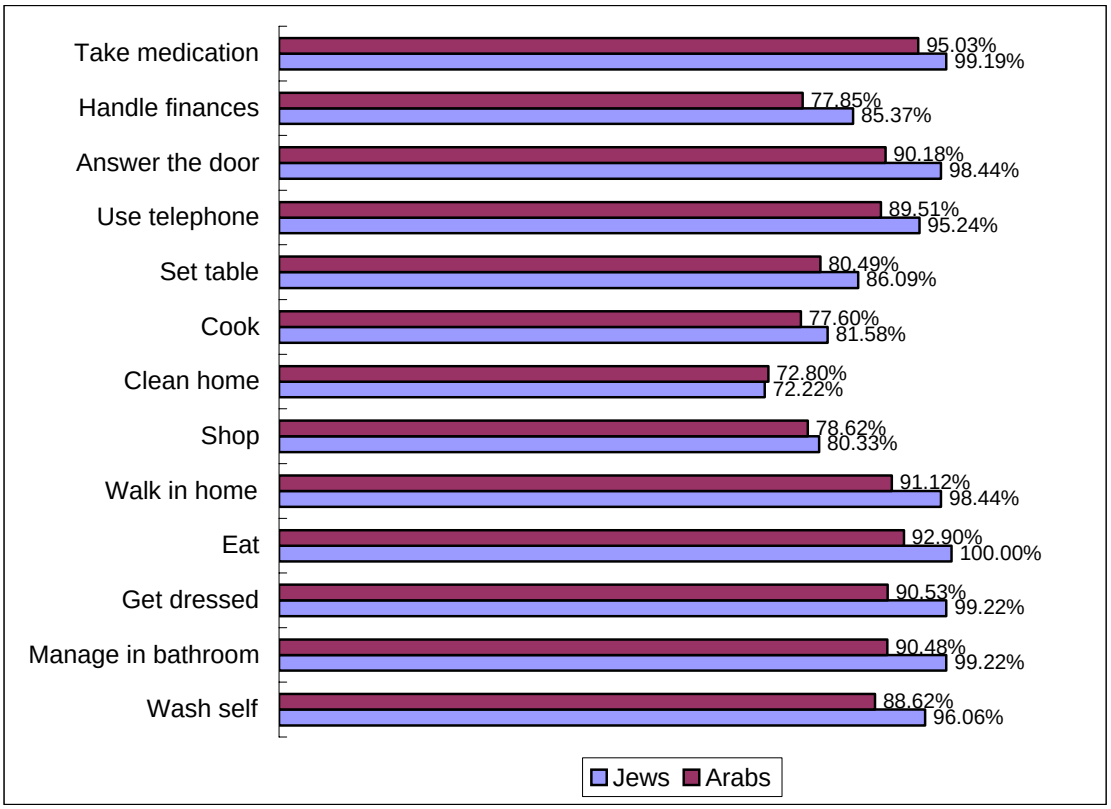


Figure number 19 shows that the percentage of the Jewish elderly can function in the home in different functions more than the Arab elderly.

Table Number 5:
Number of Areas in which the Elderly Person Can Function by Himself in the Home – Entire Sample and by Nationality (Percent of the Elderly who Can Function in a Large Number of Areas[2], Number, Mean, and Standard Deviation)

	Entire Sample				Jews				Arabs			
	%	N	Mean	SD	%	N	Mean	SD	%	N	Mean	SD
No. of areas the elderly person functions by himself in the home **	63.46	191	10.68	3.14	73.85	96	11.32	2.47	55.56	95	10.20	3.50

[2] Those who can function in 11 or more areas, in other words, those who function in a number of areas above the mean, 10.68, **p<0.01

All in all, 63.46% of the elderly can function in a great number of areas in the home. All the elderly can function in a mean of 10.68 areas of 13 defined in the questionnaire. The research findings show that the Jews can function in a greater number of areas in the home than the Arabs, significantly (11.32 and 10.20, respectively, t=3.25, p<0.01).

Table Number 6:
Description of the Essential Level of Functioning of the Elderly outside the Home – Entire Sample and by Nationality (in Percent, Number)

	General Sample			Jews			Arabs		
	No	Yes	Total	No	Yes	Total	No	Yes	Total
Travel in public transportation outside the city/village **	42.91%	57.09%	296	32.56%	67.44%	129	50.90%	49.10%	167
Walk around the city/ village *	27.52%	72.48%	298	20.77%	79.23%	130	32.74%	67.26%	168
Walk around the neighborhood *	18.73%	81.27%	299	13.08%	86.92%	130	23.08%	76.92%	169
Go up stairs **	19.06%	80.94%	299	7.75%	92.25%	129	27.65%	72.35%	170
Go down stairs **	18.39%	81.61%	299	7.75%	92.25%	129	26.47%	73.53%	170
Walk for more than 15 minutes	28.86%	71.14%	298	24.81%	75.19%	129	31.95%	68.05%	169

** p<0.01 * p < 0.05

Most of the elderly in the entire sample reported that they can function and perform essential activities in their life outside of the home.

- However, the highest percentage of the elderly noted that they can walk about their residential neighborhood (81.27%) and going down stairs (81.61%).
- Conversely, the lowest percentage of the elderly reported that they can travel on public transportation outside of their city/village (57.09%).

Significant differences were found among Jews and Arabs in regards to the functioning essential to their lives in a number of areas.

- The percentage of the elderly who reported that they can travel on public transportation outside of the city/village was significantly higher among the Jews than among the Arabs (67.44% and 49.10%, respectively, $\chi^2=9.99$, $p<0.01$).
- The percentage of the elderly who reported that they can go about the city/village was significantly higher among the Jewish respondents than the Arab respondents (79.23% and 67.2%, respectively, $\chi^2=5.26$, $p<0.05$).
- The percentage of the elderly who reported that they can go around in their residential neighborhood was significantly higher among the Jews than among the Arabs, 86.92% and 76.92%, respectively, $\chi^2=4.83$, $p<0.05$).
- The percentage of the elderly who report the ability to climb up stairs was significantly higher among the Jews than among the Arabs (92.25% and 72.35%, respectively, $\chi^2=18.82$, $p<0.01$).
- The percentage of the elderly who report the ability to go down stairs was significantly higher among the Jews than among the Arabs (92.25% and 73.53%, respectively, $\chi^2=17.12$, $p<0.01$).

Figure Number 20:
Percentage of the Jewish and Arab Elderly according to Their Functioning in Different Areas outside the Home (Response of 'Yes')

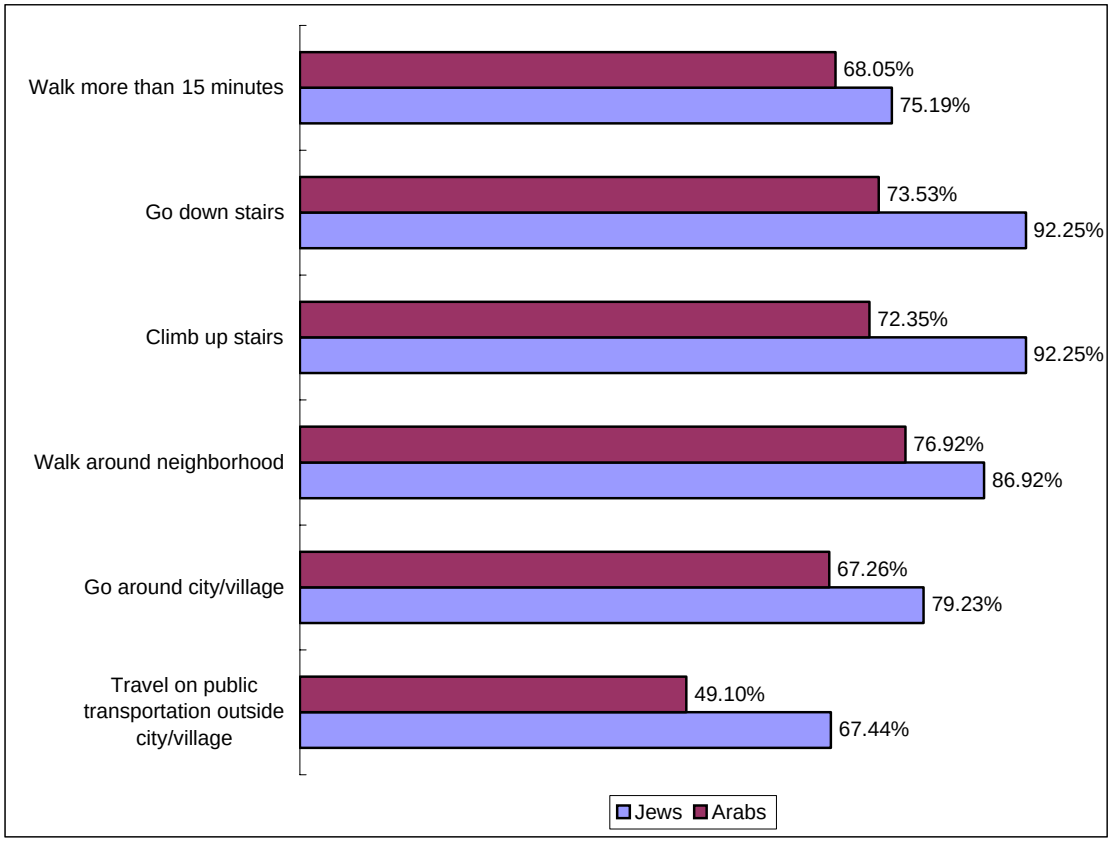


Figure number 20 shows that in the functioning in different areas outside of the home the percent of the Jewish elderly who are successful is higher than that of the Arab elderly.

Table Number 7:
Number of Areas in which the Elderly Person Can Function by Himself Outside the Home - Entire Sample and by Nationality (Percentage of the Elderly who Can Function in a Large Number of Areas[3], Number, Mean, and Standard Deviation)

	Entire Sample				**Jews**				**Arabs**			
	%	N	Mean	SD	%	N	Mean	SD	%	N	Mean	SD
No. of areas the elderly person functions by himself outside the home **	66.45	200	4.41	2.14	73.85	96	4.91	1.70	60.82	104	4.02	2.36

[3] those who can function in 5 areas or more, in other words those who function in a number of areas above the mean 0 4.41,** $p<0.01$

66.45% of the elderly can function in a large number of areas outside of the home. The elderly can function in a mean of 4.41 areas out of the 6 defined in the questionnaire. The research findings show that the Jews can function in a greater number of areas outside of the home than can the Arabs, significantly (4.91 and 4.02, respectively, $t=3.78$, $p<0.01$).

The findings of the survey show that a linear, positive, strong, and significant correlation was found between the number of areas in which the elderly person can function inside the home and the number of areas in which the elderly person can function outside of the home ($R=0.62$, $p<0.01$). Hence, as the number of areas in which the elderly person can function in the home rises, the number of areas in which they can function outside of the home also rises.

3. Attitudes of the Elderly towards Nutrition, Drugs and Alcohol, Smoking, Immunizations, and Institutional Placement

Table Number 8:
Attitudes of the Elderly towards Nutrition, Drugs and Alcohol, Smoking, Immunizations, and Institutional Placement – Entire Sample and by Nationality (Percentage of the Elderly who Expressed 'Great' or 'Very Great' Agreement[4] and Number)

	Entire Sample				**Jews**				**Arabs**			
	%	N	Mean	SD	%	N	Mean	SD	%	N	Mean	SD
Positive attitudes towards nutrition – index **	83.61	250	4.32	.79	91.54	119	4.51	.75	77.51	131	4.18	.80
Positive attitudes towards drug use – index **	5.43	14	1.44	.86	9.40	11	1.69	1.00	2.13	3	1.23	.65
Negative attitudes toward smoking – index **	72.16	210	3.98	1.03	72.00	90	4.01	.94	72.29	120	3.95	1.09
Positive attitudes towards immunizations – index	68.77	196	3.98	1.11	73.44	94	4.11	.97	64.97	102	3.88	1.20
Positive attitudes towards institutional placement – index **	10.85	32	2.05	1.09	17.19	22	2.24	1.24	5.99	10	1.91	.93

[4] Those above 3.51 according to the attitudes indices
** $p<0.01$, *$p<0.1$

Most of the elderly agree with the statements that express positive attitudes towards correct and balanced nutrition and water consumption (83.61% agree greatly-very greatly, mean 4.32), objection to smoking (72.16% agree greatly-very greatly, mean 3.98), and support of immunizations against different illnesses (68.77% agree greatly-very greatly, mean 3.98). Conversely, the lowest degree of agreement was found in regards to positive attitudes towards the use of drugs and alcohol (5.43% agree greatly-very greatly, mean 1.44) and positive attitudes towards placement in protected housing – old age homes (10.85% agree greatly-very greatly, mean 2.05).

Significant differences were found among Jews and Arabs in regards to the degree of agreement with attitudes in different topics related to the everyday life style.

- Significantly more positive attitudes towards the topic of correct and balanced nutrition and water consumption were found among the Jewish elderly than among the Arab elderly (4.51 and 4.18, respectively, t=3.67, p<0.01).
- Significantly more negative attitudes towards the use of drugs and alcohol were found among the Arab elderly than among the Jewish elderly (1.23 and 1.69, respectively, t=4.26, p<0.01).
- Significantly more positive attitudes and greater support of immunizations against different illnesses were found among the Jewish elderly than among the Arab elderly (4.11 and 3.88, respectively, t=1.79, p<0.1).
- Significantly more negative attitudes towards institutional placement in protected housing – old age homes were found among the Arab elderly than the Jewish elderly (1.91 and 2.24, respectively, t=2.56, p<0.01).

Figure Number 21:
Percentage of the Jewish and the Arab Elderly according to Degree of Agreement with the Attitudes on the Topic of Healthy and Balanced Lifestyle (Response of 'Greatly – Very Greatly Agree')

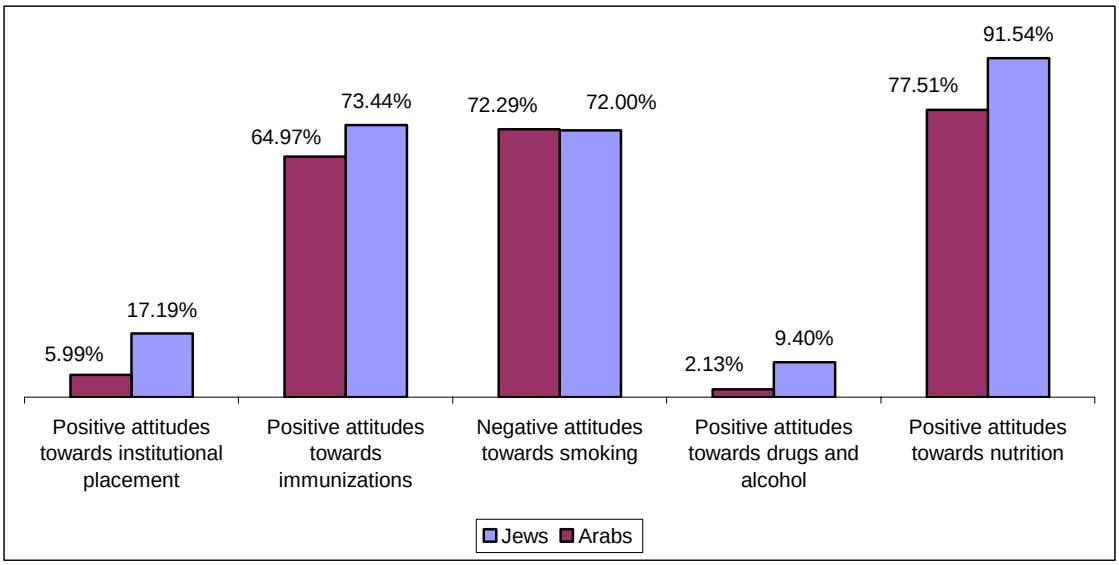
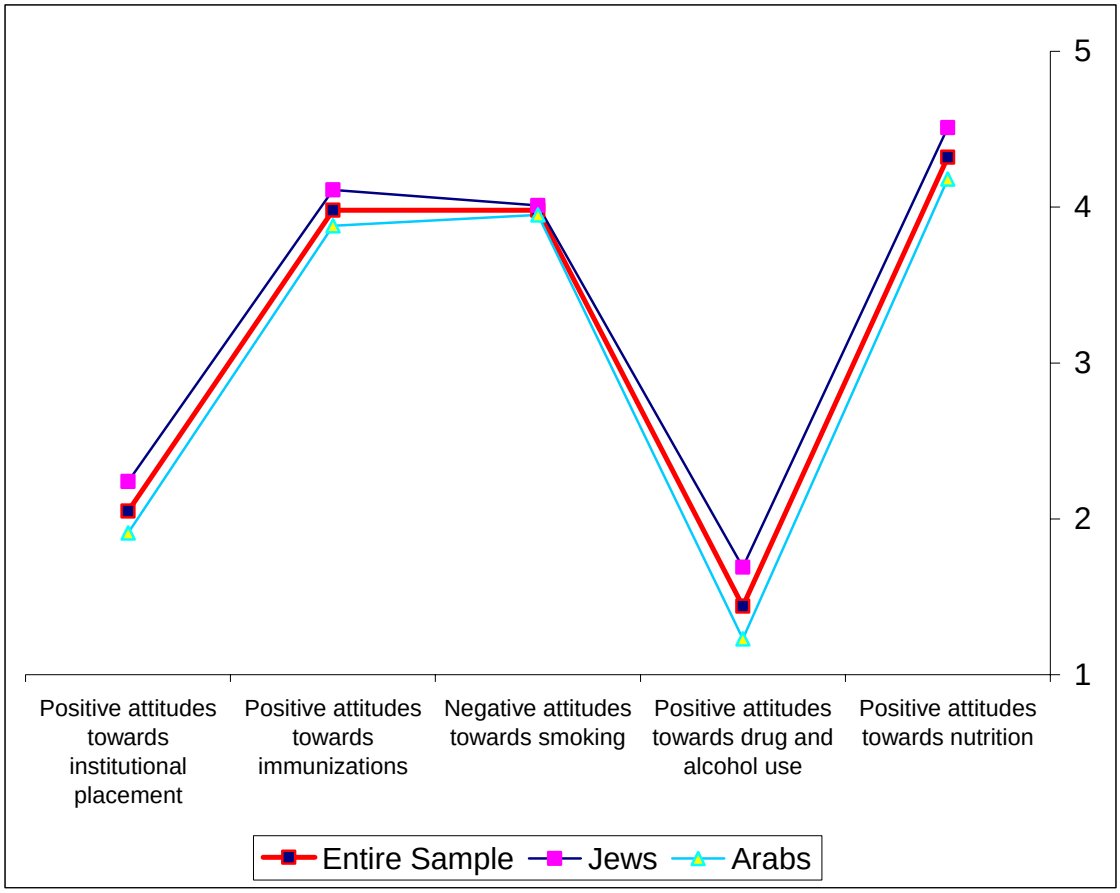


Figure number 21 shows that the Jewish elderly have more positive attitudes than do the Arab elderly towards a healthy and

balanced lifestyle (nutrition, drugs and alcohol, immunizations, and institutional placement), while in regards to the attitudes towards smoking the situation is balanced between the Arab elderly and the Jewish elderly.

Figure Number 22:
Degree of Agreement with the Different Attitudes on the Topic of Healthy and Balanced Lifestyle among the Jews and the Arabs – Mean



4. Awareness of the Elderly of Physical Activity, Nutrition, Calcium Loss, Muscle Loss, Drugs and Alcohol, Intellectual Activity, Social Activity, Smoking, Falls, Immunizations, and Mental State

Table Number 9:
Awareness of the Elderly to Physical Activity, Nutrition, Calcium Loss, Muscle Loss, Drugs and Alcohol, Intellectual Activity, Social Activity, Smoking, Falls, Immunizations, and Mental State – (Percent of Elderly Who Expressed 'Great' or 'Very Great' Awareness and Number)

	Entire Sample				**Jews**				**Arabs**			
	%	N	Mean	SD	%	N	Mean	SD	%	N	Mean	SD
Knowledge on physical activity – index	51.33	154	64.97	27.12	56.15	73	67.46	26.59	47.65	81	63.06	27.44
Knowledge on nutrition - index	58.33	175	83.61	21.22	52.13	68	81.67	21.35	62.94	107	85.10	21.07
Knowledge of calcium loss – index **	15.05	45	55.85	29.48	23.85	31	62.31	29.09	8.28	14	50.89	28.88
Knowledge on muscle loss – index **	2.35	7	22.09	27.65	3.85	5	29.62	29.77	1.19	2	16.27	24.43
Knowledge on drugs and alcohol – index **	62.42	186	77.68	31.20	52.71	68	72.48	31.85	69.82	118	81.66	30.19
Knowledge on intellectual activity – index **	68.24	202	68.24	46.63	85.83	109	85.83	35.02	55.03	93	55.03	49.89
Knowledge on social activity – index **	54.36	162	69.30	37.22	74.42	96	85.27	26.81	39.05	66	57.10	39.45
Knowledge on smoking – index	50.67	151	69.63	34.21	43.41	56	66.67	32.68	56.21	95	71.89	35.27
Knowledge on falls – index	95.97	286	96.94	17.08	98.45	127	98.45	12.40	94.08	159	95.27	19.85
Knowledge on immunizations – index	16.44	49	36.63	37.12	17.05	22	39.28	36.67	15.98	27	34.62	37.44
Knowledge on mental state – index	76.51	228	76.51	42.46	77.52	100	77.52	41.91	75.74	128	75.74	42.99

[5] Those who knew to provide more than 80% of the answers correctly to the questions in the knowledge indices

** p<0.01, *p<0.1

The highest percentage of the elderly were found as having high awareness in the following topics:

- Falls (95.97% of the elderly provided more than 80% of the answers correctly for the index, mean score 96.64).
- Nutrition and water consumption (58.33%, mean score 83.61).
- Drugs and alcohol use (62.42%, mean score 77.68).
- Mental state (76.51%, mean score 76.51).

Conversely, the research showed a number of topics in which relatively low awareness was found among the elderly:

- Muscle loss (2.35% of all the elderly provided more than 80% of the answers correctly for the index, mean score 22.09).
- Immunizations (16.44%, mean score 36.63).

Significant differences were found among the Jews and the Arabs in regards to the knowledge and awareness in the different topics related to everyday functioning of the elderly.

- The percentage of the awareness of the topic of calcium loss was significantly higher among the Jewish elderly than among the Arab elderly (62.31 and 50.89, respectively, $t=3.38$, $p<0.01$).
- The percentage of the awareness of the topic of muscle loss was significantly higher among the Jewish elderly than among the Arab elderly (29.62 and 16.27, respectively, $t=4.14$, $p<0.01$).
- The percentage of the awareness of the topic of drug and alcohol use was significantly higher among the Arab elderly than among the Jewish elderly (72.48 and 81.66, respectively, $t=-2.52$, $p<0.01$).
- The percentage of the awareness of the topic of intellectual activity was significantly higher among the Jewish elderly than among the Arab elderly (85.83 and 55.03, respectively, $t=6.24$, $p<0.01$).
- The percentage of the awareness of the topic of social activity was significantly higher among the Jewish elderly than among the Arab elderly (85.27 and 57.10, respectively, $t=7.33$, $p<0.01$).

Figure Number 23:
Percentage of the Jewish and the Arab Elderly according to Their Awareness of the Different Aspects of a Healthy and Balanced Lifestyle (Response of 'Very Great – Great Awareness')

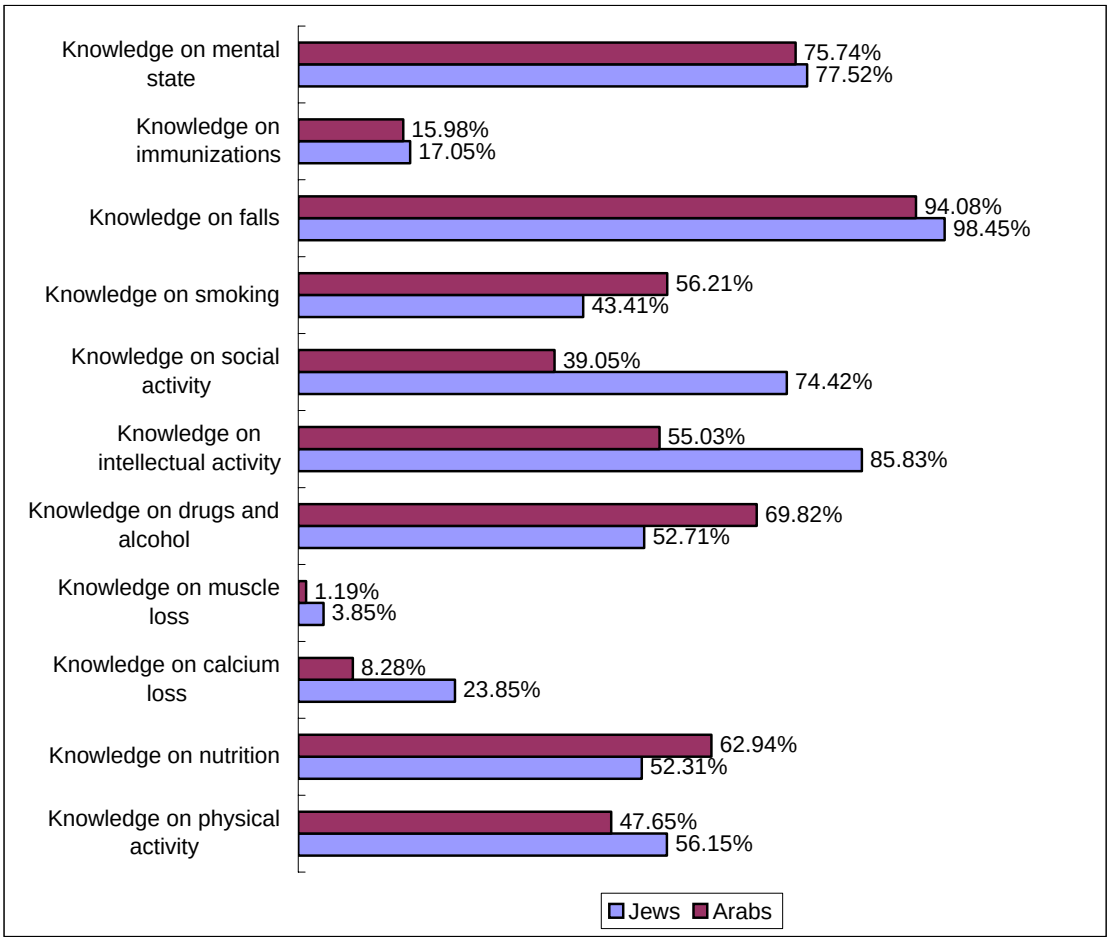
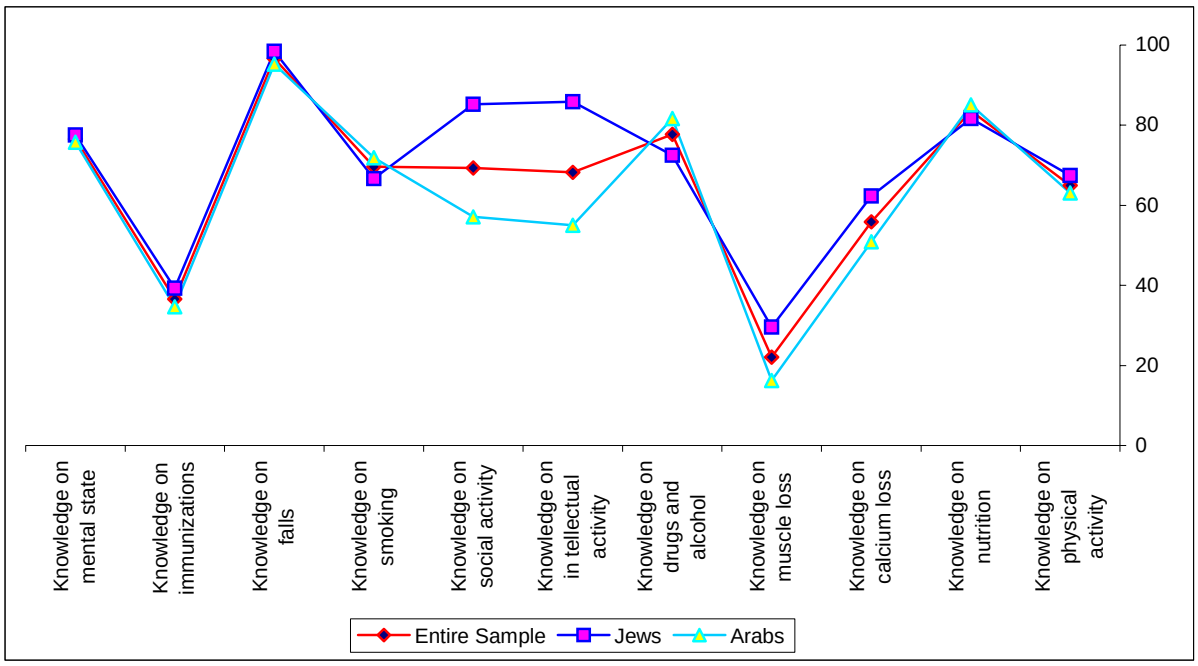


Figure number 23 shows that the knowledge of the Jewish elderly regarding a healthy and balanced lifestyle is in most cases higher than that of the Arab elderly (mental state, immunizations, falls, social activity, intellectual activity, muscle loss, calcium loss, and physical activity). In other topics, such as smoking, drugs and alcohol, and nutrition, the knowledge of the Arab elderly is higher than that of the Jewish elderly.

Figure Number 24:
Degree of Awareness of the Different Aspects of a Healthy and Balanced Lifestyle among the Jews and the Arabs – Mean



5. Behavior of the Elderly – Physical Activity, Eating and Water Consumption Habits, Calcium Loss, Drugs and Alcohol, Social Activity, Intellectual Activity, Smoking, Falls, Safety Measures, Immunizations, Psychological-Mental Aspect

Table Number 10:
Frequency of Behavior of the Elderly – Physical Activity, Eating and Water Consumption Habits, Calcium Loss, Drugs and Alcohol, Social Activity, Intellectual Activity, Smoking, Falls, Safety Measures, Immunizations, Psychological-Mental Aspect (Percentage and Number of the Elderly Who Behave 'Often' or 'Very Often')

	Entire Sample				**Jews**				**Arabs**			
	%	N	Mean	SD	%	N	Mean	SD	%	N	Mean	SD
Performance of physical activity – index **	19.40	58	2.27	1.24	32.56	42	2.74	1.33	9.41	16	1.91	1.05
Performance of eating and drinking water habits – index	61.20	183	3.87	.85	65.89	85	3.89	.89	57.65	98	3.85	.83
Taking calcium supplement *	20.42	59	2.06	1.49	15.20	19	1.82	1.40	24.39	40	2.25	1.53
Use of drugs and alcohol – index **	0	-	1.29	.49	0		1.46	.55	0	-	1.6	.40
Participation in social activity – index **	9.03	27	2.25	.94	12.40	16	2.52	.99	6.47	11	2.05	.84
Participation in intellectual activity – index **	5.39	16	1.32	.87	9.45	12	1.59	1.09	2.35	4	1.11	.59
Smoking – index *	21.48	64	2.45	1.22	16.41	21	2.27	1.06	25.39	43	2.59	1.32
Falls – index	24.50	73	3.23	.85	35.16	45	3.29	.96	16.47	28	3.19	.76
Adoption of safety measures – index **	51.18	152	3.24	1.50	63.28	81	3.55	1.34	42.01	71	3.01	1.57
Immunizations – index *	30.95	91	2.88	1.42	35.43	45	3.08	1.40	27.54	46	2.72	1.41
Psychological mental aspect - index	4.75	14	2.01	.94	2.36	3	1.97	.83	6.55	11	2.05	1.01

[6] Those who are above 3.51 according to the behavior indices
** $p<0.01$, * $p<0.05$

The highest percentage of the elderly in the entire sample of the elderly was found as performing the following activities at a high frequency:

- Healthy habits on the topic of eating and water consumption (61.20% of all the elderly ranked this index highly-very highly, mean score – 3.87).
- Adoption of safety measures (51.18%, mean score – 3.24).
- Falls (24.50%, mean score – 3.23).

The lowest percentage of the elderly was found to perform the following activities at a high frequency:

- Drug and alcohol use (0% of the elderly in the sample ranked this index highly – very highly, mean score – 1.29).
- Participation in intellectual activity (5.39%, mean score – 1.32).
- Bad mood / sad and depressed people (4.75%, mean score – 2.01).
- Participation in social activity (9.03%, mean score – 2.25).

Significant differences were found among the Jewish and Arab elderly in regards to the frequency of their behavior on the everyday level in the following contexts:

- The Jewish elderly reported that they perform physical activity more frequently, significantly, in comparison to the Arab elderly (2.74 and 1.91, respectively, $t=5.82$, $p<0.01$).
- The Arab elderly reported that they take calcium supplement more frequently, significantly, in comparison to the Jewish elderly (2.25 and 1.82, respectively, $t=-2.50$, $p<0.05$).
- The Jewish elderly reported that they use drugs and alcohol more frequently, in comparison to Arabs (1.46 and 1.16, respectively, $t=5.13$, $p<0.01$).
- The Jewish elderly reported that they participate in social activity significantly more frequently in comparison to the Arab elderly (2.52 and 2.05, respectively, $t=4.37$, $p<0.01$).
- The Jewish elderly reported that they participate in intellectual activity significantly in comparison to the Arabs (1.59 and 1.11, respectively, $t=4.50$, $p<0.01$).

- The Arab elderly reported that they smoke significantly more frequently than Jewish elderly (2.59 and 2.27, respectively, t=-2.28, p<0.05).
- The Jewish elderly reported that they adopt safety measures significantly frequently in comparison to Arabs (3.55 and 3.01, respectively, t=3.23, p<0.01).
- The Jewish elderly reported that they regularly get immunizations significantly more than Arabs (3.08 and 2.72, respectively, t=2.20, p<0.05).

Figure Number 25:
Percentage of the Jewish and the Arab Elderly according to Frequency of Healthy and Balanced Behavior (Response of 'Often – Always')

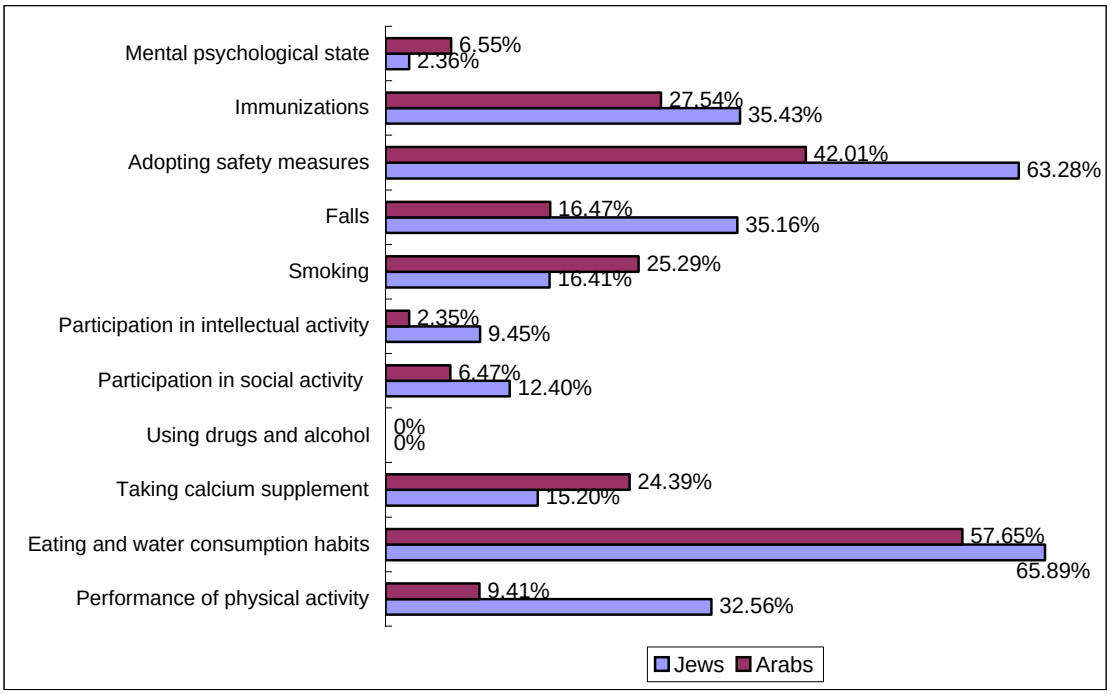
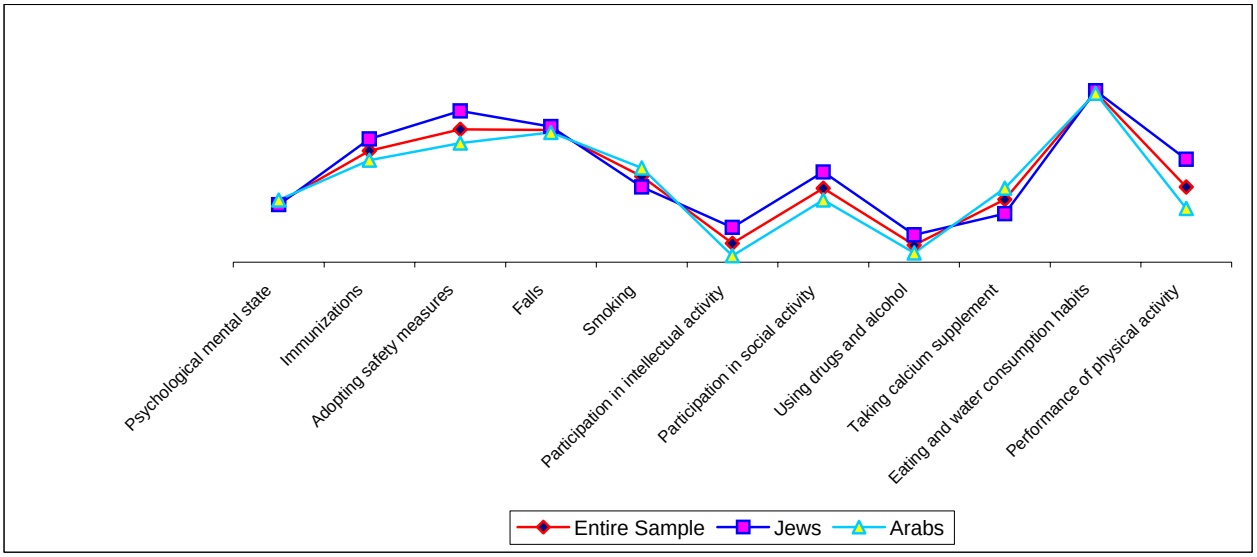


Figure number 25 shows that the frequency of the behavior of the Jewish elderly in terms of health is greater than that of the Arab elderly in a number of topics (mental psychological state, immunizations, adoption of safety measures, smoking, participation in intellectual activity, participation in social activity, eating and water consumption habits, and performance of physical activity). Among the Arab elderly,

the frequency of their behavior in topics of health is higher than that of the Jewish elderly only in the taking of a calcium supplement.

Figure Number 26:
Frequency of the Healthy and Balanced Behavior among the Jewish and Arab Elderly – Mean



6. Differences between Jews and Arabs in regards to the Relationships between the Elderly Person's General Health State, Mental Health State, and Knowledge regarding the Mental Health State

Table Number 11:
Pearson Correlation between the Elderly Person's General Health State, Mental Health State, and Knowledge on Mental Health State

		Jews				**Arabs**			
		1	2	3	4	1	2	3	4
1	Comparison of health state today to health state 5 years ago (1=better)								
2	Health state today (1=good)	-.50 **				-.57 **			
3	Knowledge on mental state topic – index	-.20	.58			-.17	.02		
4	Mental psychological aspect - index	.11	-.61 **	-.30**		.15	-.57 **	.01	

** $p<0.01$

The Pearson correlation shows that there is a linear, negative, strong, and significant relationship between the elderly person's state of health and the definition of his state of health today in comparison to the state of health 5 years ago, both among the Jewish elderly and among the Arab elderly ($R=-0.50$, $p<0.01$ and $R=-0.57$, $p<0.01$, respectively). Hence, both the Jewish elderly and the Arab elderly who defined their current state of health as good reported that five years ago their health was significantly less good than their state today.

It was found that there is a linear, positive, strong, and significant relationship between knowledge on the topic of the mental state and their state of health today among the Jewish elderly ($R=0.58$, $p<0.01$). The Jewish elderly who have greater knowledge on the topic of mental health defined their state of health today as better.

A linear, negative, strong, and significant relationship was found between the mental-psychological aspect of the elderly and their state of health today among the Jewish elderly and among the Arab elderly ($R=-0.61$, $p<0.01$ and $R=-0.57$, $p<0.01$, respectively). Both the Jewish elderly

and the Arab elderly who defined their state of health today as good have a more positive mental psychological aspect.

A linear, negative, moderate, and strong relationship was found between the mental psychological aspect and the knowledge on the topic of the mental state among the Jewish elderly ($R=-0.30$, $p<0.01$). Thus, the Jewish elderly who have greater knowledge on the mental state have a more positive mental psychological aspect.

7. Differences between Jewish and Arab Elderly in regards to Relationships between Attitudes, Knowledge, and Behavior

Tables number 12 and 13 present the Pearson correlation between attitudes, knowledge, and behavior among the Jewish and the Arab elderly.

Table Number 12: Pearson Correlation between Attitudes, Knowledge, and Behavior among the Jewish Elderly

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Attitudes towards nutrition - index	-.018													
2	Attitudes towards drugs & alcohol - index	.041													
3	Attitudes towards smoking – index	.236(**)	-.506(**)												
4	Attitudes towards vaccinations – index	.034	.138	-.044											
5	Knowledge on the topic of nutrition – index	-.061	-.374(**)	.173	-.077										
6	Knowledge on the topic of drugs & alcohol - index	-.059	-.528(**)	.373(**)	-.236(**)	.310(**)									
7	Knowledge on the topic of smoking – index	.087	-.502(**)	.405(**)	-.291(**)	.224(*)	.407(**)								
8	Knowledge on the topic of immunizations – index	.270(**)	-.066	-.083	-.108	.360(**)	.197(*)	.210(*)							
9	Eating & water consumption habits – index	-.069	-.242(**)	.144	-.073	.324(**)	.239(**)	.238(**)	.291(**)						
10	Drugs and alcohol use - index	.045	.791(**)	-.369(**)	.124	-.311(**)	-.462(**)	-.422(**)	-.108	-.165					
11	Smoking – index	.009	.373(**)	-.483(**)	.087	-.042	-.189(*)	-.420(**)	.087	-.063	.374(**)				
12	Vaccinations – index	-.007	-.019	.026	.481(**)	-.011	-.093	-.128	-.115	.013	-.043	-.047			
13	No. of areas in which the elderly person functions by himself in the home	.105	.166	-.019	-.190(*)	.091	.036	.036	.146	.165	.147	.173	-.124		
14	No. of areas in which the elderly person functions by himself outside the home	-.018	.281(**)	-.128	.047	.008	-.173	-.109	.095	.219(*)	.330(**)	.283(**)	-.100	.482(**)	

** $p<0.01$, *$p<0.05$

Table Number 13: Pearson Correlation between Attitudes, Knowledge, and Behavior among the Arab Elderly

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Attitudes towards nutrition - index														
2	Attitudes towards drugs & alcohol - index	-.042													
3	Attitudes towards smoking – index	.129	-.199(*)												
4	Attitudes towards immunizations – index	.296(**)	.149	.295(**)											
5	Knowledge on the topic of nutrition – index	.176(*)	.128	.016	.059										
6	Knowledge on the topic of drugs & alcohol - index	.014	-.278(**)	.244(**)	-.013	.109									
7	Knowledge on the topic of smoking – index	.029	-.233(**)	.484(**)	.218(**)	-.015	.310(**)								
8	Knowledge on the topic of vaccinations – index	-.047	.013	.007	-.113	-.039	.170(*)	.050							
9	Eating & water consumption habits – index	.516(**)	-.013	.251(**)	.246(**)	.179(*)	.024	.186(*)	.008						
10	Drugs and alcohol use - index	.022	.397(**)	-.304(**)	-.021	.031	-.240(**)	-.400(**)	.116	-.065					
11	Smoking – index	-.070	.084	-.639(**)	-.341(**)	.033	-.219(**)	-.473(**)	-.079	-.177(*)	.341(**)				
12	Vaccinations – index	.128	.040	.138	.400(**)	-.063	-.080	.279(**)	.071	.176(*)	-.134	-.199(*)			
13	No. of areas in which the elderly person functions by himself in the home	.297(**)	-.067	.090	.136	.009	.010	.031	-.113	.141	-.139	-.081	-.090		
14	No. of areas in which the elderly person functions by himself outside the home	.209(**)	.030	-.126	-.014	.019	-.045	-.191(*)	.114	.046	.204(**)	.171(*)	-.087	.295(**)	

** p<0.01, *p<0.05

The research findings show that linear relationships of various strength were found between the elderly person's attitudes on the topics of nutrition, drug and alcohol use, smoking, and immunizations, both among the Jewish elderly and among the Arab elderly. The following paragraphs present prominent findings in regards to the strongest relations among the attitudes, knowledge, and behavior of the elderly.

- A linear, positive, weak, and significant relationship was found between the knowledge of the Arab elderly on the topic of nutrition and their attitudes towards correct and balanced nutrition and water consumption ($R=0.18$, $p<0.05$). Thus, as the knowledge on the topic of nutrition was greater among the Arab elderly, their attitudes towards correct nutrition were more positive.

- A linear, negative, and significant relationship was found between the knowledge on the use of drugs and alcohol and the attitudes towards the use of drugs and alcohol both among the Jewish elderly and among the Arab elderly ($R=-0.53$, $p<0.01$ and $R=-0.28$, $p<0.01$, respectively). However, among the Jewish elderly the relationship was strong while among the Arab elderly it was only moderate. Hence, as the knowledge on the topic of the use of drugs and alcohol is greater, the attitudes towards the use are more negative among both nationality groups.

- A linear, moderate, positive, and significant relationship was found between knowledge on the topic of smoking and attitudes towards smoking both among the Jewish elderly and among the Arab elderly ($R=0.41$, $p<0.01$ and $R=0.48$, $p<0.01$, respectively). Hence, as the knowledge on the topic of smoking is greater, the attitudes of the Jewish and the Arab elderly towards stopping smoking are more positive.

- A linear, positive, and significant relationship was found between the attitudes of the Jewish and the Arab elderly on the topic of nutrition and frequency of eating and drinking water correctly and in a balance manner ($R=0.27$, $p<0.01$ and $R=0.52$, $p<0.01$, respectively). However, among the Arab elderly the relationship was strong while among the Jewish elderly is was only moderate. Hence, as the attitudes of the elderly on the topic

of correct nutrition are more positive, their nutritional and water consumption habits are correct and balanced more frequently.

- A linear, positive, strong, and significant relationship was found between the attitudes of the Jewish and the Arab elderly, attitudes on the topic of drugs and alcohol, and the frequency of the use of drugs and alcohol in actuality ($R=0.71$, $p<0.01$ and $R=0.40$, $p<0.01$, respectively). Hence, as the attitudes of the elderly towards the use of drugs and alcohol are more positive, the use of these materials is more frequent.

- A linear, negative, strong, and significant relationship was found between the attitudes of the Jewish and the Arab elderly on the topic of stopping smoking and the frequency of smoking in actuality ($R=-0.48$, $p<0.01$ and $R=-0.64$, $p<0.01$, respectively). Hence, as the attitudes of the elderly towards stopping smoking are more positive, they will smoke less frequently.

- A linear, positive, strong, and significant relationship was found between the attitudes of the Jewish and the Arab elderly on the topic of immunizations and the frequency of the immunizations in actuality ($R=0.48$, $p<0.01$ and $R=0.40$, $p<0.01$, respectively). Thus, as the attitudes of the elderly towards the immunizations are more positive, they will be immunized more frequently.

- A linear, positive, and significant relationship was found between the knowledge of the Jewish and the Arab elderly on the topic of nutrition and the frequency at which they eat and drink water correctly and in a balanced manner ($R=0.32$, $p<0.05$ and $R=0.18$, $p<0.01$, respectively). However, among the Jewish elderly the relationship was moderate while among the Arab elderly it was weak. Thus, as the knowledge of the elderly on the topic of correct nutrition is greater, their eating and water consumption habits are correct and balance more frequently.

- A linear, negative, and significant relationship was found between the knowledge of the Jewish and the Arab elderly on the topic of drug and alcohol use and the frequency of the actual use of drugs and alcohol ($R=-0.46$, $p<0.01$ and $R=-0.24$, $p<0.01$, respectively). However, among the Jewish elderly the

relationship was strong and among the Arab elderly only moderate. Thus, as the knowledge of the elderly on the topic of the use of drugs and alcohol is greater, the frequency of the use of these substances is lower.

- A linear, negative, and strong relationship was found between the knowledge of the Jewish and the Arab elderly on the topic of smoking and the frequency of their smoking in actuality ($R=-0.42$, $p<0.01$ and $R=-0.48$, $p<0.01$, respectively). Thus, as the knowledge on the topic of smoking is greater, the elderly smoke more infrequently.

- A linear, positive, moderate, and significant relationship was found between the frequency at which the Jewish elderly eat and consume water correctly and in a balanced manner and the number of areas in which the Jewish elderly can function by themselves outside the home ($R=0.22$, $p<0.05$). Thus, as the frequency of eating and drinking water correctly and in a balanced manner rises, the number of functions that the Jewish elderly can perform outside of the home also rises.

- A linear, positive, moderate, and significant relationship was found between the attitudes of the Arab elderly on the topic of nutrition and the number of areas inside and outside of the home in which the elderly person can function independently ($R=0.21$, $p<0.01$ and $R=0.30$, $p<0.01$, respectively). Thus, the number of areas in which the elderly person can function independently inside and outside of the home rises, so that the attitudes toward correct and balanced nutrition are more positive.

8. Examination of Differences between Attitudes, Knowledge, and Behavior of the Jewish and the Arab Elderly in Different Topics – MANOVA (Multivariate Analysis of Variance)

- The research findings show that significant differences were found in the combined variable of the attitudes of the elderly in different topics among the Jews and the Arabs ($F=10.66$, $p<0.01$). Hence, the Jewish elderly were found to have more positive attitudes towards a more balanced and healthier lifestyle than were the Arab elderly (3.48 and 3.30, respectively). The univariate analysis showed that the source of the difference between the two nationality groups lies in attitudes towards nutrition, drugs and alcohol, immunizations, and institutional placement. Table number 8 presents descriptions of the significant differences between the two nationality groups.
- In addition, significant differences were found in the combined variable of the knowledge of the elderly in different topics among the Jewish and Arab elderly ($F=17.37$, $p<0.01$). Thus, the Jewish elderly were found to have greater knowledge in topics related to a more balanced and healthier lifestyle in comparison to Arabs (69.85 and 62.34, respectively). The univariate analysis found that the source of the difference between the two groups is in the level of knowledge in the following topics: calcium loss, muscle loss, drugs and alcohol, intellectual activity, and social activity. Table number 9 describes the findings of the significant differences between the two nationality groups.
- Last, significant differences were found in the combined variable of the frequency of different behaviors among the Jewish and the Arab elderly ($F=18.75$, $p<0.01$). Thus, the Jewish elderly were found to behave in a more balanced and healthier fashion more frequently in comparison to the Arabs (3.15 and 2.94, respectively). The univariate analysis found that the source of the difference between the two groups is in the differences of frequency of behavior related to the performance of physical activity, taking calcium supplement, using drugs and

alcohol, participating in social activity, participation in intellectual activity, smoking, adopting safety measures, and immunizations. Table number 10 presents the findings of the significant differences between the two nationality groups.

9. Prediction of the Behavior of the Elderly Using Their Attitudes and Knowledge in Different Topics

Table Number 14:
Multicolinear Examination between the Combined Variable of Knowledge, Attitudes, and Behavior and Nationality and Number of Areas of the Elderly Person's Independent Functioning inside and outside the Home – Pearson Correlation

		1	2	3	4	5	6
1	Nationality						
2	Combined variable – Attitudes	.11					
3	Combined variable – Behavior	.27(**)	.13(*)				
4	Combined variable – Knowledge	.21 (**)	.14 (*)	.27 (**)			
5	No. of areas in which the elderly person functions by himself at home	.18(**)	.00	.15(**)	.12(*)		
6	No. of areas in which the elderly person functions by himself outside the home	.21(**)	.05	.18(**)	.09	.62(**)	

** $p<0.01$, *$p<0.05$

Examination of the correlations between the combined variable of knowledge, attitudes, behavior, nationality, and number of functionings of the elderly person inside and outside of the home shows that multicolinearity was not found between these variables, which thus allows them to be introduced in the regression equation.

Table Number 15:
Variables that Predict the Combined Variable of Elderly Behavior – Linear Regression, Standardized Coefficients (β) (N=298)

	Model 1 Nationality	Model 2 Combined variable attitudes	Model 3 Combined variable knowledge	Model 4 Number of Areas in which the Elderly Person Can Function Independently inside & outside the Home
Nationality	.27**	.25**	.21**	.18**
Combined variable – attitudes		.10·	.08	.08
Combined variable – knowledge			.22**	.21**
No. of areas in which the elderly person can function inside the home				.04
No. of areas in which the elderly person can function outside the home				.10
Constant	2.94	2.61	2.31	2.19
R^2	7%	8.1%	12.4%	13.9%
R^2 adj	6.7%	7.4%	11.5%	12.4%

** p<0.01, *p<0.1

Model 1: The Elderly Person's Nationality

- Analysis of the survey findings presented in model 1 using the linear regression showed that the nationality of the elderly person explains 7% of the variance of the frequency of their healthy and balanced behavior. Hence, the nationality influences the frequency of healthy behavior of the elderly.
- The Jewish elderly were found to behave in a healthy and balanced manner more frequently than the Arab elderly ($\beta=0.27, p<0.01$).

Model 2: Combined Variable of the Attitudes of the Elderly towards a Balanced and Healthy Lifestyle

- When the variable of the attitudes towards the balanced lifestyle is added to the nationality of the elderly (presented in model 2), the explained variance of the frequency of the healthy behavior of the elderly rises from 7% to 8.1%.

- It was found that nationality and attitudes towards a healthy and balanced lifestyle influence the frequency of healthy behavior of the elderly.
- The Jewish elderly were found to behave in a healthy and balanced manner more frequently in comparison to the Arab elderly ($\beta=0.25, p<0.01$).
- In addition, more positive attitudes towards a healthy life style raise the frequency of healthy and balanced behavior among the elderly ($\beta=0.10, p<0.1$).
- In the context of the second model, the variable that influences the frequency of healthy behavior of the elderly to the greatest extent is the nationality of the elderly, while the variable that least influences is attitudes towards a healthy lifestyle.

Model 3: Variable of Combined Knowledge on the Topic of Balanced and Healthy Lifestyle

- When the variable of knowledge on the issues related to a healthy lifestyle is added to the elderly person's nationality and attitudes towards a balanced and healthy lifestyle (presented in model 3), the explained variance of the frequency of healthy behavior of the elderly rises from 8.1% to 12.4%.
- It was found that nationality and knowledge on the issues related to a healthy lifestyle influence the frequency of healthy behavior of the elderly with the supervision on their attitudes towards a healthy and balanced lifestyle.
- Thus, Jewish elderly were found to behave in a healthy and balanced manner more frequently than Arab elderly ($\beta=0.21, p<0.01$).
- In addition, greater knowledge on the issues related to a healthy lifestyle increases the frequency of healthy and balanced behavior among the elderly ($\beta=0.22, p<0.01$).
- In the context of the third model, the variable that influences the frequency of healthy behavior of the elderly to the greatest extent is knowledge on the topic of a healthy lifestyle, while the variable that least influences is the nationality of the elderly person.

Model 4: Number of Areas in which the Elderly Person Can Function Independently inside and outside the Home

- When the number of areas in which the elderly person can function independently inside and outside of the home is added to the elderly person's nationality, attitudes, and awareness in connection of a balanced and a healthy lifestyle (presented in model 4), the explained variance of the frequency of the elderly people's behavior rises from 12.4% to 13.9%.
- It was found that the nationality and knowledge on topics related to a healthy lifestyle influence the frequency of healthy behavior of the elderly in the supervision of their attitudes towards a healthy and balanced lifestyle and the number of areas in which the elderly person can function independently inside and outside of the home.
- Thus, the Jewish elderly were found to behave in a healthier and more balanced manner more frequently in comparison to Arabs ($\beta=0.18$, $p<0.01$).
- In addition, greater knowledge on the topics related to a healthy lifestyle raises the frequency of the healthy and balanced behavior among the elderly ($\beta=0.21$, $p<0.01$).
- In relation to model 4, the variable that influences the frequency of healthy behavior of the elderly to the greatest extent is knowledge on the topic of a healthy lifestyle, while the variable that influences the least is the elderly person's nationality.

Table Number 16:
Variables that Predict the Number of Areas in which the Elderly Person Functions Independently in the Home – Linear Regression, Standardized Coefficients (β)(N=298)

	Model 1 Nationality	Model 2 Combined variable attitudes	Model 3 Combined variable knowledge	Model 4 Combined variable behavior	Model 5 Number of Areas in which the Elderly Person Can Function Independently inside & outside the Home
Nationality	.17**	.17**	.15**	.13*	.03
Combined variable – attitudes		-.02	-.02	-.03	-.04
Combined variable – knowledge			.09	.07	.06
No. of areas in which the elderly person can function inside the home				.11 °	.03
No. of areas in which the elderly person can function outside the home					.60**
Constant	10.24	10.59	9.69	7.94	6.27
R^2	2.9%	2.9%	3.7%	4.6%	38.3%
R^2 adj	2.6%	2.3%	2.7%	3.3%	37.2%

°p<0.1, * p<0.1, **p<0.01

Model 1: The Elderly Person's Nationality

- Analysis of the survey findings presented in model 1 using linear regression showed that the elderly person's nationality explains 2.9% of the variance of the number of areas in which the elderly person functions independently in the home. Hence, the nationality influences the number of areas in which the elderly person functions independently in the home.
- The Jewish elderly were found to function in a greater number of areas inside the home, in comparison to the Arab elderly (β=0.17, p<0.01).

Model 2: Combined Variable of Attitudes of the Elderly towards a Healthy and Balanced Lifestyle

- When the variable of attitudes towards a balanced lifestyle is added to the elderly person's nationality (presented in model 2), the explained variance of the number of areas in which the elderly person functions independently inside the home does not change and is 2.9%.
- It was found that the elderly person's nationality influences the number of areas in which he functions independently inside the home in the supervision of his attitudes towards a healthy and balanced lifestyle.
- Hence, the Jewish elderly were found to function in a greater number of areas inside the home, in comparison to the Arab elderly ($\beta=0.17$, $p<0.01$).

Model 3: Variable of Combined Knowledge on the Topic of a Healthy and Balanced Lifestyle

- When the variable of knowledge on topics related to a healthy lifestyle is added to the elderly person's nationality and attitudes towards a healthy and balanced lifestyle (presented in model 3), the explained variance of the number of areas in which the elderly person functions independently inside the home rises from 2.9% to 3.7%.
- It was found that the elderly person's nationality influences the number of areas in which he functions independently inside the home in supervision of his attitudes towards a healthy and balanced lifestyle and knowledge on a healthy lifestyle.
- Thus, the Jewish elderly were found to function in a greater number of areas inside the home in comparison to the Arab elderly ($\beta=0.15$, $p<0.01$).

Model 4: Frequency of Healthy and Balanced Behavior

- When the frequency of behavior in a healthy manner is added to the elderly person's nationality, attitudes, and awareness of a balanced and healthy lifestyle (presented in model 4), the explained variance of the number of areas in which the elderly

person's functions independently in the home rises from 3.7% to 4.6%.

- It was found that the elderly person's nationality and frequency of healthy and balanced behavior influence the number of areas in which he functions independently inside the home in the supervision of his attitudes towards a healthy and balanced lifestyle and knowledge on the healthy lifestyle.
- Thus, the Jewish elderly were found to function in a greater number of areas inside the home in comparison to the Arab elderly ($\beta=0.13$, $p<0.01$).
- A higher frequency of healthy and balanced behavior among the elderly shows the number of areas in which he functions independently in the home ($\beta=0.11$, $p<0.1$).
- In connection to the fourth model, the variable that influences the number of areas in which the elderly person functions independently in the home to the highest extent is the elderly person's nationality, while the variable that influences to the least extent is the frequency of healthy and balanced behavior.

Model 5: Number of Areas in which the Elderly Perosn Can Function Independently outside of the Home

- When the number of areas in which the elderly person can function independently outside of the home is added to the elderly person's nationality, attitudes, and awareness in connection to a balanced lifestyle and frequency of healthy and balanced behavior (presented in model 5), the explained variance of the number of areas in which he functions independently in the home rises from 4.6% to 38.3%.
- It was found that the number of areas in which the elderly person can function independently outside of the home influences the number of areas in which he functions independently in the home with the supervision on his nationality, attitudes, and awareness of a healthy and balanced lifestyle and frequency of healthy behavior.
- Thus, a greater number of areas in which the elderly person can function independently outside of the home raises the number of

areas in which he can function independently inside the home (β=0.60, p<0.01).

Table Number 17:
Variables that Predict the Number of Areas in which the Elderly Person Functions Independently Outside the Home – Linear Regression, Standardized Coefficients (β)(N=298)

	Model 1 Nationality	Model 2 Combined variable attitudes	Model 3 Combined variable knowledge	Model 4 Combined variable behavior	Model 5 Number of Areas in which the Elderly Person Can Function Independently inside & outside the Home
Nationality	.21**	.20**	.19**	.17**	.09°
Combined variable – attitudes		.02	.02	.01	.03
Combined variable – knowledge			.04	.01	-.03
Combined variable behavior				.13*	.07
No. of areas in which the elderly person can function in the home					.59**
Constant	4.04	3.66	3.42	1.93	-1.31
R^2	4.2%	4.3%	4.42%	5.8%	39%
R^2 adj	3.9%	3.6%	3.4%	4.5%	38%

°p<0.1, * p<0.1, **p<0.01

Model 1: The Elderly Person's Nationality

- Analysis of the survey findings presented in model 1 through linear regression showed that the elderly person's nationality explains 4.2% of the variance of the number of areas in which the elderly person functions independently outside of the home. Hence, the nationality influences the number of areas in which the elderly person functions independently outside of the home.
- Thus, the Jewish elderly were found to function in a greater number of areas outside of the home in comparison to the Arabs (β=0.21 p<0.01).

Model 2: Combined Variable of Attitudes of the Eldelry towards a Balanced and Healthy Lifestyle

- When the variable of the attitudes towards a balanced lifestyle (presented in model 2) is added to the elderly person's nationality, the explained variance of the number of areas in which the elderly person functions independently outside of the home rises from 4.2% to 4.3%.
- It was found that the elderly person's nationality influences the number of areas in which he functions independently outside of the home in the supervision of his attitudes towards a healthy and balanced lifestyle.
- Thus, the Jewish elderly were found to function in a greater number of areas outside of the home than the Arab elderly ($\beta=0.20$, $p<0.01$).

Model 3: Combined Variable of Knowledge on the Topic of a Balanced and Healthy Lifestyle

- When the variable of the knowledge on the topics related to a healthy lifestyle (presented in model 3) is added to the elderly person's nationality and attitudes towards a healthy and balanced lifestyle, the explained variance of the number of areas in which the elderly person functions independently outside of the home rises from 4.3% to 4.4%.
- It was found that the elderly person's nationality influences the number of areas in which he functions independently outside of the home in supervision on his attitudes towards a healthy and balanced lifestyle and knowledge towards a healthy lifestyle.
- Thus, the Jewish elderly were found to function in a greater number of areas outside of the home in comparison to the Arab elderly ($\beta=0.19$, $p<0.01$).

Model 4: Frequency of Healthy and Balanced Behavior

- When the frequency of behavior in a healthy manner (presented in model 4) is added to the elderly person's nationality, attitudes, awareness of a balanced and healthy lifestyle, the explained variance of the number of areas in which the elderly

person functions independently outside of the home rises from 4.4% to 5.8%.

- It was found that the elderly person's nationality and frequency of healthy and balanced behavior influence the number of areas in which he functions independently outside of the home in the supervision of his attitudes towards a healthy and balanced lifestyle and knowledge on a healthy lifestyle.
- The Jewish elderly were found to function in a greater number of areas outside of the home in comparison to Arabs ($\beta=0.17$, $p<0.01$).
- A higher frequency of healthy and balanced behavior among the elderly raises the number of areas in which he functions independently outside of the home ($\beta=0.13$, $p<0.05$).
- In the context of the fourth model, the variable that most influences the number of areas in which the elderly person functions independently outside of the home is the elderly person's nationality, while the variable that least influences is the frequency of healthy and balanced behavior.

Model 5: Number of Areas in which the Elderly Person Can Function Independently outside the Home

- When the number of areas in which the elderly person can function independently in the home is added to the elderly person's nationality, attitudes, awareness of a balanced lifestyle, and his frequency of healthy and balanced behavior (presented in model 5), the explained variance of the number of areas in which the elderly person can function independently outside of the home rises from 5.8% to 39%.
- It was found that the elderly person's nationality and number of areas in which the elderly person can function independently in the home influences the number of areas in which he can function independently outside of the home in the supervision on his attitudes and awareness of a healthy and balanced lifestyle and frequency of healthy behavior.

- The Jewish elderly were found to function in a greater number of areas outside of the home in comparison to the Arab elderly (β=0.09, $p<0.1$).
- A greater number of areas in which the elderly person can function in the home independently raises the number of areas in which he can function independently outside the home (β=0.59, $p<0.01$).
- In the context of the fifth model, the variable that influences the number of areas in which the elderly person independently outside the home to the greatest extent is the number of areas in which he functions independently inside the home, while the variable that influences to the least extent is the elderly person's nationality.

Discussion

This chapter presents the relationship between the theoretical section of the research study and the findings of the empirical study. The objective of the research was to examine whether there are differences in the health education of the elderly, between Jewish elderly and Arab elderly. The theoretical review showed that the topic of health education is a broad topic that includes very many different areas that address different populations in general and the elderly population in particular. The areas that the present research addressed are very diverse, ranging from nutrition to physical activity, through smoking, drugs and alcohol, immunizations, and mental-psychological state, and to social activity, intellectual activity, and institutional placement.

The present research focused not only on the different areas of health education but also on the relationship of knowledge, attitudes, and behavior in topics of health education. In other words, the research sought to see whether the elderly person who knows that a certain behavior contributes to his health and who even holds a positive attitude towards this behavior does indeed behave accordingly. The focus is placed on eating habits, water consumption, physical activity, calcium loss, intellectual activity, safety measures, and level of functioning inside and outside of the home.

In Israel, Jews and Arabs have lived together for many years. However, there are differences between them, both in the attitude of the State and the different organizations to the different populations and in the attitude of the individual to the State. Throughout the research, the differences between the Jewish elderly and the Arab elderly were examined in the topic of health education and promotion. The Jews and the Arabs are different in many areas, but there is one area, which is most significant and has long-term impact on the individual's life – family tradition. The review of the literature showed that the Arab tradition is more family-oriented and there is greater and closer concern for the Arab elderly person than for the Jewish elderly person. In the Arab family, the elderly person in most cases lives with his children, grandchildren, and even great-grandchildren and not in an old age home. In the Jewish family, in spite of the concern for the elderly person, many families prefer to live in a smaller nuclear family and the elderly person moves to an old age home.

I would like to mention that most of the old age homes in Israel are of a very high quality and the care of the elderly residents is very dedicated.

Now, the primary findings of the present research study are presented and the theoretical aspects that arose from the literature review are addressed.

First, the demographic characteristics of the research study must be addressed. The present research study consisted of 301 respondents, of which 130 are Jews and 171 are Arabs. About one-half are women and one-half are men.

Significant differences were found between Jews and Arabs in regards to the area of residence, when most of the Jewish elderly live in the city, where they have greater access to health services, as opposed to the Arab elderly, who live for the most part in villages, where there is less access to the health services (Barnea and Haviv, 1992; Shuval and Anson, 2001).

In addition, significant differences were found between the two nationality groups in regards to level of education (see table number 2). The percentage of the elderly without an education is significantly higher among the Arab elderly than among the Jewish elderly (61.76% and 20.00%, respectively). This finding shows us that the difference in the level of education influences most of the different aspects in health education in terms of knowledge, attitudes, and behavior.

In the Jewish families the patterns of a married couple is more prevalent, and most of the elderly live with their spouses or live alone. In the Arab families, there is a multigenerational living pattern, in which the elderly person lives with his children and grandchildren (Yakovitz and Nir, 2001). The present research also found that the percentage of the elderly live with other family members is higher among the Arabs than among the Jews (82.61% and 63.57%, respectively). Conversely, the percentage of the elderly who live alone was significantly higher among the Jews than among the Arabs (27.91% and 15.22%, respectively).

Next, the research hypotheses of the research study are discussed at length.

Research Hypothesis Number 1

The nationality (Jewish/Arab) will influence the knowledge on the topics of nutrition, physical activity, muscle loss, calcium loss, drugs and alcohol, intellectual activity, smoking, falls, social activity, immunizations, and mental state.

To examine this hypothesis several questions of knowledge in the topics of nutrition, physical activity, muscle loss, calcium loss, drugs and alcohol, intellectual activity, smoking, falls, social activity, immunizations, and mental state were chosen. A comparison was performed between the knowledge of the Jewish elderly and that of the Arab elderly in these areas. The following paragraphs address each aspect separately, beginning with the aspects in which the differences were significant.

Social Activity

Social activity and the elderly person's involvement in the activity in the community in the framework of his ability have considerable value in the preservation of his abilities. Social isolation constitutes an independent risk factor for cardiovascular illness at all ages. Social isolation may cause a sense of loneliness, which may deteriorate to depression (Brenner, 2003; Shen, 2000).

Since the population of the Jewish elderly has a higher level of education than the population of the Arab elderly and there is a relationship between a high level of education and social activity, their knowledge, too, on the topic of social activity is higher. (See figure number 23 and table number 9.) In the present research, too, the percentage of awareness of social activity was significantly higher among the Jewish elderly than among the Arab elderly (85.27 and 57.10, respectively, $t=7.33$, $p<0.01$).

Sarcopenia (Muscle Loss)

Till recently, the degeneration of the muscles was considered an irreversible phenomenon in the aging process. Today, it is known that even among people aged ninety and above it is possible to strengthen the muscles through appropriate exercises. The problem is that till now much has not been done to derive benefit from this information and thus many elderly people receive nursing care unnecessarily (Shen, 2000).

As aforementioned, people with a higher level of education have greater knowledge on this topic. Thus, the present research study found that there are significant differences in the awareness (knowledge) on the topic of muscle loss between the Jewish elderly, who have a higher level of education than the Arab elderly. (See figure number 23 and table number 9.) The awareness on the topic of muscle loss was significantly higher among the Jewish elderly than among the Arab elderly (29.62 and 16.27, respectively, $t=4.14$, $p<0.01$).

Calcium Loss from Bones

By a rough measure, the risk of a bone fracture during old age doubles every five years. If we take into account the fact that most fractures in the thighbone occur after the age of eighty, it is clear that calcium loss should be stopped even at an advanced age.

It is possible to prevent or reduce the decline in the bone density through calcium rich nutrition, calcium supplements, vitamin D, and physical exercise. It should be emphasized that the elderly above eighty also tend to suffer from calcium loss and bone fractures. Till now very little has been done to prevent fractures among elderly men (Shen, 2000; The Committee for Health Promotion, 2003). On this topic, too, it is possible to say that since the population of Jewish elderly have a higher level of education than the population of Arab elderly, their knowledge on the topic of calcium loss is greater and this was also found in the present research. (See figure number 23 and table number 9.) The awareness of the topic of calcium loss was significantly higher among the Jewish elderly than among the Arab elderly (62.31 and 50.89, respectively, $t=3.38$, $p<0.01$).

Intellectual Activity

Intellectual activity and its varieties have an impact that reduces the risk of cognitive deterioration. Intellectual activity can be of different types – secular studies, religious studies, card games, crossword puzzles, etc. Different researches have shown that such activity reduces the risk of cognitive decline (Brenner, 2003). In addition to the intellectual and cultural stimuli, the studies at an advanced age supply a broad range of the learner's needs. The cultivation of expressive needs contributes to the enrichment of the 'self' and to the improvement of the learner's self image (Becker, 1989).

In this aspect, too, the individual's level of education is important. The awareness of the topic of intellectual activity is higher among more educated people. (See figure number 23 and table number 9.) The present research found that the awareness of the topic of intellectual activity was significantly higher among the Jewish elderly than among the Arab elderly (85.83 and 55.03, $t=6.24$, $p<0.01$).

Drugs and Alcohol

The elderly are especially sensitive to alcohol for two main reasons. First, the elderly tend to weigh less than other adults, they have less of a muscular system and less liquids in the body. Alcohol is not mixed in the bodily fluids. Therefore, the elderly generally have a low threshold of tolerance of alcohol, since the consumption of a certain amount of alcohol leads to a high blood alcohol level. A second reason is that the elderly population takes many medications. This fact makes them a high risk group in regards to the interaction of alcohol with different medications, especially sleeping pills and sedatives (Weiss, 1990).

From this aspect, it was found that the knowledge of the Arab elderly is higher than that of the Jewish elderly. (See figure number 23 and table number 9.) The present research found that the awareness of the topic of drug and alcohol use is significantly higher among the Arab elderly than among the Jewish elderly (72.48 and 81.66, respectively, $t=-2.52$, $p<0.01$).

In other aspects, however, the differences between the knowledge of the elderly Jews and the elderly Arabs were not significant.

Physical Activity

Preservation of the body and its functioning through controlled physical activity can slow the aging process (Becker, 1989). The good feeling caused following physical activity derives from metabolic changes that occur during the activity. In addition to the improvement of endurance, physical activity causes positive metabolic changes, such as a rise of the sensitivity of the insulin receptors to action, change in the excretion of hormones and the sensitivity of the receptors to them, and the reduction of the visceral fat that appears in the inner organs and is tied to the rise of cardiovascular illness (Brenner, 2003; The Committee for Health Promotion, 2003).

Cohen (2000) adds that physical activity has many diverse advantages. These include, for example, 'healthy' tiredness and improvement of sleeping, the increase of appetite, the improvement of intestinal activity, the strengthening of the bones, the prevention of calcium loss, and the maintenance of body heat control.

The data of the Central Bureau of Statistics shows that among the Arabs the knowledge on the topic of physical activity is less than among the Jews. The percentage of those who engage in physical activity increases with the level of education and level of income (Rasoli and Shemesh, 2003).

The present research study also showed that the knowledge of the Jewish elderly on the topic of physical activity is higher than that of the Arab elderly. (See figure number 23 and table number 9.)

Periodic Immunization

Periodic immunization has considerable value in the prevention of infectious illness and reduces the change of functional decline and the exploitation of the functional reserves following an illness (Brenner, 2003; The Committee for Health Promotion, 2003).

Here, too, the person's educational level and his environment are of importance. The present research study showed that the Jewish elderly, who have a higher level of education than the Arab elderly, have a greater level of knowledge than the Arab elderly on the topic of immunizations. (See figure number 23 and table number 9.)

Falls

Falling is an event that is reported by the person who fell himself or by a witness and it causes the person to unintentionally change his posture and find himself on the floor or on a lower surface, without or with the loss of consciousness and harm (Rubinstein, 1999).

The fear of falling causes older people to lessen their physical activity and this causes a decline in their general functioning. Correct physical activity may balance the body and the muscles and even lessen the risk of falling (Less, Clark, Nigg, Newman, 2005).

In this aspect, too, the research found that the knowledge of the Jewish elderly is higher than that of the Arab elderly. (See figure number 23 and table number 9.)

Mental Psychological State

Depression rises with old age and it is more apparent among people older than 75. People with clinical depression are at high risk of heart illnesses decades after the depression began (Simopolos, 2002).

The individual assessment of loneliness is considered a variable that predicts the state of health, illness, and death. The data of the Central Bureau of Statistics found that the report of better health is more frequent among men with a high level of education and among Jews (Rasoli and Shemesh, 2003).

The present research, too, found that the knowledge of the Jewish elderly on the topic of their mental state is higher than that of the Arab elderly. (See figure number 23 and table number 9.)

Nutrition

Nutrition is a main element in the promotion of health at all ages. In general, a person's intake must be diverse, balanced, and appetite inducing. The meals need to be eaten at regular intervals (Cohen, 2000). The regular drinking of liquids is one of the recommendations of smart nutrition. The data of the Central Bureau of Statistics found that the Jewish elderly are more aware than the Arab elderly of correct nutrition (Rasoli and Shemesh, 2003).

However, the present research study found that the knowledge of the Arab elderly on the topic of nutrition is better than that of the Jewish elderly on this topic. This difference was not significant. (See figure number 23 and table number 9.)

Smoking

Many researches in Israel and around the world indicate the harm of smoking to the health of the public and the relationship between smoking and illnesses such as cancer, respiratory diseases, cardiovascular illnesses, etc. (Rasoli and Shemesh, 2003). The data of the Central

Bureau of Statistics found that the percentage of smokers is greater among the Jews than among the Arabs (Rasoli and Shemesh, 2003).

The present research found that the knowledge of the Arab elderly on the topic of smoking is greater than that of the Jewish elderly – but the findings are not significant. (See figure number 23 and table number 9.)

The aspects that were not found to be significant were examined in correlations of knowledge, awareness, and behavior and are discussed in the continuation.

Thus, it can be said that the first research hypothesis, which hypothesized that the nationality (Jew/Arab) would influence the knowledge on the topic of nutrition, physical activity, muscle loss, calcium loss, drugs and alcohol, intellectual activity, smoking, falls, social activity, immunizations, and mental state, **was partially confirmed**.

Research Hypothesis Number 2

The nationality (Jewish/Arab) will influence the attitudes on the topics of drugs and alcohol, smoking, institutional placement, immunizations, and nutrition.

The attitude is an organized and consistent mode of thought, feeling, and response, in regards to different people or events. The primary components of the attitude are thoughts and beliefs, emotions, and tendencies to respond (Lambert and Lambert, 1964). Rucks and Shwarzwald (2000) see an attitude to be an internal guide through which a large part of human behavior can be explained. People develop their attitudes in a process of overcoming and adjusting to their social environments. After the attitudes develop, they make the social adaptation easier. Attitudes play a primary part in the determination of human behavior (Lambert and Lambert, 1964).

The objective of the hypothesis is to examine whether the nationality of the elderly person has influence on his attitudes in different topics of health education. The topics are drugs and alcohol, smoking, institutional placement, immunizations, and nutrition.

The findings indicate that in most of the areas the differences in attitudes between the Jewish elderly and the Arab elderly were

significant. (See table number 8, figure number 21, and figure number 22.) The following presents each topic separately.

Nutrition

According to Bar-Tor (1997), the engagement in food during old age actively or passively constitutes a main world of content. The elderly tend to hold eating rituals in which they painstakingly sustain a menu and regular schedule. Intelligent nutrition is based on the principles of diversification between and within the different food groups, with the adjustment to the age, to the gender, to the health situation, and to the aspiration to maintain the desired weight. Regular drinking of liquids is included in the recommendations of correct nutrition. Intelligent nutrition influences the quality of life and life span. Conversely, deficient nutrition is sometimes related to illness and handicap (Rasoli and Shemesh, 2003). The data of the Central Bureau of Statistics found that the Jewish elderly are more aware of correct nutrition than the Arab elderly (Rasoli and Shemesh, 2003).

The present research study found that among the Jewish elderly there are significantly more positive attitudes towards nutrition and water consumption than among the Arab elderly (4.51 and 4.18, respectively, $t=3.67$, $p<0.01$). (See table number 8, figure number 21, and figure number 22.)

Periodic Immunization

There is no doubt that aside from an improved level of life (residence, dress, correct nutrition, public and personal hygiene), the greatest impact on the extension of the life span and quality of life should be attributed to the immunization system that is imparted during childhood (Cohen, 2000).

It is recommended that the elderly receive the following immunizations: immunization against influenza, every year in the fall, one-time immunization against pneumonia for people aged 65 and above, and immunization against tetanus and diphtheria every ten years (Brenner, 2003, The Committee for Health Promotion, 2003).

There is a relationship between the person's awareness of the different topics and his state of education. It is possible to say that as the person's education is higher, his awareness to different topics related to

his health is also higher. As seen previously, the Jewish elderly are more educated than are the Arab elderly and therefore it can be said that their positive attitudes on the topic of immunizations is higher. (See table number 8, figure number 21, and figure number 22.)

The present research study found that the Jewish elderly had significantly more positive attitudes towards and support of immunizations against different illnesses than did the Arab elderly (4.11 and 3.88, respectively, $t=1.79$, $p<0.1$).

Drugs and Alcohol

The elderly generally have lower tolerance of alcohol, since the consumption of a certain amount of alcohol leads to a high level of blood alcohol among them. Since they take many medications, they are a high risk population to suffer from the interaction of alcohol with the different medications, especially sleeping pills and sedatives (Weiss, 1990).

The first research hypothesis showed that the knowledge of the Arab elderly on this topic is higher than the knowledge of the Jewish elderly. There are significantly more negative attitudes towards drug and alcohol use among the Arab elderly than among the Jewish elderly (1.23 and 1.69, respectively, $t=4.26$, $p<0.01$). (See table number 8, figure number 21, and figure number 22.)

Institutional Placement

According to Arab tradition, a disabled and sick Arab elderly person is kept in his home and is cared for by his family members, while the old age home is perceived as a refuge for neglected and terminally ill elderly (Suleiman, 1998).

Most of the needs of the elderly in the Arab sector are provided by the members of their extended family, both by the force of tradition and out of necessity. The values of traditional family among Israeli Arabs dictate respect of the elderly parents. The relative rarity of geographic mobility and the rather accepted pattern of shared residence encourage this supportive behavior (Reiss, 1991; Shuval and Anson, 2001). The percentage of institutionalization among the Arab elderly is low in comparison to that of the Jewish population (0.7% and 4.4%) (Kait, 1991).

The present research also found that there are more negative attitudes towards institutional placement in protected housing – old age home among the Arab elderly in comparison to the Jewish elderly (1.91 and 2.24, respectively, $t=2.56$, $p<0.01$). (See table number 8, figure number 21, and figure number 22.)

Smoking

Brenner (2003) shows that smoking influences cardiovascular illness, lung cancer, and chronic bronchitis. While among people above the age of 75, the impact of smoking on cardiovascular illness and cancerous growths declines, nevertheless the impact of smoking on respiratory illness remains. In light of the tendency towards infections, which is increased in old age, stopping smoking has a positive impact on short-term lung illnesses and therefore even at an advanced age people should be encouraged to stop smoking.

In the first hypothesis, too, the differences in the knowledge of the Jewish elderly and the Arab elderly on the topic of smoking were not found to be significant. In the present hypothesis, research hypothesis number 2, the attitudes towards smoking are balanced between the Jewish elderly and the Arab elderly. Thus, there is no difference between these two groups regarding the topic of smoking. (See table number 8, figure number 21, and figure number 22.)

It is possible to say that on the topic of smoking that the attitudes of the Jewish elderly and the Arab elderly are negative. This can perhaps be ascribed to the work of different organizations, which educate against smoking. In light of the age of the research subjects, it is possible to say that, over the course of their lives, they have understood to some extent the harm of smoking and therefore their attitudes on the topic are negative.

Thus, research hypothesis number 2, which hypothesized that the nationality (Jewish / Arab) would have impact on the attitudes on the topic of drugs and alcohol, smoking, institutional placement, immunizations, and nutrition, was **almost completely confirmed**.

Research Hypothesis Number 3

The nationality (Jewish/Arab) will influence the behavior in the topics of physical activity, taking calcium supplement, drugs and alcohol, social activity, intellectual activity, smoking, safety measures, immunizations, institutional placement, falls, level of functioning, and eating habits.

This hypothesis examined a great number of areas related to health education and examined whether there are significant differences in the behavior of the Jewish and the Arab elderly. The findings showed that there are significant differences between these two groups in almost all the areas examined.

Physical Activity

The benefit in an active physical lifestyle is not linked to age: regular physical activity lessens the level of risk of chronic illnesses, improves the aerobic tolerance and flexibility, and improves the quality of life. Physical activity lessens the level of LDL and the viscosity of the plasma and thus improves the blood flow, lowers the blood pressure, and reduces the risk of becoming overweight and developing Type 2 Diabetes (Simpolos, 2002).

Among the elderly, regular physical activity has supreme importance to preserve the muscle force and mass, to increase the stability, and to prevent falls. The data of the Central Bureau of Statistics states that 35.6% of people aged 60 and above reported that they perform some form of physical activity. The highest percentage is among men (40%) in comparison to women (32%). Among the Arabs, the percentage of people engaging in physical activity is lower (3%). The percentage of people engaging in physical activity rises with the rise in the level of education and level of income. (Rasoli and Shemesh, 2003)

The present research study found that there are significant differences in the physical activity between the Jewish elderly and the Arab elderly. Figure number 13 shows that the percentage of the elderly who walk (at least for fifteen minutes) was significantly higher among the Jewish respondents than among the Arab respondents (61.29% and 45.29%, respectively, $\chi^2=7.35$, $p<0.01$). In addition, the percentage of swimmers was significantly higher among the Jewish respondents than among the Arab respondents (21.15% and 1.18%, respectively,

χ^2=32.22, p<0.01). Furthermore, the percentage of the elderly who ride bicycles was significantly higher among the Jewish respondents than among the Arab respondents (8.74% and 0.58%, respectively, χ^2=12.15, p<0.01). The percentage of research subjects who go to a fitness club was significantly higher among the Jewish respondents than among the Arab respondents (5.88% and 0%, respectively, χ^2=10.29, p<0.01).

Thus, the present research indicates that the Jewish respondents reported that they perform physical activity significantly more frequently than do the Arab respondents (2.74 and 1.91, respectively, t=5.82, p<0.01. (See table number 10 and figure number 25.)

Taking Calcium Supplement

Taking a calcium supplement is related to the person's state of health and education level. The first hypothesis showed that the knowledge of the Jewish respondents on the topic of calcium loss is significantly higher than that of the Arab elderly. However, the present research found that the Arab elderly reported that they take a calcium supplement significantly more frequently than do the Jewish elderly (2.25 and 1.82, respectively, t=-2.50, p<0.05). (See table number 10 and figure number 25). This finding is explained in the context of the correlations of knowledge, attitudes, and behavior, which is presented in the continuation.

Drugs and Alcohol

The topic of alcohol and drugs during old age is an index of the person's health and quality of life. The first research hypothesis showed that the knowledge of the Arab elderly on this topic is significantly higher than that of the Jewish elderly. The second hypothesis, which examined the attitudes on this topic, showed that the attitudes of the Arab elderly on this topic are significantly higher than those of the Jewish elderly. When the behavior in actuality in this topic are examined, table number 10 and figure number 25 shows that the Jewish elderly reported that they use drugs and alcohol more frequently than do the Arab elderly (1.46 and 1.16, respectively, t=5.13, p<0.01).

This finding can be explained by the prohibition to drink alcohol and use drugs in Islam. In addition, about 21% of the Jewish elderly have

immigrated from the countries of the Former Soviet Union, where the attitude towards this topic is more permissive.

Social Activity

The social activity and involvement of the elderly person in the community in the framework of his ability are very important in the preservation of his abilities. The active involvement of remedial factors and community representatives is a simple and inexpensive means for the prevention of depressive illness and the improvement of the esteem and coping ability of the elderly person with different limitations and problems (Brenner, 2003; Shen, 2000).

The first hypothesis found that the level of involvement of the Jewish elderly in the topic of social activity is significantly higher, and this is related also to the individual's level of education, since the level of education of the Jewish elderly is higher than that of the Arab elderly. Table number 14 shows that the percentage of participants in courses is significantly higher among the Jewish elderly than among the Arab elderly (38.46% and 2.92%, $\chi^2=61.15$, $p<0.01$).

In addition, table number 10 and figures number 25 and 26 show that the Jewish elderly reported that they participate in social activity significantly more frequently than the Arab elderly (2.52 and 2.05, respectively, $t=4.37$, $p<0.01$).

Intellectual Activity

Studies at an old age may also enrich the learner's cognitive repertoire and equip him with new ways of thinking and consideration. As the learner assimilates them, his chances of choosing for himself new solutions that will better suit his situation over solutions that he determined in the past are increased. Therefore, the studies will constitute a factor that facilitates his adjustment process to changes that time and conditions dictate (Becker, 1989).

In this aspect, too, it is possible to see that according to the first research hypothesis the awareness of the Jewish elderly is higher in intellectual activity than among the Arab elderly. According to table number 10 and figures number 25 and 26, the Jewish elderly reported

that they participate in intellectual activity more significantly frequently than the Arab elderly (1.50 and 1.11, respectively, $t=4.50$, $p<0.01$).

Smoking

The harm of smoking cannot be debated, but it can be seen that the topic of smoking is a problematic aspect in the field of health education at all ages, even among the elderly. The examination of the first hypothesis, which examined the differences in knowledge, found that the knowledge of the Arab elderly on the topic of smoking is higher than that of the Jewish elderly – just not significantly higher. The second hypothesis showed us that the attitudes of the Jewish elderly and the Arab elderly are balanced on the topic of smoking.

However, when the behavior of the Jewish and the Arab elderly is examined, table number 3 and figure number 9 show that the Arab elderly today smoke more than do the Jewish elderly. The Arab elderly reported that they smoke at a significantly higher frequency than the Jews (2.59 and 2.27, respectively, $t=-2.28$, $p<0.05$). It is possible to say that in the Arab population the smoking of a hookah is accepted as part of family-social activity at all ages and thus the findings.

Safety Measures

The area of safety measures, such as installing a safety rail in the bathroom and by stairs, is directly related to the individual's level of income and level of education. Since the level of income and level of education of the Jewish elderly are higher than those of the Arab elderly, it can be hypothesized that the behavior in this topic – installation of safety measures – will be accordingly. Table number 10 and figures number 25 and 26 show that the Jewish elderly reported that they adopt safety measures significantly more frequently than do the Arab elderly (3.55 and 3.01, respectively, $t=3.23$, $p<0.01$).

Immunizations

Immunizations help the person sustain his life and avert illnesses. There is a direct relationship between the person's education and his behavior in the topic of immunizations. In other words, the more educated the person is, the more he tends to receive the required immunizations over the course of his life and especially during old age. It has been seen that the Jewish elderly are more educated than are the

Arab elderly and the examination of the second research hypothesis found that the attitudes of the Jewish elderly were significantly more positive toward immunizations that those of the Arab elderly. Therefore, according to table number 10 and figures number 25 and 26, the Jewish elderly reported that they are immunized at a significantly higher frequency than are the Arab elderly (3.08 and 2.72, respectively, $t=2.20$, $p<0.05$).

Institutional Placement

The elderly person's status, the attitudes towards the elderly, and patterns of care of the elderly are all influenced by the patterns of family accepted in the different social groups that comprise Israeli society. These, as aforementioned, rather overlap the position on the traditional-modern continuum. The non-Jewish rural population in Israel holds more traditional attitudes towards the elderly person and his care (Barnea and Haviv, 1992; Shuval and Anson, 2001).

The examination of the second hypothesis showed that among the Arab elderly more negative attitudes towards institutional placement were found. The present research study, according to table number 2 and figure number 6, showed that the percentage of the elderly who live in protected housing is significantly higher among the Jews than among the Arabs (10.00% and 1.17%, respectively, $\chi^2=12.16$, $p<0.01$).

Falls

According to Rasoli and Shemesh (2003), falls constitute a frequent problem among the elderly. The falls sometimes cause fractures and other severe injuries and the outcome is eventually handicap, lack of confidence in motion, and even premature death. The data of the Central Bureau of Statistics show that falls outside or inside the home are more frequent among Jews than among Arabs.

The present research study, in table number 3 and figure number 8, found that the percentage of the elderly who fell in the past year outside of the home is significantly higher among the Jews than among the Arabs (33.59% and 15.29%, respectively, $\chi^2=13.74$, $p<0.01$). It can also be seen that the Jewish elderly fell more inside and outside of the home than did the Arab elderly, but the damage incurred as a result of the fall outside of the home is greater among the Arab elderly (see figure

number 8). This finding can be explained in light of the fact that the Jewish elderly perform more activities, both in the home and outside of it, and therefore they fall more.

Level of Functioning

The state of health of the elderly in Israel, their commonly found health habits, and their patterns of use of health services reflect the positioning of the groups to which they belong in Israeli society. As in society at large, among the elderly, too, the level of health and behavior related to health are differentiated according to the elderly person's age, gender, ethnic origin, and religious affiliation (Shuval and Anson, 2001).

The different research findings indicated the significant differences between Arabs and Jews in the degree of their ability to perform actions related to household management. One difference derives from the higher percentage of Arabs who answered that they are not accustomed to performing these actions. The question is: why are they not accustomed to performing these actions? The explanation lies, apparently, in the structure of the household in Arab society. The form of residence that most typifies Arab family is the elderly person, whether male or female, living with his or her spouse and their children in the same household. Approximately 35% of the Arab elderly live in this type of household. This percentage of the elderly noted that they are not accustomed to perform actions of cleaning, washing laundry, and cooking.

This multigenerational pattern of residence also embodies the division of roles in the extended family, in which the members of the young generation bear the burden of the household chores. Therefore, even if the elderly person can perform actions related to the management of the home, he is not required to do so.

In contrast, in Jewish families the pattern of a married couple is more prevalent and 53% of the Jewish elderly live with their spouse or live alone. Thus, they perform more activities related to the home and outside of it (Yakovitz and Nir, 2001).

The present research found significant differences between the Jews and Arabs in the functioning essential to their lives in a number of areas. The research findings show (in table number 7) that the Jews can

function in a significantly greater number of areas outside of the home in comparison to the Arabs (4.91 and 4.02, respectively, $t=3.78$, $p<0.01$). Examples are as follows (see table number 6 and figure number 20).

- The percentage of the elderly who reported that they could travel in public transportation outside of the village/city was significantly higher among the Jewish respondents than among the Arab respondents (67.44% and 49.10%, respectively, $\chi^2=9.99$, $p<0.01$).

- The percentage of the elderly who reported that they could go about inside the village/city was significantly higher among the Jewish respondents than among the Arab respondents (79.23% and 67.26%, respectively, $\chi^2=5.26$, $p<0.05$).

- In the residential neighborhood the situation is identical: the percentage of the Jewish elderly who can go about their residential neighborhood was significantly higher than that of the Arab elderly (86.92% and 76.92%, respectively, $\chi^2=4.83$, $p<0.05$).

- The percentage of the elderly who report their capability of climbing stairs was significantly higher among the Jewish elderly than among the Arab elderly (92.25% and 72.35%, respectively, $\chi^2=18.82$, $p<0.01$).

- The percentage of the elderly who report their capability of descending stairs was significantly higher among the Jewish elderly than among the Arab elderly (92.25% and 73.53%, respectively, $\chi^2=17.12$, $p<0.01$).

The research findings in table number 5 show that the Jewish elderly can function in a greater number of areas in the home, in comparison to the Arab elderly, significantly so (11.32 and 10.20, respectively, $t=3.25$, $p<0.01$). This is illustrated in the following examples (see table number 4 and figure number 19).

- The percentage of the elderly who reported that they can wash themselves was significantly higher among the Jewish

elderly than among the Arab elderly (96.06% and 88.962%, respectively, χ^2=5.53, p<0.05).

- The percentage of the elderly who report managing in the bathroom was significantly higher among the Jewish elderly than among the Arab elderly (92.22% and 90.48%, respectively, χ^2=10.26, p<0.05).
- The percentage of the elderly who report getting dressed by themselves was significantly higher among the Jewish elderly than among the Arab elderly (99.22% and 90.53%, respectively, χ^2=10.18, p<0.01).
- The percentage of the elderly who report eating by themselves was significantly higher among the Jewish elderly than among the Arab elderly (100.00% and 92.90%, respectively, χ^2=9.47, p<0.01).
- The percentage of the elderly who report walking in the home was significantly higher among the Jewish elderly than among the Arab elderly (98.44% and 91.12, %, χ^2=7.22, p<0.01).
- The percentage of the elderly who report being able to use the telephone to make and receive calls was significantly higher among the Jewish elderly than among the Arab elderly (95.24% and 89.51%, respectively, χ^2=3.17, p<0.1).
- The percentage of the elderly who report answering the door was significantly higher among the Jewish elderly than among the Arab elderly (98.44% and 90.18%, respectively, χ^2=8.42, p<0.01).
- The percentage of the elderly who report taking medication by themselves was significantly higher among the Jewish elderly than among the Arab elderly (99.19% and 95.03%, respectively, χ^2=3.93, p<0.5).

The findings indicate that there is a linear, positive, strong, and significant correlation between the number of areas in which the elderly person function inside the home and the number of areas in which he can function outside of the home (R=0.62, p<0.01).

Hence, as the number of areas in which the elderly person can function inside the home rises, the number of areas in which he can function outside of the home also rises.

Nutrition and Water Consumption

In this area, the differences in behavior between the Jewish elderly and the Arab elderly were not found to be significant.

The topic of nutrition is a main element in the promotion of health at all ages. The examination of the first research hypothesis, which examined the differences in knowledge between the Jewish elderly and the Arab elderly, showed that the differences were not significant. The examination of the second research hypothesis, which examined the differences in attitudes between the Jewish elderly and the Arab elderly, showed that among the Jewish elderly there were significantly more positive attitudes towards nutrition and water consumption. However, the present research study, according to table number 10 and figure number 25, shows that while the Jewish elderly reported that their nutritional habits were more balanced than those of the Arab elderly, this finding was not significant.

Explanation of this finding is provided in the examination of the correlation of knowledge, attitudes, and behavior on this topic.

Therefore, research hypothesis number 3, which hypothesized that the nationality (Jewish/Arab) has impact on the behavior on the topics of physical activity, taking calcium supplement, drugs and alcohol, social activity, intellectual activity, smoking, safety measures, immunizations, institutional placement, falls, level of functioning, and eating habits, was **almost completely confirmed**.

Research Hypothesis Number 4

Differences will be found between Jewish elderly and Arab elderly in the correlations between knowledge, attitudes, and behavior in the topics of nutrition, drugs and alcohol, smoking, and immunizations.

This hypothesis examined the correlations on different topics in knowledge, attitudes, and behavior of the Jewish elderly and the Arab elderly. Significant correlations were found (see tables number 12 and 13).

Nutrition

The examination of the first research hypothesis showed that the knowledge of the Arab elderly on the topic of nutrition was higher than that of the Jewish elderly, but not significantly so (see table number 9). The examination of the second research hypothesis showed that the Jewish elderly had significantly more positive attitudes towards the topic of nutrition and water consumption (see table number 8). The examination of the third research hypothesis, which examined the actual behavior of the elderly in the topic of nutrition and water consumption, showed that the Jewish elderly reported that their nutrition habits are more balanced than those of the Arab elderly but this finding was not significant (see table number 10).

The examination of the knowledge and attitudes of the Arab elderly on the topic of nutrition found a linear, positive, weak, and significant relationship between the knowledge of the Arab elderly on the topic of nutrition and their attitudes towards correct and balanced nutrition and water consumption ($R=0.18$, $p<0.05$). Thus, the greater the knowledge on the topic of nutrition is among the Arab elderly, their attitudes towards correct nutrition are more positive (see tables number 12 and 13).

In addition, the examination of the attitudes and behavior of the Jewish and the Arab elderly found a linear, positive, and significant attitude between the attitudes of the Jewish and the Arab elderly on the topic of nutrition and the frequency of eating and water consumption in a correct and balanced manner ($R=0.27$, $p<0.01$ and $R=0.52$, $p<0.01$, respectively). However, among the Arab elderly the relationship is strong while among the Jewish elderly it is only moderate. Thus, as the attitudes of the elderly on the topic of correct nutrition are more positive, their nutrition and water consumption habits are correct and balanced more frequently (see tables number 12 and 13).

In addition, the relationship between knowledge and behavior of the Jewish and the Arab elderly was also examined. A linear, positive, and significant relationship was found between the knowledge of the Jewish and the Arab elderly in the topic of nutrition and the frequency of their correct and balanced nutrition and consumption of water ($R=0.32$, $p<0.01$ and $R=0.18$, $p<0.05$, respectively). However, among the Jewish elderly the relationship is moderate while among the Arab elderly the

relationship is only weak. Thus, as the knowledge of the elderly on the topic of correct nutrition is greater, the eating habits and water consumption habits are correct and balanced more frequently (see tables number 12 and 13).

In the context of nutrition and water consumption, the Pearson correlation between this topic and the level of the elderly person's functioning was examined. A linear, positive, moderate, and significant relationship between the frequency of correct and balanced eating and water consumption and the number of areas in which the Jewish elderly can function themselves outside of the home was found ($R=0.22$, $p<0.05$). Thus, as the frequency of eating and water consumption is performed in a more correct and balanced manner, the number of areas of functioning of the Jewish elderly outside of the home also rises.

In addition, a linear, positive, moderate, and significant relationship between the attitudes of the Arab elderly on the topic of nutrition and the number of areas inside and outside of the home in which they can function independently was found ($R=0.30$, $p<0.01$ and $R=0.21$, $p<0.01$, respectively). Thus, as the number of areas in which the elderly person can function independently inside and outside of the home rises, their attitudes towards correct and balanced nutrition are more positive (see tables number 12 and 13).

Drugs and Alcohol

The first research hypothesis examined the differences in this topic between the Jewish elderly and the Arab elderly. The knowledge on the topic of drugs and alcohol use was significantly higher among the Arab elderly than among the Jewish elderly (See tale number 9). The second research hypothesis examined the attitudes of the elderly in the context of drugs and alcohol and significantly more negative attitudes towards drugs and alcohol were found among the Arab elderly than among the Jewish elderly (see table number 8).

The examination of the knowledge and attitudes on the topic of drugs and alcohol consumption found a linear, negative, and significant relationship on the topic of the use of drugs and alcohol and attitudes towards use of drugs and alcohol, both among the Jewish elderly and among the Arab elderly ($R=-0.53$, $p<0.01$ and $R=-0.28$, $p<0.01$, respectively). However, among the Jewish elderly the relationship was

found to be strong and among the Arab elderly only moderate. Thus, as the knowledge on the topic of the use of drugs and alcohol is greater, the attitudes towards the use are more negative in both nationality groups (see tables number 12 and 13).

Next, attitudes and behavior on this topic are examined. A linear, positive, strong, and significant relationship was found between the attitudes of the Jewish and the Arab elderly on the topic of drugs and alcohol and the frequency of use of drugs and alcohol in actuality ($R=0.71$, $p<0.01$ and $R=0.40$, $p<0.01$, respectively). Thus, as the attitudes of the elderly towards the use of drugs and alcohol are more positive, the use of these materials occurs more frequently (see tables number 12 and 13).

Last, the knowledge and behavior on this topic were examined and a linear, negative, and significant was found between the knowledge of the Jewish and the Arab elderly on the topic of the consumption of drugs and alcohol and the frequency of the consumption of drugs and alcohol in actuality ($R=-0.46$, $p<0.01$ and $R=-0.24$, $p<0.01$, respectively). However, among the Jewish elderly the relationship is strong and while among the Arab elderly it is only moderate. Hence, as the knowledge of the elderly on the topic of the consumption of drugs and alcohol is greater, the frequency of the use of these materials is lower.

Smoking

The first research hypothesis examined the differences in the knowledge on the topic of smoking between the Jewish elderly and the Arab elderly. The knowledge of the Arab elderly on the topic of smoking is higher, but not significantly, than that of the Jewish elderly (see table number 9). The second research hypothesis examined the differences in the attitudes of the elderly on the topic of smoking but significant differences were not found between these two groups. In other words, the attitudes in regards to smoking were balanced between the Jewish elderly and the Arab elderly (see table number 8). Examination of the third hypothesis, which examined the differences in behavior in actuality in the topic of smoking between the Jewish elderly and the Arab elderly, found significant differences, when the Arab elderly reported that they smoke significantly more frequently than do the Jewish elderly (See table number 3).

The correlation between knowledge and attitudes on the topic of smoking was examined. A linear, moderate, positive, and significant relationship was found between knowledge on the topic of smoking and attitudes towards smoking, both among the Jewish elderly and among the Arab elderly ($R=0.41$, $p<0.01$ and $R=0.48$, $p<0.01$, respectively). Thus, as the knowledge on the topic of smoking is greater, the attitudes of the Jewish and Arab elderly towards stopping smoking are more positive (see tables number 12 and 13).

The correlation between attitudes and behavior in the topic of smoking was examined and a linear, negative, strong, and significant relationship was found between the attitudes of the Jewish and the Arab elderly on the topic of stopping smoking and the frequency of smoking in actuality ($R=-0.48$, $p<0.01$ and $R=-0.64$, $p<0.0$, respectively). Thus, as the attitudes of the elderly towards stopping smoking are more positive, they will smoke more infrequently (see tables number 12 and 13). Last, the correlation between knowledge and behavior on the topic of smoking was examined. A linear, negative, and strong relationship was found between the knowledge of the Jewish and the Arab elderly and the frequency of their actual smoking ($R=-0.42$, $p<0.01$ and $R=-0.48$, $p<0.01$, respectively). Thus, as the knowledge on the topic of smoking is greater, the elderly people smoke less frequently.

Immunizations

The first research hypothesis examined the differences in the knowledge on the topic of immunizations between Jewish elderly and Arab elderly and found that the knowledge of the Jewish elderly on this topic is greater than that of the Arab elderly but not significantly so (see table number 9). However, the examination of the second research hypothesis found significant differences in the attitudes of the Jewish elderly and the Arab elderly on the topic of immunizations: the Jewish elderly have more significantly positive attitudes in regards to the immunizations than do the Arab elderly (see table number 8). In addition, the examination of hypothesis number 3 found that the Jewish elderly reported that they are immunized significantly more frequently than are the Arab elderly (see table number 10).

Therefore, the correlation between attitudes and behavior on the topic of immunizations was examined. A linear, positive, strong, and significant correlation was found between the attitudes of the Jewish and

the Arab elderly on the topic of immunizations and the frequency of performance of the immunizations in actuality ($R=0.48$, $p<0.01$ and $R=0.40$, $p<0.01$, respectively). Thus, as the attitudes of the elderly towards immunizations are more positive, they will be immunized more frequently (see tables number 12 and 13). The correlations between knowledge and behavior and between knowledge and attitudes on the topic of immunizations were not significant (see tables number 12 and 13).

The research sought to examine in general the differences between the attitudes, knowledge, and behavior of the Jewish and the Arab elderly on different topics. Therefore, MANOVA (multivariate analysis of variance) was conducted and yielded the following findings.

In regards to the attitudes of the elderly in different topics among Jews and Arabs, significant differences were found in the combined variable of the elderly people's attitudes in different topics between the Jews and the Arabs ($F=10.66$, $p<0.01$). Hence, it can be said that the Jewish elderly had more positive attitudes towards a more balanced and healthier lifestyle than did the Arab elderly (3.48 and 3.30, respectively). Univariate analysis of variance (ANOVA) found that the source of the difference between the two nationality groups lies in the attitudes towards nutrition, drugs and alcohol, immunizations, and institutional placement (see table number 20 in appendix number 4).

In addition, in regards to the knowledge of the elderly in different topics among Jews and Arabs, significant differences were found in the combined variable of knowledge of the elderly in different topics among the Jews and the Arabs ($F=17.37$, $p<0.01$). Hence, the Jewish elderly were found to have greater knowledge in topics related to a balanced and healthier lifestyle than the Arab elderly (69.85 and 62.34, respectively). The univariate analysis found that the source of the difference between the two groups is in the level of knowledge in the following topics: calcium loss, muscle loss, drugs and alcohol, intellectual activity, and social activity (see table number 20 in appendix number 4).

Last, significant differences in the combined variable of frequency of behaviors were found among the Jewish and the Arab elderly ($F=18.75$, $p<0.01$). Hence, the Jewish elderly behave in a more balanced and healthier manner more frequently than do the Arab elderly (3.15 and 2.94, respectively). The univariate analysis found that the source of the

difference between the two groups was the differences in the frequency of behavior related to the performance of the physical activity, taking calcium supplement, use of drugs and alcohol, participation in social activity, participation in intellectual activity, smoking, taking safety measures, and immunizations (see table number 20 in appendix number 4).

Thus, research hypothesis number 4, which hypothesized that differences would be found in correlations between knowledge, attitudes, and behavior of the Jewish elderly and the Arab elderly on the topics of nutrition, drugs and alcohol, smoking, and immunizations, was **confirmed**.

Research Hypothesis Number 5

Differences will be found between Jewish elderly and Arab elderly in the relationship between mental health and physical health.

This hypothesis examined, using Pearson correlation, whether there is a relationship between the elderly person's general state of health, his mental-psychological state of health, and knowledge on his mental-psychological statue of health, both among the Jewish elderly and among the Arab elderly.

According to Bar-Tor (2002), the person's well being, both as a patient and as a healthy person or independent person, is considerably related to the emotional, social, and physical sources of support that the environment provides for the elderly person. In the area of successful aging, in recent years the prevalent conclusion is that successful aging depends on more than the person himself – on his different characteristics and primarily on the community where he lives, on the social, ecological, and cultural resources that exist in his residential environment. These allow him to continue to be active, to develop, to learn, to be among people's company, and to receive the most care he receives.

Analysis of Pearson correlation (see table number 11) shows that there is a linear, negative, strong, and significant relationship between the elderly person's state of health today and the definition of his state of health today in comparison to his state of health five years ago both among the Jews and among the Arabs ($R=-0.50$, $p<0.01$ and $R=-0.57$,

$p<0.01$, respectively). Thus, the Jewish elderly and the Arab elderly who defined their current state of health as good reported that five years ago their state of health was less good than the situation today significantly.

The connection between the physical health and the mental health in its different components, which expresses an integrative perception, yielded the term 'positive health'. In other words, positive health is the integration of physical and mental health (Bar-Tor, 2003).

It can be seen that the health situation and health image, referring to the subjective feeling (how the person perceives his state of health), influence the image of old age: not surprisingly, old age is perceived in a negative life, when these are poor. The image of the old age of the elderly is influenced by socioeconomic factors, namely, by the level of education and the income of the researched population (Vale, 1991).

The present research found that there is a linear, positive, strong, and significant relationship between knowledge on the topic of mental state and the health situation today among the Jewish elderly ($R=0.58$, $p<0.01$). In other words, the Jewish elderly who have greater knowledge on the topic of mental health defined their health situation today as better (see table number 11).

Demoralization is defined as a state of mental distress, from which the person does not see a way out. The level of demoralization constitutes an indicator or mental and physical illness and may serve as a valid index of the state of mental health in the population. The population of the elderly constitutes a high risk group for states of demoralization following the increased frequency of physical illness, functional deficiencies, loss, and social isolation and loneliness. The data of the Central Bureau of Statistics shows that there is a higher level of demoralization among the Jews than among the Arabs (39.85 and 21.4, respectively) (Rasoli and Shemesh, 2003).

The self evaluation of the loneliness is considered a variable that best predicts the state of health, sickness, and mortality. The data of the Central Bureau of Statistics shows that the report of better health is more frequent among men, among those with a higher level of education, and among Jews. The frequency of complaints of loneliness is higher among women, Arabs, and those of lower level education (Rasoli and Shemesh, 2003).

The present research study shows that there is a linear, negative, strong, and significant relationship between the mental-psychological aspect of the elderly and their state of health today, both among the

Jewish elderly and among the Arab elderly (R=-0.61, p<0.01 and R=-0.57, p<0.01, respectively). Hence, both the Jewish elderly and the Arab elderly who defined their state of healthy today as good have a more positive mental-psychological aspect (see table number 11).

The Arabs use the mental health services and emergency health services less than do the Jews. In addition, the Arabs have a lessened tendency to obtain from the health clinics preventative services such as blood pressure examination and information on complementary and/or supplementary insurances (Farfel, Rosen, Berg, and Gross, 1997).

The present research study found a linear, negative, moderate, and strong relationship between the psychological-mental aspect and the knowledge on the topic of mental health among the Jewish elderly (R=-0.30, p<0.01). Thus, the Jewish elderly who have greater knowledge on the mental state have a more positive mental-psychological state (see table number 11).

Thus, research hypothesis number 5, which hypothesized that differences would be found between Jewish elderly and Arab elderly in regards to the relationship between the elderly person's mental health and his state of health, was **confirmed**.

Research Hypothesis Number 6

The nationality (Jewish/Arab), attitudes, and knowledge will predict healthy and balanced behavior.

After different tests were performed and the knowledge, attitudes, and behavior of the Jewish elderly and the Arab elderly and the differences between them were examined, linear regression was performed, with the aim of examining the prediction of the behavior of the elderly through their attitudes and knowledge on different topics.

Model 3 in table number 15 shows that the nationality (Jew/Arab) and knowledge on the topics related to a healthy lifestyle influence the frequency of healthy behavior of the elderly with supervision on their attitudes towards a balanced and healthy lifestyle. In other words, Jewish elderly were found to behave in a healthy and balanced manner more frequently than Arab elderly (β=0.21, p<0.01). In addition, greater

knowledge on the topics related to a healthy lifestyle raises the frequency of healthy and balanced behavior among the elderly ($\beta=0.22$, $p<0.01$).

These findings are commensurate with the research literature, which states that the level of education is one of the factors of healthy behavior. The present research and other studies found that the level of education is higher among the Jewish elderly than among the Arab elderly.

The research of Rasouli and Shemesh (2003) found that the percentage of people who engage in physical activity rises with the level of education and level of income. In addition, the percentage of those who eat meat, chicken, and eggs or fish at least five times a week is higher among the Jews (62%) than among the Arabs (33%) (Rasoli and Shemesh, 2003).

Therefore, it can be said that in the present research study as well, the knowledge of the Jewish elderly on topics related to a healthy lifestyle, such as correct nutrition, physical activity, immunizations, etc., causes the frequency of their healthy behavior to be higher than that of the Arab elderly.

Thus, research hypothesis number 6, which hypothesized that the nationality (Jewish/Arab), the attitudes, and the knowledge predict healthy and balanced behavior, was **confirmed**.

Research Hypothesis Number 7

The nationality (Jewish/Arab), attitudes, and knowledge will predict a number of areas of the functioning of the elderly person in the home.

After the examination of whether the nationality and the knowledge influence healthy and balanced behavior, linear regression was performed to examine whether the nationality, the attitudes, and the knowledge of the elderly person predict his level of functioning in the home (see model 3 in table number 16).

I would like to note that in the questionnaire the elderly were asked a number of questions on their level of functioning in the home. For instance, they were asked about their ability to wash themselves, to dress themselves, to eat by themselves, to clean their homes, to cook, to use a telephone, etc., since the research examines whether there is a

relationship between the elderly person's nationality and additional variables in his ability to function inside the home.

The findings of different research studies indicated significant differences between the Arabs and the Jews in the degree of ability to perform actions related to household management. One difference derives from a higher percentage of Arabs who responded that they are not accustomed to performing these actions.

The explanation of this lies, apparently, in the structure of the household in the Arab society. The residential mode that most characterizes the Arab family is the old person living with his/her spouse and with their children in the same home. Approximately 35% of the Arab elderly live in this type of household. About this percentage of the elderly noted that they are not accustomed to perform actions of cleaning, washing laundry, and cooking.

This multigenerational residential pattern also embodies the division of roles in the extended family, in which the members of the younger generation bear the burden of the household tasks. Therefore, even if the elderly person can perform actions related to household management, he is not required to do so.

In contrast, in the Jewish families the pattern of a married couple is more common and 53% of the elderly live with their spouses or by themselves. Hence, the difficulty in household management can be expected to be more prevalent in the Jewish population.

In addition, the existing policy, which encourages the old person to remain in his environment and grow older there, obligates that help in household task management be provided in such a way and scope that ensures the old person of quality of life and a sense of well being (Yakovitz and Nir, 2001).

The present research study also found that the elderly person's nationality influences the number of areas in which he functions independently in the home with the supervision of his attitudes toward a healthy and balanced lifestyle and knowledge on a healthy lifestyle. Thus, the Jewish elderly were found to function in a larger number of areas in the home than the Arab elderly ($\beta=0.15$, $p<0.01$).

In addition, when the elderly person's nationality, attitudes, and knowledge were examined in the context of a healthy and balanced lifestyle, it was found that the elderly person's nationality and frequency of healthy and balanced behavior influence the number of areas in which he functions independently inside the home with the supervision of his attitudes towards a healthy and balanced lifestyle and knowledge on a healthy lifestyle.

Thus, the Jewish elderly were found to function in a greater number of areas in the home than the Arab elderly ($\beta=0.13$, $p<0.01$). In other words, a higher frequency of healthy and balanced behavior among the elderly raises the number of areas in which they function independently in the home ($\beta=0.11$, $p<0.01$). These findings are commensurate with the research literature.

Therefore, research hypothesis number 7, which hypothesized that the nationality (Jewish/Arab), attitudes, and knowledge predict the number of areas of the elderly person's independent functioning in the home, was **confirmed**.

Research Hypothesis Number 8

The nationality (Jewish/Arab), attitudes, and knowledge will predict a number of areas of the functioning of the elderly person outside of the home.

After the research examined whether the nationality, knowledge, and attitudes predict the level of functioning of the elderly person inside the home, it next examined whether these variables – nationality (Jewish/Arab), knowledge, and attitudes – indeed predict the level of functioning outside of the home as well (see model 3 and 4 and table number 17).

The questionnaire included a number of questions that the elderly people were asked in regards to their level of functioning outside of the home, for instance, travel in public transport, wandering about the residential neighborhood, going up and down stairs, etc.

The research literature has noted that the percentage of handicap among the elderly in the Arab sector is higher than that in the Jewish sector. The relative scarcity of coping resources, as a result of the

differences in the social status of Israeli Arabs and inequality in access to these resources, such as income, education, health services, living conditions, etc., are one of the main factors of the high handicap percentage of the elderly in the Arab sector. In addition, it must not be forgotten that most of the needs of the elderly in the Arab sector are provided by the extended family, both by force of tradition and out of the necessity of reality. The values of traditional family among Israeli Arabs dictate the respect of the elderly parents and the relative rarity of geographic mobility and the rather accepted pattern of shared residence encourage this supportive behavior (Reiss, 1991; Shuval and Anson, 2001).

Therefore, the present research study is commensurate with the literature and found that the elderly person's nationality influences the number of areas in which he functions independently outside of the home with the supervision of his attitudes towards a healthy and balanced lifestyle and knowledge about a healthy lifestyle. Thus, the Jewish elderly were found to function in a greater number of areas outside of the home than the Arab elderly ($\beta=0.19$, $p<0.01$).

In addition, it was found that the elderly person's nationality and frequency of healthy and balanced behavior influence the number of areas in which he functions independently outside of the home with the supervision of his attitudes towards a healthy and balanced lifestyle and knowledge of a healthy lifestyle. Hence, the Jewish elderly were found to function in a larger number of areas outside of the home than the Arab elderly ($\beta=0.17$, $p<0.01$). In other words, a higher frequency of healthy and balanced behavior among the elderly raise the number of areas in which he functions independently outside of the home ($\beta=0.13$, $p<0.05$).

Thus, research hypothesis number 8, which hypothesized that the nationality (Jewish/Arab), attitudes, and knowledge predict the number of areas of functioning of the elderly person outside of the home, was **confirmed**.

To conclude, all eight of the research hypotheses were confirmed, some partly and some completely. The hypotheses addressed the relationship between the elderly person's nationality and different issues in health education and promotion and the different correlations of knowledge, attitudes, and behavior of the elderly in different areas of health education, differentiating between Jewish and Arab elderly.

The research hypotheses can be divided into a number of parts. Hypotheses number 1, 2, and 3 address the impact of the nationality on knowledge, attitudes, and behavior of the elderly in different areas of health education. The findings show that in most of the areas the knowledge and attitudes are positive and the behavior in actuality of the Jewish elderly is higher than that of the Arab elderly. In general, the level of education and level of income of the elderly person influence his knowledge, attitudes, and behavior in the different areas.

Research hypothesis number 4 examined the different correlations between knowledge, attitudes, and behavior of the Jewish and the Arab elderly in different topics. Significant correlations were found in different topics (nutrition, drugs and alcohol, smoking, and immunizations) in the knowledge, attitudes, and behavior of the Jewish and the Arab elderly.

Research hypothesis number 5 examined whether there are significant differences between Jewish elderly and Arab elderly in regards to the relationship between the elderly person's mental health and his state of health today. The Jewish elderly have greater knowledge in the topic of mental health and defined their state of health as better and they also have a more positive psychological-mental state than the Arab elderly.

Research hypotheses number 6, 7, and 8 were aimed at examining the prediction of behaviors. Research hypothesis number 6 examined and found that the elderly person's nationality, knowledge, and attitudes can predict healthy and balanced behavior. In other words, among the Jewish elderly the knowledge and attitudes in different topics lead to a greater frequency of healthy behavior than among the Arab elderly. Research hypotheses number 7 and 8 examined and found that the nationality, knowledge, and attitudes predict a number of areas of the functioning of the elderly person inside and outside of his home. Among the Jewish elderly, the knowledge and attitudes in different topics led to a better level of functioning both inside and outside of the home than among the Arab elderly.

In other words, it is possible to summarize that the research study found that there are differences in health education of Jewish and Arab elderly.

Summary, Conclusions, and Recommendations for Future Research

1. Summary

From previous generations till today, both among Jews and among other nations of the world, people who have reached old age and remain in good mental and physical conditions have been mentioned. These elderly people are asked about the reasons for their long lives and the answers they propose are different and diverse: their lifestyles, their perseverance with principles and good actions, their habits in the fields of nutrition, avoidance of smoking, and abstention from strong drink, their family lives, their sex lives, etc. (Kortz, 1984).

According to Rubinstein (1999), old age is a normative developmental stage in the individual's life cycle. This is the last period in the life of every organism and generally it lasts from the end of productivity till death.

Western society and the elderly population see and perceive the elderly person in different ways. This different viewpoint determines a constellation of problems that require the intervention of an inter-disciplinary staff, in combination with the cooperation of the family that is coping with the care of the elderly person.

As the person grows older, the risk that he will fall ill with a prolonged illness or that he will be limited in his activity and will require aid in his everyday life increases. The elderly person's unique needs indeed are entailed by his health situation but the relationship is not simple and immediate: his living conditions, the system of social support he receives, and his economic situation all influence his need for services. Moreover, the services provided to the sick or handicapped elderly person are not always optimal: the quantity and components are not determined according to his needs but according to the supply of the services that society places at his disposal. This supply does not necessarily reflect all the technological possibilities that may facilitate his functioning and improve the elderly person's health and is not necessarily even efficient and cost-effective for society (Peretz, 1984).

According to Gafni (1988), the person's aging is a normal process in his development from birth to death, since aging is the only way to live many years. If the person is old in the awareness of young person, then his other identities are erased. Old age, in their view, unjustifiably becomes the essence of his nature and casts in shadow all the person's other indicators and his other qualities become secondary. The professional identity as a judge, teacher, or work manager does not receive the same attitude as before he was catalogued as 'old'.

Very many factors are involved in the health education of the elderly in Israel. There are factors that engage in the development of programs, in the training of skilled personnel, in the preparation of written and audio-visual instruction material for professionals and the community at large, in the performance of health education actions among the population, in the influence on the policy designers and in the performance of research and evaluation. Health education activity for the elderly is conducted in the framework of the ongoing medical treatment in the clinics of the health systems of clinics and in the family health stations, and in the community frameworks such as in clubs, community centers, day centers, etc. (Barnea and Haviv, 1992).

Therefore, health promotion among the elderly is very important, given the following reasons. First, the deficient state of health of the elderly – the elderly are sick more than other groups in the population. In addition, they suffer from a multiplicity of health problems and therefore they receive different treatments and then the likelihood of side effects increases. Second, the elderly require health services more intensively than do younger people. Third, during old age, the rate of the decline in the functioning of the senses is rapid and this increases the importance of the treatment of such factors as early as possible. Moreover, the process of aging necessitates the adjustment of the lifestyle, so that it will be easier for the elderly person to cope with the problems that are characteristics of his age. For instance, if the person did not engage in initiated physical activity in his youth, it is important that he commence initiated physical activity in his old age, since the decline in everyday physical activity may impair his functioning. Last, it must be remembered that the elderly are more vulnerable to environmental risks, such as accidents in the home, falls, and traffic accidents, than are younger people. The frequency of these injuries rises with the increase in age and the rehabilitation process is more difficult. Therefore,

intervention that will create a safer environment (improved lighting, installation of safety rails, etc.) will promote the reduction of the rate of injury (Barnea and Haviv, 1992).

Israel has a special place as a country and as a society in formation that combines the old and traditional with the modern and advanced. It is a country that esteems its historical and cultural heritage and also esteems rapid social change and orientation to the future (Kortz, 1984).

The uniqueness of this research lies in the fact that it examined different aspects of health education in the comparison between the Jewish elderly and the Arab elderly and addressed systemically the impacts of knowledge, attitudes, and behavior of different areas in health education in the comparison between the Jewish elderly and the Arab elderly.

First, the research examined the concept of health and health promotion and education. Different definitions were presented, when most address the fact that health education is a process that enables people to increase their control over their health and to enable their health.

Then, the topic of the knowledge, attitudes, and behavior was examined. This topic was examined in the present research study, since the fact that a person experiences cognitive dissonance in different areas of his life is decisively importance and he must understand first that he is found in such dissonance and then he must attempt to resolve it. The findings of the research indicate that indeed the elderly are found in a state of cognitive dissonance; in other words, they are aware of the fact that they must behave in a certain manner and they even hold positive attitudes towards this topic but they behave differently. However, it can be seen that for most of the elderly who participated in the present research study there is a correlation in their knowledge, attitudes, and behavior in many areas.

In the continuation, a review of different areas that engage in health education was conducted. The person's behaviors in different areas, such as smoking, nutrition, physical activity, exposure to the sun, and alcohol drinking, and different aspects such as living conditions, social-mental factors, access to health services, and genetic factors that influence the person's health were addressed.

Then, different theories that address health education from different aspects were presented. The integration theory, which addresses health education as an ongoing process that relies on different levels – environmental, social, organizational, and individual – was presented. This theory focuses on three different spheres: health protection sphere, health education sphere, and prevention sphere.

On the basis of the findings of the present research study, it can be said that it is necessary to examine the different aspects of the health promotion of the elderly according to the integration theory. In other words, it is necessary to employ a broad perspective that to educate for health all the different aspects – environmental, social, organizational, and individual – must be addressed.

In addition, the prevention model was also presented. This model addresses the improvement in the living standard with a minimum of illness and limitations according to three different levels: primary prevention, secondary prevention, and tertiary prevention. The prevention model can be seen to fit into the present research study since in secondary prevention, we can identify the illness among the elderly at its start and then there are greater chances of healing it. In addition, in tertiary prevention the goal is to prevent complication in the state of the existing illness, to promote rehabilitation, and to avert a worsening of the situation – and thus to achieve a higher level of health in the framework of the possible station.

Then, the radical model was presented. In contrast to the previous theories, this model addresses health only on the social level and not on the individual level. The present research study found that among different populations who live in the villages, where the sanitation situation is not adequate and the accessibility to health services is more difficult, the attitudes towards healthy behavior and the behavior in actuality are different from those of people who live in the city.

Hence, psychological approaches in health education were described. The health belief model aims at explaining and predicting behavior that is ascribed to health; in other words, the attempt to bring the person to be willing to act to change behavior related to his health. The present research study showed that it is possible to predict behavior attributed to healthy

The next two theories, the theory of reasoned action and the theory of planned behavior, focus on the theoretical aspects related to the individual's motivation as a reason for the appearance of a certain behavior. These theories strengthen the research findings and address the fact that there is a correlation between the person's knowledge, attitudes, and behavior.

After the reference to the different theories, the research examined the population of the elderly around the world, with the focus on the elderly population in Israel. Emphasis was placed on the social aspects of the elderly such as education, participation in the work force, informal support system, and the relationship between the elderly and health.

Then, the research presented the different aspects in health education of the elderly, such as smoking, nutrition, social and intellectual activity, falls, and so on. Then another factor that is important in the health education of the elderly population was presented: the mental-psychological aspect, which connects us to the adjustment of the elderly in their institutional placement in protected housing and in old age homes and in home hospitalization. In addition, the topic of health promotion of the elderly population in different countries in the world was presented.

Last, the research presented the main differences between the Jewish elderly and the Arab elderly in Israel. Emphasis was placed on differences in the perception of old age, in the willingness for institutional placement, in the formal and informal support, and in the different behaviors related to health education such as physical activity, nutritional habits, smoking, falls, and mental-psychological state.

2. Conclusions

As aforementioned, the present research study examines whether there are differences in different areas of health education between the Jewish elderly and the Arab elderly.

On the basis of the different findings of the research study, it is possible to say that in general that there are significant differences between the Jewish elderly and the Arab elderly in different areas of health education. The questionnaire examined the knowledge, attitudes, and behavior in different aspects of health education, for example,

nutrition, physical activity, smoking, alcohol and drug use, institutional placement, immunizations, psychological-mental state, falls, social activity, intellectual activity, safety measures, calcium loss, and muscle loss. In addition, it referred to the elderly person's level of functioning, both inside the home and outside the home.

The different findings indicate that the knowledge of the Jewish elderly is more extensive in many areas than that of the Arab elderly. Furthermore, the Jewish elderly also hold more positive attitudes towards a healthy and balanced lifestyle. The result is that their behavior is also healthier and more balanced than that of the Arab elderly.

Moreover, a relationship was found between the elderly person's health and his psychological-mental state and in this aspect, too, there is a significant difference between the Jewish elderly and the Arab elderly, when the Jewish elderly have greater knowledge in the topic of mental health and defined their state of health today as better.

Last, a relationship was found between the healthy behavior of the Jewish elderly person and his level of functioning inside and outside of the home. In other words, the Jewish elderly function better both inside and outside of the home than do the Arab elderly.

To conclude, it can be stated that the individual's nationality considerably influences the different aspects in health education among the elderly.

3. Recommendations for Further Research

The present research study examined 301 Jewish and Arab elderly in Israel and examined their reference to different aspects in health education. The questionnaire constructed for the present research study examined demographic questions, knowledge, attitudes, and behavior questions regarding different areas of health education, and equations on the level of functioning inside and outside of the home.

Therefore, it is possible to propose that additional research studies in the future undertake:

- To add different questions on knowledge and attitudes towards different areas of health education, to focus on the

topic of knowledge, attitudes, and behavior in different topics of health education, and to address the topic of the functioning of the elderly person inside and outside of the home.

- To example a broader sample of Jewish and Arab elderly.
- To focus on the population of the elderly in the old age homes and to examine among them the different topics of health education.

The present research study and other researches in the field present that that there is a gap in the reference of the Jewish elderly and the Arab elderly to areas of health education. The theoretical review showed that there is a gap on the part of the policy makers in Israel to these two populations – and these gaps need to be closed and to disappear in the future.

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Appendices

Appendix Number 1: The Pre-Test

Questionnaire on the Topic of Health Education among the Elderly

Dear Respondent,

This questionnaire is anonymous and confidential. It is intended solely for research purposes. The questionnaire is phrased in the masculine format for convenience but addresses both women and men. I thank you ahead of time for your cooperation in filling out this questionnaire.

Please complete the following:

1. Sex: A. Male B. Female

2. Age: _____

3. Year of birth: _____

4. Country of birth: _____

5. Year of immigration: _____

Please circle the most appropriate answer:

6. Residential region:
   - A. City
   - B. Village
   - C. *Kibbutz*
   - D. Other, note: _____

7. Personal status:
   - A. Married
   - B. Widowed
   - C. Divorced
   - D. Single
   - E. Other, note: _____

8. Religion:
   - A. Jewish
   - B. Christian
   - C. Muslim
   - D. Druse
   - E. Bedouin

9. Education
   A. No education
   B. Elementary school
   C. Partial high school
   D. Complete high school
   E. Advanced

10. How would you define your economic situation?
   A. Very good
   B. Good
   C. Moderate
   D. Not good
   E. Bad

11. Do you live in:
   A. An apartment that belongs to you.
   B. An apartment that belongs to your children.
   C. A rented apartment, when you pay the rent.
   D. A rented apartment, when somebody else pays the rent.
   E. An old age home, detail: _____

12. Who are the people who live with you?
   A. I live alone. For how long? _____
   B. I live with a mate.
   C. I live with the children.
   D. I live with another relative.
   E. I live in an old age home.

13. Do you have a telephone?
   A. Yes B. No

14. How do you define yourself in terms of religious belief?
   A. Religious
   B. Traditional
   C. Secular
   D. Other, detail: _____

15. What is your primary source of income?
   A. National Insurance Institution stipend.
   B. Help from the family.
   C. Work.
   D. Other, detail: _____

16. Do you have children?
   A. Yes, number: _____
   B. No

17. Have you fallen in the past year at home?
    A. Yes B. No

18. If yes, did you suffer any harm?
    A. Yes B. No

19. Have you fallen in the past year outside of the home?
    A. Yes B. No

20. If yes, did you suffer any harm?
    A. Yes B. No

21. Do you smoke cigarettes?
    A. Yes, number of cigarettes a day: _____
    B. No

22. Did you smoke in the past?
    A. Yes B. No

23. Do you drink alcohol?
    A. Yes B. No

24. In the past, did you do drugs?
    A. Yes B. No

25. Do you belong to a club for the elderly?
    A. Yes B. No

26. If yes, how many times a week? _____

27. Do you suffer from a chronic disease?
    A. Yes, detail: _____
    B. No

28. In the past year were you hospitalized in the hospital?
    A. Yes, how many times: _____ for how long: _____
    B. No

29. How often do you tend to go to the doctor?
    A. Once or more a week
    B. Once a month
    C. Once every two-three months
    D. Once every four-five months
    E. Less than once every six months

30. When did you last see a doctor or when did a doctor last see you? _____

31. Is your health situation today, compared to your health situation five years ago:
    A. Much better
    B. Better
    C. Unchanged
    D. Worse
    E. Much worse

32. What is your health situation today?
    A. Good
    B. Moderate
    C. Bad

33. Do your health problems interfere with you doing the things you want to do?
    A. Not at all
    B. Slightly
    C. Greatly

34. When you look at people your age, would you say that your health situation is:
    A. Much better
    B. Similar
    C. Worse
    Do you perform any physical activity? If yes, how many times a week? _____

35. Walking (at least fifteen minutes):
    A. Yes _____ B. No

36. Swimming:
    A. Yes _____ B. No

37. Running (at least fifteen minutes):
    A. Yes _____ B. No

38. Riding a bicycle:
    A. Yes _____ B. No

39. Participation in courses:
    A. Yes _____ B. No

40. Fitness club:
    A. Yes _____ B. No

41. Other: _____

Before you are different statements. To what extent do you agree with each one of the statements? Please note an 'X' in the column that is most appropriate.

	5 Very greatly agree	**4** Greatly agree	**3** Rather agree	**2** Slightly agree	**1** Don't at all agree	**0** Not relevant
42. Orderly meals should be eaten throughout the day.						
43. Food from all the food groups should be eaten.						
44. A large amount of water should be imbibed throughout the day.						
45. I am for drinking alcohol.						
46. I am for doing drugs as long as they are 'light'.						
47. I am for smoking cigarettes.						
48. I am for smoking in general.						
49. Smoking is harmful to the health.						
50. It is very worthwhile to receive the immunization against influenza.						
51. It is very worthwhile to receive the immunization against pneumonia.						
52. Life in an old age home contributes to a person.						
53. Life in an old age home causes a person to be lonely.						
54. It is best to live at home, in any situation.						
55. A person who lives in an old age home lives a good life.						

For each one of the following sentences, choose the answer that you feel is most appropriate. Please note an 'X' in the appropriate column.

	Correct	Incorrect	Don't know
56. Physical activity may cause calcium loss.			
57. Physical activity promotes the balance of sugar in the blood.			
58. Physical activity promotes balanced blood pressure.			
59. Climbing stairs is considered physical activity.			
60. Walking to the grocery store / bank / medical clinic is considered physical activity.			
61. It is important to drink a lot of water.			
62. Variety in meals is important.			
63. It is possible to eat only one of the food groups.			
64. Calcium is important to the body's health.			
65. It is possible to treat calcium loss.			
66. From an early age a calcium supplement should be taken.			
67. Muscle loss is related to the person's nutrition.			
68. Muscle loss is caused by calcium loss.			
69. Muscle loss is a disease.			
70. It is possible to treat muscle loss.			
71. Drinking 2-3 glasses of alcohol a day is allowed.			
72. Doing drugs is harmful.			
73. Studies at an advanced age can contributed to the person physically, mentally, etc.			

	Correct	Incorrect	Don't know
74. Participation in social activity (films, shows, card games, study courses, temple, club) contributes to the person.			
75. Volunteering in different organizations (*Yael*, *Naamat*, *Wizo*, *IDF*) is a waste of time.			
76. Smoking cigarettes may hurt the person.			
77. A number of cigarettes a day can help a person calm down from tensions.			
78. Falling in the home may cause fractures.			
79. Falling outside of the homes may cause fractures.			
80. A person who has immunized against influenza may be sick with the disease.			
81. Immunization against influenza can prevent all the types of influenza.			
82. Immunization against pneumonia prevents the illness.			
83. The person's self-esteem contributes to his state of health.			

For each of the following statements, please note an ‘X’ in the column that is most appropriate to you.

	5 Always	4 Often	3 Sometimes	2 Seldom	1 Never
84. I perform physical activity regularly at least three times a week.					
85. I perform physical activity regularly once a day.					
86. I perform physical activity about once a month.					
87. I eat in an orderly manner three times a day.					
88. I am careful to drink water.					
89. I take different vitamins.					
90. I am careful to eat food from all the food groups.					
91. I eat products that contain calcium.					
92. I take a calcium supplement.					
93. I drink alcohol.					
94. I do drugs.					
95. In the past I drank alcohol.					
96. In the past I did drugs.					
97. I participate in different social activities (card games, backgammon, temple, etc.).					
98. I go to a club for the elderly.					
99. I meet with friends.					
100. I volunteer for different organizations.					

	5 Always	4 Often	3 Sometimes	2 Seldom	1 Never
101. I learn different courses from the age of 65.					
102. I smoke cigarettes.					
103. In the past I smoked cigarettes.					
104. People around me smoke.					
105. I am careful not to fall in the home.					
106. I am careful not to fall outside of the home.					
107. I have fallen in the home in the past.					
108. I have fallen outside of the home in the past.					
109. I have a safety rail on the stairs.					
110. I have safety rail in the bathtub.					
111. I have a rug against slipping in the bathtub.					
112. I am immunized against influenza every year.					
113. I am immunized against pneumonia.					
114. I feel sad and depressed.					
115. I feel lonely and distant from others.					
116. I am happy.					
117. I feel unimportant and unwanted.					

The list before you contains different actions. In what way can you perform these actions?

	1 Do by myself without difficulty	**2** Do with slight difficulty	**3** Do with difficulty	**4** Cannot do by myself	**5** Not relevant
118. To wash self					
119. To manage in the bathroom.					
120. To get dressed					
121. To eat					
122. To walk around the apartment					
123. To go shopping					
124. To clean the house					
125. To cook					
126. To set the table					
127. To make and receive telephone calls					
128. To answer the door					
129. To handle finances					
130. To take medications					

Are you able to do the following?

	Yes	No
131. To take public transportation outside of the city / town		
132. To go about the city / town		
133. To go about your neighborhood		
134. To climb up stairs		
135. To climb down stairs		
136. To walk for more than fifteen minutes		

Thank you for your cooperation.

Appendix Number 2: The Research Questionnaire

Questionnaire on the Topic of Health Education among the Elderly

Dear Respondent,

This questionnaire is anonymous and confidential. It is intended solely for research purposes. The questionnaire is phrased in the masculine format for convenience but addresses both women and men. I thank you ahead of time for your cooperation in filling out this questionnaire.

Please complete the following:

1. Sex: A. Male B. Female

2. Age: _____

3. Year of birth: _____

4. Country of birth: _____

5. Year of immigration: _____

Please circle the most appropriate answer:

6. Residential region:
   A. City
   B. Village
   C. *Kibbutz*
   E. Other, note: _____

7. Personal status:
   A. Married
   B. Widowed
   C. Divorced
   D. Single
   E. Other, note: _____

8. Religion:
   A. Jewish
   B. Christian
   C. Muslim
   D. Druse
   E. Bedouin

9. Education
   A. No education
   B. Elementary school
   C. Partial high school
   D. Complete high school
   E. Advanced

10. How would you define your economic situation?
   A. Very good
   B. Good
   C. Moderate
   D. Not good
   E. Bad

11. Do you live in:
   A. An apartment that belongs to you.
   B. An apartment that belongs to your children.
   C. A rented apartment, when you pay the rent.
   D. A rented apartment, when somebody else pays the rent.
   E. An old age home, detail: _____

12. Who are the people who live with you?
   A. I live alone. For how long? _____
   B. I live with a mate.
   C. I live with the children.
   D. I live with another relative.
   E. I live in an old age home.

13. Do you have a telephone?
   A. Yes B. No

14. How do you define yourself in terms of religious belief?
   A. Religious
   B. Traditional
   C. Secular
   D. Other, detail: _____

15. What is your primary source of income?
   A. National Insurance Institution stipend.
   B. Help from the family.
   C. Work.
   D. Other, detail: _____

16. Do you have children?
   A. Yes, number: _____
   B. No

17. Have you fallen in the past year at home?
    A. Yes B. No

18. If yes, did you suffer any harm?
    A. Yes B. No

19. Have you fallen in the past year outside of the home?
    A. Yes B. No

20. If yes, did you suffer any harm?
    A. Yes B. No

21. Do you smoke cigarettes?
    A. Yes, number of cigarettes a day: _____
    B. No

22. Did you smoke in the past?
    A. Yes B. No

23. Do you drink alcohol?
    A. Yes B. No

24. In the past, did you do drugs?
    A. Yes B. No

25. Do you belong to a club for the elderly?
    A. Yes B. No

26. If yes, how many times a week? _____

27. Do you suffer from a chronic disease?
    A. Yes, detail: _____
    B. No

28. In the past year were you hospitalized in the hospital?
    A. Yes, how many times: _____ for how long: _____
    B. No

29. How often do you tend to go to the doctor?
    A. Once or more a week
    B. Once a month
    C. Once every two-three months
    D. Once every four-five months
    E. Less than once every six months

30. When did you last see a doctor or when did a doctor last see you? _____

31. Is your health situation today, compared to your health situation five years ago:
    A. Much better
    B. Better
    C. Unchanged
    D. Worse
    E. Much worse

32. What is your health situation today?
    A. Good
    B. Moderate
    C. Bad

33. Do your health problems interfere with you doing the things you want to do?
    A. Not at all
    B. Slightly
    C. Greatly

34. When you look at people your age, would you say that your health situation is:
    A. Much better
    B. Similar
    C. Worse

Do you perform any physical activity? If yes, how many times a week? _____

35. Walking (at least fifteen minutes):
    A. Yes _____ B. No

36. Swimming:
    A. Yes _____ B. No

37. Running (at least fifteen minutes):
    A. Yes _____ B. No

38. Riding a bicycle:
    A. Yes _____ B. No

39. Participation in courses:
    A. Yes _____ B. No

40. Fitness club:
    A. Yes _____ B. No

41. Other: _____

Before you are different statements. To what extent do you agree with each one of the statements? Please note an 'X' in the column that is most appropriate.

	5 Very greatly agree	**4** Greatly agree	**3** Rather agree	**2** Slightly agree	**1** Don't at all agree	**0** Not relevant
42. Orderly meals should be eaten throughout the day.						
43. Food from all the food groups should be eaten.						
44. A large amount of water should be imbibed throughout the day.						
45. I am for drinking alcohol.						
46. I am for doing drugs as long as they are 'light'.						
47. I am for smoking cigarettes.						
48. I am for smoking in general.						
49. Smoking is harmful to the health.						
50. It is very worthwhile to receive the immunization against influenza.						
51. It is very worthwhile to receive the immunization against pneumonia.						
52. Life in an old age home contributes to a person.						
53. Life in an old age home causes a person to be lonely.						
54. It is best to live at home, in any situation.						
55. A person who lives in an old age home lives a good life.						

For each one of the following sentences, choose the answer that you feel is most appropriate. Please note an 'X' in the appropriate column.

	Correct	Incorrect	Don't know
56. Physical activity may cause calcium loss.			
57. Physical activity promotes the balance of sugar in the blood.			
58. Physical activity promotes balanced blood pressure.			
59. Climbing stairs is considered physical activity.			
60. Walking to the grocery store / bank / medical clinic is considered physical activity.			
61. It is important to drink a lot of water.			
62. Variety in meals is important.			
63. It is possible to eat only one of the food groups.			
64. Calcium is important to the body's health.			
65. It is possible to treat calcium loss.			
66. From an early age a calcium supplement should be taken.			
67. Muscle loss is related to the person's nutrition.			
68. Muscle loss is caused by calcium loss.			
69. Muscle loss is a disease.			
70. It is possible to treat muscle loss.			
71. Drinking 2-3 glasses of alcohol a day is allowed.			
72. Doing drugs is harmful.			
73. Studies at an advanced age can contributed to the person physically, mentally, etc.			

	Correct	Incorrect	Don't know
74. Participation in social activity (films, shows, card games, study courses, temple, club) contributes to the person.			
75. Volunteering in different organizations (*Yael*, *Naamat*, *Wizo*, *IDF*) is a waste of time.			
76. Smoking cigarettes may hurt the person.			
77. A number of cigarettes a day can help a person calm down from tensions.			
78. Falling in the home may cause fractures.			
79. Falling outside of the homes may cause fractures.			
80. A person who has immunized against influenza may be sick with the disease.			
81. Immunization against influenza can prevent all the types of influenza.			
82. Immunization against pneumonia prevents the illness.			
83. The person's self-esteem contributes to his state of health.			

For each of the following statements, please note an ‘X’ in the column that is most appropriate to you.

	5 Always	4 Often	3 Sometimes	2 Seldom	1 Never
84. I perform physical activity regularly at least three times a week.					
85. I perform physical activity regularly once a day.					
86. I perform physical activity about once a month.					
87. I eat in an orderly manner three times a day.					
88. I am careful to drink water.					
89. I take different vitamins.					
90. I am careful to eat food from all the food groups.					
91. I eat products that contain calcium.					
92. I take a calcium supplement.					
93. I drink alcohol.					
94. I do drugs.					
95. In the past I drank alcohol.					
96. In the past I did drugs.					
97. I participate in different social activities (card games, backgammon, temple, etc.).					
98. I go to a club for the elderly.					
99. I meet with friends.					
100. I volunteer for different organizations.					

	5 Always	4 Often	3 Sometimes	2 Seldom	1 Never
101. I learn different courses from the age of 65.					
102. I smoke cigarettes.					
103. In the past I smoked cigarettes.					
104. People around me smoke.					
105. I am careful not to fall in the home.					
106. I am careful not to fall outside of the home.					
107. I have fallen in the home in the past.					
108. I have fallen outside of the home in the past.					
109. I have a safety rail on the stairs.					
110. I have safety rail in the bathtub.					
111. I have a rug against slipping in the bathtub.					
112. I am immunized against influenza every year.					
113. I am immunized against pneumonia.					
114. I feel sad and depressed.					
115. I feel lonely and distant from others.					
116. I am happy.					
117. I feel unimportant and unwanted.					

The list before you contains different actions. In what way can you perform these actions?

	1 Do by myself without difficulty	**2** Do with slight difficulty	**3** Do with difficulty	**4** Cannot do by myself	**5** Not relevant
118. To wash self					
119. To manage in the bathroom.					
120. To get dressed					
121. To eat					
122. To walk around the apartment					
123. To go shopping					
124. To clean the house					
125. To cook					
126. To set the table					
127. To make and receive telephone calls					
128. To answer the door					
129. To handle finances					
130. To take medications					

Are you able to do the following?

	Yes	No
131. To take public transportation outside of the city / town		
132. To go about the city / town		
133. To go about your neighborhood		
134. To climb up stairs		
135. To climb down stairs		
136. To walk for more than fifteen minutes		

Thank you for your cooperation.

Appendix Number 3: The Expert Validation

Questionnaire on the Topic of Health Education among the Elderly with Differences between Jews and Arabs

The research examines different aspects of health education for the differences between Jewish elderly and Arab elderly. The questionnaire is constructed from demographic questions, questions that address the elderly person's general health, questions that examine knowledge, attitudes, and behavior towards different aspects in health education, and questions that address the elderly person's level of functioning. (The complete questionnaire is attached.)

To what extent is this instrument relevant, in your opinion, to the examination of the **attitudes** towards different aspects in the topic of health education?

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Physical Activity					
Physical activity should be performed three times a week.					
Physical activity should be performed once a week.					
Physical activity should be performed every day.					
Nutrition					
Orderly meals should be eaten throughout the day.					
Food from all the food groups should be eaten.					
A large amount of water should be imbibed throughout the day.					
Drugs and Alcohol					
I am for drinking alcohol.					
I am for doing drugs as long as they are 'light'.					

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Smoking Cigarettes					
I am for smoking cigarettes.					
I am for smoking in general.					
Smoking is harmful to the health.					
Immunizations					
It is very worthwhile to receive the immunization against influenza.					
It is very worthwhile to receive the immunization against pneumonia.					
Institutional Placement					
Life in an old age home contributes to a person.					
Life in an old age home causes a person to be lonely.					
It is best to live at home, in any situation.					
A person who lives in an old age home lives a good life.					

In your opinion, are items for the examination of the different aspects missing?

A. No

B. Yes, please detail:

_____

_____

_____

_____

_____

In your opinion, to what extent is this instrument relevant to the examination of the **knowledge** towards different aspects on the topic of health education?

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Physical Activity					
Physical activity may cause calcium loss.					
Physical activity promotes the balance of sugar in the blood.					
Physical activity promotes balanced blood pressure.					
Climbing stairs is considered physical activity.					
Walking to the grocery store / bank / medical clinic is considered physical activity.					
Nutrition					
It is important to drink a lot of water.					
Variety in meals is important.					
It is possible to eat only one of the food groups.					
Calcium					
Calcium is important to the body's health.					
It is possible to treat calcium loss.					
From an early age a calcium supplement should be taken.					

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Muscle Loss					
Muscle loss is related to the person's nutrition.					
Muscle loss is caused by calcium loss.					
Muscle loss is a disease.					
It is possible to treat muscle loss.					
Drugs and Alcohold					
Drinking 2-3 glasses of alcohol a day is allowed.					
Doing drugs is harmful.					
Intellectual Activity					
Studies at an advanced age can contributed to the person physically, mentally, etc.					
Social Activity					
Participation in social activity (films, shows, card games, study courses, temple, club) contributes to the person.					
Volunteering in different organizations (*Yael*, *Naamat*, *Wizo*, *IDF*) is a waste of time.					
Smoking Cigarettes					
Smoking cigarettes may hurt the person.					
A number of cigarettes a day can help a person calm down from tensions.					

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Falls					
Falling in the home may cause fractures.					
Falling outside of the homes may cause fractures.					
Immunizations					
A person who has immunized against influenza may be sick with the disease.					
Immunization against influenza can prevent all the types of influenza.					
Immunization against pneumonia prevents the illness.					
Mental State					
The person's self-esteem contributes to his state of health.					

In your opinion, are items for the examination of the different aspects missing?

A. No

B. Yes, please detail:

_____

_____

_____

_____

_____

In your opinion, to what extent is this instrument relevant to the examination of the **behavior** towards different aspects on the topic of health education?

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Physical Activity					
I perform physical activity regularly at least three times a week.					
I perform physical activity regularly once a day.					
I perform physical activity about once a month.					
Nutrition					
I eat in an orderly manner three times a day.					
I am careful to drink water.					
I take different vitamins.					
I am careful to eat food from all the food groups.					
Calcium					
I eat products that contain calcium.					
I take a calcium supplement.					
Drugs and Alcohol					
I drink alcohol.					
I do drugs.					
In the past I drank alcohol.					
In the past I did drugs.					

	5 Very greatly relevant	4 Greatly relevant	3 Rather relevant	2 Slightly relevant	1 Not relevant
Social Activities					
I participate in different social activities (card games, backgammon, temple, etc.).					
I go to a club for the elderly.					
I meet with friends.					
I volunteer for different organizations.					
Intellectual Activity					
I learn different courses from the age of 65.					
Smoking Cigarettes					
I smoke cigarettes.					
In the past I smoked cigarettes.					
People around me smoke.					
Falls					
I am careful not to fall in the home.					
I am careful not to fall outside of the home.					
I have fallen in the home in the past.					
I have fallen outside of the home in the past.					
I have a safety rail on the stairs.					
I have safety rail in the bathtub.					
I have a rug against slipping in the bathtub.					

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
Immunizations					
I am immunized against influenza every year.					
I am immunized against pneumonia.					
Mental State					
I feel sad and depressed.					
I feel lonely and distant from others.					
I am happy.					
I feel unimportant and unwanted.					

In your opinion, are items for the examination of the different aspects missing?

A. No

B. Yes, please detail:

_____

_____

_____

_____

_____

In your opinion, to what extent is this instrument relevant to the examination of the elderly person's **level of functioning**?

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
To wash self					
To manage in the bathroom.					
To get dressed					
1To eat					
To walk around the apartment					
To go shopping					
To clean the house					
To cook					
To set the table					
To make and receive telephone calls					
To answer the door					
To handle finances					
To take medications					

To what extent is this instrument relevant to the examination of the elderly person's level of functioning?

	5 Very greatly relevant	**4** Greatly relevant	**3** Rather relevant	**2** Slightly relevant	**1** Not relevant
To take public transportation outside of the city / town					
To go about the city / town					
To go about your neighborhood					
To climb up stairs					
To climb down stairs					
To walk for more than fifteen minutes					

In your opinion, are items for the examination of the different aspects missing?

A. No

B. Yes, please detail:

_____

_____

_____

_____

_____

I will be happy to hear additional comments:

_____

_____

_____

_____

_____

Thank you for your cooperation.

Appendix Number 4: Additional Statistics

Indices of the Respondents' Attitudes towards Nutrition, Drugs and Alcohol, Smoking, Immunizations, and Institutional Placement

The research subjects were asked to note for every item the extent to which it describes their outlook on the different topics related to their everyday lifestyle. The answers were on the continuum: 1 – don't at all agree, 2 – agree slightly, 3 – rather agree, 4 – agree greatly, 5 – agree very greatly. A high score in the different indices means that the index describes the respondent's attitudes considerably.

Table Number 18:
Collection into Indices of Questions Pertaining to the Respondents' Attitudes towards Nutrition, Drugs and Alcohol, Smoking, Immunizations, and Institutional Placement

Index	Cronbach's Alpha
Positive attitudes towards correct & balanced nutrition & water consumption – overall index	**0.62**
Orderly meals should be eaten throughout the day.	
Food from all the food groups should be eaten.	
A large amount of water should be imbibed throughout the day.	
Positive attitudes towards doing drugs & alcohol – overall index	**0.60**
I am for drinking alcohol	
I am for doing drugs as long as they are 'light'.	
Negative attitudes towards smoking – overall index	**0.55**
I am for smoking cigarettes[1]	
Smoking in general should be prohibited	
Smoking in harmful for the health.	
Supportive attitudes of immunizations – general index	**0.84**
It is very worthwhile to be immunized against influenza.	
It is very worthwhile to be immunized against pneumonia.	
Positive attitudes towards institutional placement (old age home) – general index	**0.84**
Life in the old age home contributes to the person	
Life in the old age home causes the person to be lonely[1]	
It is best to live at home in any situation[1]	
A person who lives in an old age home lives a good life	

[1] these statements were measured on a reversed scale to that of the other statements in terms of meaning (these statements are positive, while the others are negative). Hence, to use in the statistical analyses their measurement scales were reversed as follows: 1 = agree very greatly, 5 = not at all agree.

Indices of the Respondents' Behavior in Topics of Physical Activity, Eating and Water Drinking Habits, Drugs and Alcohol, Social Activity, Smoking, Falls, Safety Measures, Immunizations, Psychological Mental Aspect

The research subjects were asked to note for every item the extent to which it describes their outlook on the different topics related to their everyday lifestyle. The answers were on the continuum: 1 never, 2 – seldom, 3 – sometimes, 4 – often, 5 – always. A high score in the different indices means that the respondent performs these actions considerably.

Table Number 19:
Collection into Indices of Questions Pertaining to the Respondents' Behavior in Topics of Physical Activity, Eating and Water Drinking Habits, Drugs and Alcohol, Social Activity, Smoking, Falls, Safety Measures, Immunizations, Psychological Mental Aspect

Index	Cronbach's Alpha
Physical Activity – General Index	**0.76**
I perform physical activity regularly at least three times a week.	
I perform physical activity regularly once a day.	
I perform physical activity about once a month.	
Correct & balanced eating & water consumption habits – General Index	**0.71**
I eat in an orderly manner three times a day.	
I am careful to drink water.	
I am careful to eat food from all the food groups.	
I eat products that contain calcium.	
Drugs and Alcohol Use – General Index	**0.56**
I drink alcohol.	
I do drugs.	
In the past I drank alcohol.	
In the past I did drugs.	
Social Activity – General Index	**0.71**
I participate in different social activities (card games, backgammon, temple, etc.).	
I go to a club for the elderly.	
I meet with friends.	
I volunteer for different organizations.	

Index	Cronbach's Alpha
Smoking – General Index	**0.75**
I smoke cigarettes.	
In the past I smoked cigarettes.	
People around me smoke.	
Falls – General Index	**0.61**
I am careful not to fall in the home.	
I am careful not to fall outside of the home.	
I have fallen in the home in the past.	
I have fallen outside of the home in the past.	
Safety measures – General Index	**0.70**
I have a safety rail on the stairs.	
I have safety rail in the bathtub.	
I have a rug against slipping in the bathtub.	
Immunization Supporting Behavior – General Index	**0.72**
I am immunized against influenza every year.	
I am immunized against pneumonia.	
Psychological Mental State – General Index	**0.83**
I feel sad and depressed.	
I feel lonely and distant from others.	
I am generally happy[1].	
I feel unimportant and unwanted.	

[1] This statement was measured on a reverse scale from the other statements, in terms of meaning (it has a positive meaning, when the other statements have an negative meaning). Hence, so as to use it in the statistical analyses, the measurement scales were reversed as follows: 1=always, 2 = never.

[2] The statement "I take different vitamins" was removed from the index of 'Correct and balanced eating and water consumption habits" in particular and from the statistical analysis in general because of its low fit with the Cronbach's alpha of the index.

Table Number 20:
MANOVA Test for the Examination of the Significance of the Differences between Attitudes, Knowledge, and Behavior among the Jewish and the Arab Elderly

	Jewish			Arab		
	Mean	SD	N	Mean	SD	N
Attitudes – Combined variable **	3.48	0.47	110	3.30	0.38	128
Knowledge – Combined variable **	69.85	15.01	127	62.34	15.57	168
Behavior frequency – Combined variable **	3.15	0.41	120	2.94	0.41	163

** $p<0.01$