Evaluating the effectiveness of the health educator intervention on health beliefs and attitudes of female Palestinian adolescents: Applying the Solomon Four-Group Design

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By

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Dedication

I dedicate this work to my family who carried a lot of distress with me during its work, and to my colleagues at work. This work is dedicated to the Palestinian girls who are considered major contributors to the making of the future of Palestinian society.

Declaration

No portion of the work referred to in this thesis has been submitted as an application for another degree or qualification of this or any other university or institute of learning.

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Abstract

Health and well being of the young people has been advocated by health planners in Palestine to become one of the main components of community health care. The national health information system such as vital statistics (PCBS) provides valuable information, but data on aspects of health relevant to young people are not easily available. Female adolescent health is a new area of concern in Palestine and most of the Palestinian adolescents' health studies have been concerned with the assessment of their health needs and problems. Some recent studies have assessed the adolescents' reproductive and sexual health needs. Very few studies indicated that health education programmes were developed and implemented based on those needs and problems but no one study has evaluated the effectiveness of the health educator role in those programmes.

The diversity and lack of standards for health education programmes and for those who implement them may have an impact on the quality of health education/promotion services delivered to meet the changing health needs of society (WHO, 1998). To achieve a quality in health services offered, it largely depends on the people who deliver these services. Therefore; evaluation for the effectiveness of the health educator is one aspect for improving the quality of these services and thus the health status of the individuals and/or the communities.

This experimental study is designed to evaluate the role of the health educator intervention in affecting change in the health beliefs and attitudes of Palestinian female adolescents aged 14-17 years in four female public schools in the West Bank. To answer the research questions of the study and to achieve its purpose and objectives, two theoretical frameworks were utilized: first, adolescence developmental approaches; the physiological, cognitive, psychological and social development. Second, the Stimulus-Organism-Response Model (S-O-R); (1) the stimulus element reflects the health educator intervention, (2) the organism element reflects the female adolescent health beliefs, values, knowledge and attitudes, and (3) the response element reflects the influence of health educator on the female adolescents' health beliefs and attitudes as measured at post test. The two frameworks were the base for the questionnaire

construction and the base for implementing and evaluating the effectiveness of the health educator intervention. The following three experimental steps were followed to have the study completed:

1. An assessment of Palestinian female adolescents' health beliefs and attitudes toward their physiological, psychological and social development as the pre-intervention phase of the study. This assessment was conducted among 246 female students from 9th-11th grades in two public (governmental) female schools. It was based on quantitative type of data, a self-administered questionnaire that included socio-demographic variables and 92 checklist items, and qualitative type of data with two subjective questions. The questionnaire was constructed and developed by the investigator; its content validity was established through revision of the questionnaires by experts, and its reliability was measured by Cronbach's Coefficient alpha test.

   The findings of the pre-intervention data revealed that the Palestinian female adolescents' needs and concerns were associated with their biological, psychological and social development. The adolescents' general lack of knowledge regarding their sexual and reproductive health was evident in the quantitative as well as qualitative data, the feeling of low self esteem, poor self confidence, and the feeling of gender inequalities were of particular concerns. Based on those needs and concerns, a health education intervention programme was developed aiming at assisting them to have more information and knowledge regarding their sexual and reproductive health, and to increase their awareness regarding their psychological and social well-being.

2. The second experimental step of the study was the implementation of health education intervention programme to the experimental groups. The health education intervention programme was developed by the investigator based on the findings of pre-intervention data and implemented by an external heath educator with the presence of the investigator. The health educator has utilized the educational and community development models, as a guide for her role to implement different educational methods and strategies in order to help the adolescent students achieve the goals of the educational sessions assigned aiming at affecting change in their health beliefs and attitudes toward a healthy life style.

3. The third step of the study was a post-intervention data obtained for variables reflecting the psychological and social health beliefs and attitudes from experimental and control groups to evaluate the effectiveness of the health educator intervention provided to experimental groups under study.

The study has employed an experimental research methodology; the Solomon-Four group design. This design has allowed for each of the four schools under study to be assigned to different condition; two were the experimental groups and two were the control groups, and each group was assigned as; ① The first experimental group has received pre-intervention assessment (pre-test), health educator intervention and post test, ② the first control group has received pre-intervention assessment and post test, ③ the second experimental group has received the health educator intervention only and post test, ④ the second control group, was not assigned to intervention nor to pre-intervention assessment, but received the post test only.

Statistical analyses were performed using the Statistical Package for Social Science (SPSS) version 10. Descriptive statistics were used to analyze the socio-demographic variables. The t-test for significance of means was the statistical analysis technique utilized to compare for differences between two group means or two means of one group at two levels; ① at pre-test to compare for equality of mean groups prior to intervention, and ② at post test multiple comparison for the mean differences between subjects in the four different groups was made to indicate for the effects of the pre-test, the health educator intervention, and for the pre-test intervention-interaction on 8 dimensions of the adolescents' psychological and social beliefs and attitudes for all groups. The major findings of the study at the post test data included the followings:

1. The findings showed a significant difference in the mean scores of the female adolescents' psychological health beliefs and attitudes dimension as a result of; the pre-test, the intervention, and the pre-test-intervention interaction. There was a significant difference for those who received the pre-test when compared with those who did not, but this difference was less than those who received the intervention. The difference for those who received the pre-test and intervention was stronger than those who received the pre-test or

intervention alone. This means that an interaction between pre-test and intervention gives stronger effects on adolescents' psychological health beliefs and attitudes.

2. The findings showed neither the pre-test nor the intervention or the pre-test intervention-interaction implied any effectiveness for the adolescents' social health beliefs and attitudes dimension which included the family, school and society sub dimensions. This is expected since these students do not live in a vacuum, and such programmes have to target their environment especially their family and school systems.

The study design was helpful in assessing the adolescents' health beliefs and attitudes and identifying their needs and concerns; also it was helpful in developing culturally appropriate interventions according to those needs. Therefore, emphasis on the needs and concerns of the adolescents to be assessed prior to any intervention is of importance and highly recommended to have effective outcomes for any planned educational programmes. Furthermore; the design was helpful in identifying that direct health education instruction can be effective on female adolescent psychological/emotional well-being but not on their social well-being. This effectiveness was recognized by the significant difference in the mean scores of the experimental groups compared to control groups.

The effectiveness of health education on the adolescents' health beliefs and attitudes was estimated immediately after the intervention; however, a further follow up study is required to estimate if this acquired effectiveness is maintained and sustained in those adolescents. Research studies emphasizes that while it may be relatively easy to influence attitudes and behaviour short-term, it can be very difficult for people to sustain behaviour change over the longer term (Pill, 1990). Therefore; continuity of such programmes and involvement of interdisciplinary approaches particularly for the psychosocial aspect of the female adolescents' development is required to have an effective and successful intervention programmes.

List of Abbreviations

AIDS	Autoimmune diseases
ANOVA:	Analysis of Variance
CAWTAR	Center of Arab Women for Training and Research
CDPHC	Center for Development of Primary Health Care
CHSCS	Child Health Self-Concept Scale
FAFO	Center for the International Studies at the Institute for the Applied Social Sciences
GSCE	General Secondary Certificate Exam
HBM	Health Belief Model
HBSC	Health Behaviour of School Children
HDIP	Health, Development, Information and Policy Institute
ICPD	International Conference on Population and Development
MANOVA	Multivariate analysis of variance
MCH	Maternal and Child Health
MOE	Ministry of Education
MOH	Ministry of Health
NGOs	Non-Governmental Organizations
NHP:	National Health Plan
NSHP	National Strategic Health Plan
O	Observation
OPT	Occupied Palestinian Territory
PCBS	Palestinian Central Bureau of Statistics
PNA	Palestinian National Authority
R	Randomization
RCT	Randomized Control Trials
SOPHE	Society of Public Health Education
SOR:	Stimulus-Organism-Response
SPSS	Statistical Package for Social Sciences
STDs	Sexually Transmitted Diseases
UHWC	Union of Health Work Committees
UNFPA	United Nation Population Fund
UNRWA	United Nation Relief and Work Agency
UPMRC	Union of Palestinian Medical Relief Committees
WBGS	West Bank and Gaza Strip
WCLAC	Women Center for Legal AID and Counseling
WHO	World Health Organization
X	Treatment

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Chapter One
Introduction

Adolescents face different sets of challenges and pressures as they approach adulthood. Disparities in the way girls and boys are raised and treated are at the root of many sexual and reproductive health problems and psychological and social development challenges (Abu Nahleh et al 1999). Given the scarcity of research related to young people's health in general and to females in specific in the region, this study intends to contribute to the knowledge of the Palestinian female adolescents' health needs and concerns and to assist them to have a better life through health education and empowerment. Aghebekian and Shaheen (1999) pointed that the health and social status of Palestinians are much affected by the level of women's health status in the society and women's ability to make own decisions without undue influence from people around them.

The World Health Organization (WHO, 1993) has defined adolescence as "a critical time in a woman's physical and mental development, in which many life styles, behaviour patterns and practices established at this time influence the rest of her life, her own health and that of her family and children" (p. 27). The advanced technology and speedier communication which affect Palestinian society will expose Palestinians to different cultures and may lead to changes in the individual's role in the family. For example, many Palestinian families are gradually changing from the extended family form to a nuclear family form (Abu Dayya, 2000). However it is unclear to what extent these changes could affect the dominant societal traditions, habits and customs that the Palestinian family has to refer to in raising children, especially girls. To meet these changes and challenges Abu Dayya added, the societal constraint that has been imposed on the girls requires an introduction of new beliefs and attitudes through education and empowerment with anticipation to deal and participate toward this changing future. Adolescents' health issues and the means to address them have raised increasing concerns in recent years, since adolescence is recognized a critical period for girls'

development, it is a time when they need the most support and effective health education (WHO, 1993, Hall 2003).

Freudenberg (1984) defined health education, as "those efforts that educate and motivate people to create more healthful environments, institutions and policies as well as lifestyles" (p. 40). According to Greene & Simon-Morton (1990), health education activities take place in public schools, colleges, clinical sites, factories and other community settings. This great diversity of the settings is the result of organizations and programme leaders' efforts that sponsor health education/promotion programmes to reach people in the most effective way, and therefore, health educators need to be adaptable and develop an array of skills to cope with this diversity. Health education is based on the assumption that the health status of individuals or communities may be influenced purposefully, and opinions vary about how such influence can or should occur (Kiger, 1995). Health education therefore, varies with the underlying health aspirations, the knowledge base and available resources.

In Palestine, health education/promotion programmes are increasing in the primary health care system but rarely evaluated or measured for their effectiveness (Quttieneh 1997). Recently, health education/promotion activities have been recognized as the most important activities in school health services, and health educators were assigned to initiate and support such activities which are carried out by the schools through the students' school health committees established for this purpose (Ministry of Health/Annual Report, 2000). However, little is known about the role of the health educator and to what extent this role has an effect on increasing health knowledge and shaping the health beliefs and attitudes of these students. The role of a health educator has been defined by Greene & Simon-Morton (1990) as "an individual prepared to assist individuals acting separately or collectively to make informed decisions regarding matters affecting their personal health and of others" (p.392).

WHO (1993) considers adolescence as one of the life's most dangerous cross roads. For adolescent girls before they reach adulthood, their relative powerlessness and emerging

sexuality leave them vulnerable to exploitation by others and at risk by many forms of discrimination, violence and ill health. Thus, they are in need of continuous health supervision, protection and education. To ensure this continuity, and for the importance of health education for adolescent girls, the investigator of this study foresees that health education programmes delivered by the health educator in selected Palestinian female public schools may motivate and guide learning toward their health knowledge and attitudinal change which may contribute to their health and future development.

Therefore, evaluation for effectiveness of the health educator intervention is essential to determine the level of education given and to provide evidence of the success or failure of the health education provided (Kiger, 1995). Also it may aid health care planners and managers to identify effective use of health teaching and thus inform the planning process (Kiger, 1995, Hall, 2003). According to Lister-Sharp et. al. (1999) there is some evidence that interventions promoting general self empowerment are more effective than interventions dealing with single health issues.

The purpose of this study was to evaluate the effectiveness of the health educator in affecting change in the health beliefs and attitudes of female Palestinian adolescents. To achieve this purpose, and to measure for effectiveness, the following experimental steps were employed: (1) Pre-intervention assessment (pre-test) of the health beliefs and attitudes of female adolescents aged 14 -17 years in four selected female Palestinian public schools (2) a health education intervention programme based on the findings of the pre-intervention assessment of the adolescents health beliefs and attitudes was developed by the investigator and introduced by a health educator, and (3) post-intervention assessment (post-test) of the same variables to evaluate the health educator intervention for effectiveness of the health education provided to participants under study.

Effectiveness is the extent to which the results set out to achieve are actually achieved. To evaluate for effectiveness of the health educator intervention, the study has employed an experimental research method. Taub et al (2001) indicated that "randomized

controlled trials (RCT), or the true experimental design, has been regarded as the gold standard for evaluating effectiveness" (p 9). To have true experimental design, the Solomon-Four group design was chosen to allow the groups under study to be assigned to different conditions. This assignment of the groups has allowed for multiple comparisons between the experimental and the control groups by the use of the Statistical Package for Social Science.

1.1 Palestinian Society: Background and Demographic trends

1.1.1 Historical Background

Since 1948, the year of the Nakba (disaster) millions of Palestinians has been displaced and became refugees on the land of historic Palestine and in neighbouring countries and in various regions of the world. There remains a great portion of the Palestinians in West Bank, Gaza Strip, East Jerusalem, and Israel. The West Bank including East Jerusalem is the eastern middle part of Palestine that was united with Trans Jordan, and Gaza Strip is a narrow piece of land lying on the coast of the Mediterranean that was united with Egypt in 1950. In June 1967 during the Six Days War, Israel occupied both, the West Bank and Gaza Strip. (Please refer to Palestine map including the West Bank and Gaza Strip in appendix A)

The total area of the West Bank and the Gaza Strip (WBGS) referred to as the Occupied Palestinian Territory (OPT) consist of 6170 Km2. in WB and 365 Km2. in the GS. The West Bank is divided into four geographical regions: The North including the districts of Nablus, Jenin, Tulkarem, the centre including the districts of Ramallah and Jerusalem, the south including the Bethlehem and Al-Khaliel districts, and sparsely populated Jordan Valley including Jericho. Up to sixty percent of the population lives in approximately 400 villages and rural refugee camps, and the other 40% live in urban refugee camps and the cities mentioned above (FAFO 1994, National Health Plan (NHP) 1994, MOH/Annual Report 2001).

After twenty years of occupation a popular uprising known as "Intifada" started in 1988 and became a mass movement that involved children and adolescents. The Israeli

Palestinian declaration of principles on interim self-government arrangements, signed in Washington and Oslo 1993, put an end to this uprising and opened the first optimistic perspective for Palestinians with the establishment of their Palestinian National Authority (PNA) in Palestine in 1994. According to ICPD report (2004), from the years 1994-2000 with the PNA takeover of responsibility over various sectors in the Palestinian territories one witnessed and sensed impressive progress towards creating organizational capacities including formation of legislation and development of national policies, and implementation of various developmental programmes in all sector services. For example, the National Strategy for the Advancement of the Palestinian Women, the Directorates at the ministries like the one on women's health and the one on health education/promotion at the Ministry of health.

However; in the last three years, after the eruption of the second Intifada (September, 2000), one witnessed a repression and deterioration of peace process. This in turn affected many of developmental initiatives as well as the socioeconomic status of Palestinians at national and individual levels

1.1.2 Demographic trends

According to the MOH/Annual Report (2001), the population size of Palestine in 2000 was estimated at 3,150,056. Out of which 1,590,945 (50.5%) are males and 1,559,111 (49.5%) are females. 56.4% live in cities, 28.5% live in rural areas or villages, while 15.1% are refugees camp residents. The population pyramid of the Palestinians with its wide base indicates a young population in which children 0-14 years comprises 46.9% and adolescents aged 15-19 years old comprises 10.4%, those above 65 are estimated at 3.2% only and around 39.5% comprise the ages 20-65 years

The National Strategic Health Plan (NSHP, 1999) reported that 50% of the total population was under the age of 16 years. The PCBS estimated population growth in Palestine to be around 3.6% during 1997-2003. According to ICPD Plan of Action (2004) this growth rate is one of the highest natural growth rates in the world considering that the world yearly growth rate is at 1.4% maximum, also it has tremendous implications on population and development. The crude birth rate has declined progressively from

46.5/1000 in 1995 to 39.2/1000 in 2003. The total fertility rate (TFR) has also declined from 7.4/1000 in 1995 to 5.9/1000 in 2003. Despite the progressive decline over the years in birth rate, it is still high in Palestine compared to other countries. For example Jordan in 2000 had a TFR of 4.4 and Egypt had a TFR of 3.3 as been reported by the MOH/Annual Report, (2001).

1.1.3 Households

The labour force survey of (2002) did not indicate any differences in the household size in 1997 and 2002; it was 6.4 in OPT. The majority of households were made up of nuclear families (81.4%) in 2002 compared with (73.3%) in 1997. Ninety one percent of households live in crowded conditions with more than one person per room, and one of every 4 children in the Palestinian authority is poor. Child poverty rates average 25.6% (PCBS, 1999).

The PCBS (2002) statistics indicated; with the ongoing Palestinian uprising, the female headed households reached 12.3% compared to 7.7% in 1999, and female participation in the labour force was 11% in 2000, it dropped to 10.4% in 2002. The unemployment rate dramatically increased from 14.1% in 2000 to 31.1% in 2002. Poverty levels are expected to be on the rise with some estimating that 60% of Palestinians are living under the poverty line.

1.1.4 Education

The labour force survey of PCBS (2002) indicated the literacy rate (knowledge of writing and reading) of 91% in the OPT for those 15 years and above. For the 15 years and above; 16.8% have not completed any educational level (12% males and 21.5% females) 20% completed the elementary educational level or 6 grade (21% males and 19% females), 32.9% completed grade 9 (33.6% males and 32.2% females), 19.1% obtained high school certificate, 4.8% a middle diploma, and 6.4% a bachelor degree and above (8.8 males and 4.1% females). The figures given shows men have lower level of illiteracy and higher post secondary education. There is significant gender gap in the general education of the population.

The number of students between grades one through twelve, including both genders, is 942,942 (477,042 boys and 465,900 girls). Females constitute 49.4% of students enrolled in basic education. A grade means a school year, which is nine months of study that starts at the beginning of September and ends by the end of May each year. The number of female students from 9 to 11 grades who are between 14 -17 years of age, the target population for this study is around 136,000 (PCBS, 2000).

Indeed, Palestinian families have a fairly high commitment to the education of both sons and daughters at least through the basic education level (Giacaman and Johnson, 2002). The PCBS report (2000) showed that for the scholastic year 1998/1999 the school dropout rates increases rapidly from lower to higher grades, from 0.25% in the first grade to 1.3% in the sixth grade, then jumped to 8% in the 10^{th} grade for both genders. However in the 10^{th} and 11^{th} grades, the school dropout rates among girls become higher than boys to reach 8.5%. This decline in the discontinuity of female education that resulted of early marriages, or the increase of parents' concern sending their daughters to schools away from their villages or sending them to high co-education institution (Gaicaman and Johnson 2002 and ICPD Report, 2004)

Several local studies and surveys of young Palestinian women such as Kan'an & Halabi (1995), Mansour (1999), and Aghabekian & Shaheen (1999) indicated that young Palestinian women suffer from socially and economically based gender inequalities, early marriage and school dropouts were considered to be among the main problems they encounter. Such issues should be viewed as a threat to health given the fact that education has positive impact on people's well being (Kiger, 1995).

Formal education is of great importance for the development of young people. It is in schools that literacy, numeracy, and thinking skills are fostered, exercised and knowledge are acquired (WHO, 1993). WHO further described the function of schools and teachers act as a major source of some education and guidance about specific health issues and provision of health screening and some health services. Kirby (2002) considers school environments are important factors to benefit young people from health behaviour messages in school, where connectedness with the source of information is important to impact influence on those children.

1.1.5 Marriage and reproductive health

Social expectations often put pressure on girls to marry and begin bearing children before they are ready. Despite a shift toward later marriage in many parts of the world, 82 million girls in developing countries who are now between the ages of 10 and 17 will be married before their 18th birthday (UNFPA Report, 2002). In Palestine, as is common in the developing world, a girl is often considered to be an adult at the time when regular menstruation is established (Paxman & Zakerman, 1987). Early marriage, early and frequent childbearing and large families are of positive cultural values (FAFO, 1994). Early marriage is still a phenomenon in OPT despite the increased median age at first marriage. In 2002, the PCBS reports indicated a noticeable increase in marriage age to 24.2 years for males and 19 years for females compared to 23.7 years for males and less than 18 years for females in PCBS (1997) and NSHP (1999) reports. PCBS further indicated, still about one quarter of women marry under 18 years of age. According to UNFPA (2002), reproductive health is determined by a cluster of psychosocial factors of which the most important one is ignorance and lack of awareness. Early marriage is one of those factors that jeopardizes the health and limits the opportunities afforded to women, usually disrupts their education and often violates their human rights.

This list of facts and figures highlights the state of women in general and adolescents specifically within the Palestinian society and helps to see and understand where help and support is needed. The task of improving the health status of young people is complex and difficult. Kelder et. al. (1995), elaborated that "this task is made more difficult by the concurrent problems in educational performance, interrupted family relationships, poor living conditions and a culture that supports many unhealthy behaviours" (p179). McQuaid, et al (1996) added, for many adolescents, their developmental health, and social problems are closely intertwined with those of their family, peer groups and local communities. Aghabekian and Shaheen's (1999) study reported that Palestinian young women needs included: awareness raising programmes, work opportunities, prevention of early marriage, education, vocational training, and availability of youth centres.

More recently, WHO (1993) started to shift towards the adoption of health promotion principles and strategies of social mobilization. It defined health promotion as "the

process of enabling people to increase control over and to improve their health" (p23). WHO goes on to say: "This perspective is derived from a conception of health as the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs; and, on the other hand, to change or cope with the environment.

Health is, therefore, seen as resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capacities" (p24). Green & Krueter (1991) defined health promotion as "the combination of educational and environmental supports for actions and conditions of living conducive to health", (p.4). For adolescents, health-promotion interventions are most often concerned with modifiable risk factors that are closely related to current or future health outcomes (Kolbe, 1990).

Therefore, assessment of Palestinian female adolescents' health beliefs and attitudes, and introduction of health education intervention programme based on those beliefs and attitudes may influence them to have a healthy living and promote their future development. Hall (2002) believes that health education/promotion is clearly important to young people to be nurtured so that they may become healthy adults and contributors to society.

1.2 An overview of the Health Care System in Palestine:

Over the past years the Palestinian health care system has been developing side by side with the development of the Palestinian society. The development of the health care system was identified by the MOH/Annual Report (2001) as follows:

At the early days of the Israeli Military Occupation in the West Bank and Gaza strip in 1967, there was an attempt by the Israelis to take over the Palestinian health care structures and to make them increasingly dependent on the Israeli health care system. According to MOH Annual Report (2001), despite the restrictions imposed by the Israeli Authorities, in the early 1970s, few Palestinian health structures that focused on curative health services with little emphasis on preventive services were established.

During the late 1970s and early 1980s, the preventive services started to emerge, and the concept of holistic health for individuals and society at large was considered as an integral part of the social, economic, even the political context within which the population lived.

In early 1988, at the beginning of the Palestinian uprising "Intifada", the Palestinian health care structures was put in a state of emergency due to the large number of casualties, which resulted from the Israeli army violence. As a result of this situation, new clinics and health centers were established in the West Bank and Gaza Strip in order to meet the increasing need of medical and emergency services. These centers were predominantly confined to non-governmental organizations and charitable societies.

According to the MOH/Annual report (2001), since 1992 and after the MOH has taken the responsibility of health in Palestine, there has been great improvement and development in terms of quantity and quality of health services including policies, regulations, and infrastructure and human resources development. Since then health care in Palestine is first and foremost the responsibility of the Ministry of Health. Thus it is essentially a public and a governmental responsibility. Being so, it is regulated by mandates issued by Palestinian National Authority.

For the purpose of this study, the Palestinian primary health care components will be emphasized in the following section. Due to the specific characteristics of the Palestinian political situation different providers currently deliver primary health care. The main providers according to the Ministry of Health/Annual Report (2000) are:

1. The Palestinian government (MOH)
2. The United Nations Relief and Work Agency (UNRWA), which provides free services for refugees in the camps
3. The National and International non-governmental organizations (NGOs)
4. The private sector

The Palestinian governmental sector is increasingly assuming a leading role in health planning and development (Quttieneh, 1997). This is reflected in a number of projects aimed at expanding the existing health services and establishing new programmes and services. Quttieneh (1997) has indicated that UNRWA is coordinating its programmes with the government sector, with an intention of a future merger into one large public service. However, primary health care itself receives little attention in the government plan. According to the Palestinian Ministry of Health figures, $7 million was allocated to public health care activities in 1996 in comparison to $69.4 million allocated to hospital development and $29 million to equipment and construction (Health, Development, Information and Policy Perspectives (HDIP, 1998).

According to Barghouthi and Lennock (1997) the Ministry of Health (MOH) runs 178 full time primary health care clinics in the West Bank, and 29 in the Gaza Strip. Thirteen new clinics are under construction and a number of others are being expanded. The MOH runs nine hospitals in the West Bank and 5 in the Gaza Strip with a new hospital due to open later this year. Governmental services are provided free of charge to those with insurance, except for maternal and child health (MCH) services, which are free to all people regardless of insurance status.

Barghouthi and Lennock (1997) reported that UNRWA operates 22 health clinics and one hospital in the West-Bank, and 11 health clinics in the Gaza Strip. Primary health care services, including drugs, are provided for free of charge though patients bear 25% of the cost of secondary level services. They added that UNRWA is coordinating with the MOH by expanding its services and diverting its resources towards government health facilities where possible.

Quttieneh (1997) indicated that the Palestinian NGO sector has established self-help initiatives and structures in health, education, and other service delivery during the years of Israeli occupation. The NGOs are viewed as important players in the process of health development, because of their critical role in providing subsidized services to the Palestinian population. In addition to service delivery, they have played an essential role in building models of health care that are increasingly adopted by the government and UNRWA sectors (Barghouthi and Lennock 1997).

HDIP (1997) reported that, in 1992, the NGO sector operated about 60% of primary health care canters in West Bank and the Gaza Strip. The NGOs have been badly hit by the effects of the Gulf War and the diversion of financial assistance to the Palestinian Authority. The number of rural NGO clinics fell from 210 in 1992 to 128 in 1996 (HDIP, 1997). However, NGOs continue to provide a large proportion of primary health care services and one half of general hospital beds in the West Bank (Barghouthi and Lennock 1997).

Bargouhti and Lennock (1997) revealed that the private-for-profit sector is expanding significantly particularly in the urban areas of the West Bank. This sector is expanding the provision of advanced diagnostic and secondary level services.

Health promotion strategy and health education programmes are gaining attention in all sectors, focusing on assessing knowledge, attitudes and practices and delivering knowledge to the public in the context of primary health care activities (Qutteineh, 1997). For example, the Union of Palestinian Medical Relief Committees (UPMRC), the Centre for Primary Health Care Development (CDPHC), the Palestinian Red Crescent Society and the Union of Health Work Committees (UHWC) are spreading health promotion/ education activities in the West Bank and Gaza Strip.

Those NGOs are targeting mainly young people, women's health, gender issues and school health for the purpose of raising health awareness and improving the health status of the Palestinians. Visser, Thurmond and Stinson (1998) suggested that "a comprehensive primary care model should include health education components targeted to the identified needs of the population, presented in a culturally appropriate manner, and delivered via multiple strategies" (p.10)

In 1998, the Ministry of Health re-activated the National Committee on Health Promotion and Education. The primary task of this committee is to assist in developing and implementing a Five-Year National Plan. This plan aims at creating a Palestinian institutional ownership in health promotion and education, and at reducing mortality and morbidity among Palestinian people by modifying health related behaviour and life style through different National Scale health programmes and interventions (NSHP, 1999).

There is a specific National Strategy for Health Education /Promotion for young people and adolescents, (1999) which include:

- Strengthening the relation, networking and cooperation with other health education and promotion programmes, including governmental, non- governmental, UNRWA, and Private Sector at the local, regional and international level.
- Promoting Palestinian Women's health, including gender equity, family planning, women empowerment and pre-marriage counseling. The population targets include women, men, youth and adolescents for health education and promotion related subjects. Accordingly, needed KAP studies are to be conducted for the pre and post intervention.
- Promoting youth and adolescent health, including building the Health Behaviour of School Children (HBSC) database. Knowledge, Attitude and Practice (KAP) Studies for special areas related to behaviour and life style such as: exercise, nutritional habits and smoking habits are also required for proper design and evaluation of these areas.
- Implementing the on-going programmes, including promoting the healthy school activities, such as child to child activities, health education's curriculum development, testing and production, dental health and social skills (NSHP, 1999, p 36).

1.3 Significance of the study

In this research the investigator argues that Palestinian female adolescents' health beliefs and attitudes and their response to health education require investigation for several reasons:

1. The lack of systematic and comprehensive health education services has been noted by several studies. For example, Birziet University, Department of Community Health carried out a needs assessment study for primary health care training in Palestine (Giacaman, 1995). The study notes that most of the in-service training and continuing education offered was focused on general curative care (Giacaman, 1995). In regard to the perceived needs for training, the Birziet University study reported that training in health education and communication skills was the first priority for individuals in the sample. Interviews with health care experts, performed as part of

the needs assessment, pointed to health education as one of the highest priority issues for training, followed by management and supervision needs (Giacaman, 1995). Quttieneh (1997) and the Women' Centre for Counseling and Legal Aid (2000) emphasized that most of the health education activities carried out in Palestine were sporadic and lack the means of follow-up and continuity, and are seldom properly evaluated. In this study a follow-up assessment after the completion of the health education sessions will be performed.

2. The effectiveness of the role of the health educator, in specific, has not been evaluated in Palestine, and has not been discussed except by the Ard Al Insan or Terre des Hommes society. This society is an international organization that works with children and their families through follow-up, assessment, health education and health promotion programmes that aim to raise health awareness. It trains nurses and community health workers to work in the community as health educators. It acknowledges the health educator as a valuable community agent and views the provision of their training as a means for improving the health status of Palestinians (HDIP, 1998). In this study a follow up assessment after the completion of the health education sessions will be performed for evaluation of the effectiveness of the health educator intervention.

3. Female adolescents are considered the focus of the future families who need education, and health information to empower them and promote their future decisions. Most Palestinian female adolescents are the near-future mothers and caretakers of their siblings, therefore, issues of marriage, education, family planning, and healthy lifestyles are of prime importance to this age group (Aghabekian and Shaheen 2000).

4. Female adolescents are the most exposed group to different types of violence, especially where the Palestinian society is silent toward such issues and rejects counselling in matters which a person feels embarrassed to talk about (Mansour 1999, & The Women Centre for Legal Aids and Counseling (WCLAC, 2000).

5. Some Palestinian studies indicate that adolescents girls lack the sufficient knowledge about their physical health as well as their sexual and reproductive health, and this may expose them to different health problems including psychological and social problems (Alami 1994, Kan'an & Halabi 1995 & Mansour 1999).

6. The psychosocial aspect of development for girls is not much considered by the Arab societal traditions (Al-Saadawi, 1990, and Kevorkian, 1997), thus the importance of promoting the psychological/emotional and social well being of the female adolescents through education may help them to interact and communicate effectively within their families, and within their socio-cultural context. Also it is an appropriate age where healthy attitude and social skills can be instilled and rooted.

1.4 Purpose and objectives of the study

The purpose of this study was to evaluate the role of the health educator in effecting change in the beliefs and attitudes toward healthy living among female adolescent at the age of 14-17 years in four governmental female schools in the West Bank.
To achieve this purpose, the following experimental steps were employed as follows:

1. An assessment of female adolescents' beliefs and attitudes toward their health status and healthy living as the pre-intervention phase of the study
2. A health education intervention programme based on the pre-intervention assessment was implemented in experimental groups through the use of the health educator instruction as the intervention phase of the study
3. A post-intervention assessment of the adolescents' health beliefs and attitudes to evaluate the effectiveness of the health educator intervention provided to adolescents under study.

Objectives

1. To strengthen the female adolescents' health beliefs and attitudes through health education about their health and healthy living, thus empowering them to promote a healthy life-style.

2. To encourage the use of health educators in the school system to affect the health beliefs and attitudes of female adolescents toward a positive healthy living.
3. To contribute to health care planners and managers in identifying the effective use of health teaching and in the promotion of healthy living

1.5 The research questions

In order to achieve the purpose and objectives of this study, the following research questions would allow the investigator to asses the effectiveness of the intervention when using the experimental designs (Brink and Wood, 1998):

1. Do female adolescents who receive health education instruction by health educator will perceive their health status differently when compared to female adolescents who do not?
2. Does instruction by the health educator fosters the development of healthy beliefs and attitudes of females adolescents who received health education.

Summary

This first chapter provided an overview of the social setting and background of the study. It basically described the Palestinian society and the Palestinian health care system, with an emphasis on primary health care settings. Also included, is the significance of the study and the purpose and objectives of the research.

The subsequent chapters provide a detailed discussion of the study as follows: Chapter two: A literature review of studies and research related to adolescents' health, health education theories/models, role of health educator and the conceptual framework of the study. Chapter three; the research methodology, covers literature about qualitative and quantitative research, detailed discussion of the study design, the Solomon-four-group design, instrumentation and questionnaire development, data collection and data analysis procedures and expected outcome of the study. Chapter four covers analysis and discussion of the pre-intervention data. Chapter five; provide a rationale for the health education intervention, the process of intervention and the educational sessions given to experimental groups. Chapter six; present analysis and findings of the demographic

variables and the quantitative data, as well as all comparisons made between the groups under study. Chapter seven; highlighted the steps followed in the study including the study limitations, and provide a thorough discussion of the findings including the effectiveness of the health educator. Chapter eight; incorporates the study recommendations and implications of the use health educator.

Chapter Two

Literature Review

Introduction

The aim of literature review is to help in selecting and developing a definition of the major concepts, and in clarifying the ways and methods of conducting the research. A literature review allows the researcher to see the path of knowledge development that others in this area have followed and where it has taken them (Talbot, 1995). A literature review is a compilation of knowledge that provides the groundwork for further study (Talbot, 1995). It is frequently found as a subsection of a published research study or published as freestanding exploration of a body of knowledge and critical thinking is important for the integrity of the review process (Talbot 1995).

Four major classification of literature review were proposed by Jackson (1980): review of new substantive or methodological developments in a field, verification or development of a theory, synthesis of knowledge from different disciplines, inferences and generalizations from a set of studies. Talbot (1995) further described five purposes to the classification for the review of the literature: (1) summarization of new ideas (2) formation or testing of theory (3) organization of knowledge (4) integration of knowledge and, (5) focused determination of study components.

The literature review of studies relevant to the concepts of this study was a continuous process through all stages of the study development. The process of literature search was complicated; it utilized different approaches for several reasons: (1) the study of concepts, beliefs and attitudes of female adolescents was not an easy task to find about in the national and international studies, most of the studies have looked at knowledge, behaviours and skills rather than beliefs and attitudes. (2) To identify literature containing evidence on the effectiveness of health education, different resources and indexes were

used, for example; the MEDLINE and CINHAL provided access to health education and adolescents' health, most of the studies available were from United States, with few studies reported from other parts of the world, this is documented also in Taub (2001) study. (3) The available Palestinian adolescents' health studies were limited to assessment and surveys which aimed at establishing the ground for the health planners to identify priorities and needs of Palestinian adolescents, the ICPD Plan of Action (2004) reported that statistics are fuller since the establishment of the Palestinian Authority but in depth studies is needed to further identify health problems. This part is also supported by the EU Report (2000) which indicated that in-depth studies and comparative studies regarding the young people health problems in the European Union are scarce.

Since the study was innovative in its nature; assessment of the female adolescent health beliefs and attitudes put a constraint for finding the appropriate theoretical framework which is believed that the SOR model was the most appropriate one for measuring the adolescents' perception of health, combined with the adolescents developmental approaches was of help to build the base for the further steps of the study. (4) Therefore, a specific measurement tool for this local study was developed taking into consideration the given justification; this also required the investigator to look at literature pertaining to development of measurement tools specific to this study. The literature search was complex and utilized different indexes; CD-ROMs and internet for health search at different websites like for example the MEDLINE, CINHAL, Healthinternetwork, the population council, the British medical journal, the UNFPA sites etc..

Palestinian Universities such as Al-Quds and BirZeit, and Staffordshire University (in England) libraries have been utilized too for some of the books and journals used in this search. The Health, Development, Information and Policy Institute (HDIP) annotated bibliography directory was a reference guide to find the local studies of interest for the present study. Some governmental departments studies have been used too, such as the Palestinian Central Bureau of Statistics (PCBS), Ministry of Education and Ministry of Health Directorate of women's health and Directorate of Health Education/Promotion were all used to obtain abstracts and to develop a bibliography.

This chapter presents a literature review relevant to the concepts, purpose and research questions of the study. A global, regional and local overview of adolescence demographic indicators and characteristics is presented first to give a broader insight of the adolescent health status. Adolescent developmental approaches and the Stimulus-Organism-Response Model (S-O-R); are presented as the theoretical frameworks of the study and discussed in details to answer the research questions and to achieve its purpose and objectives. Presentation of different models and theories used in health education, and the role of the health educator are emphasized. The concepts of S-O-R Model, are discussed, and compared with other models and theories used in health education/promotion programmes.

2.1 Adolescence: a general framework

2.1.1 Adolescents: Demographic indicators and characteristics

Global overview

Adolescents, broadly defined as 10-19 years old, are a vital population segment, making up one fifth of the world's people. They account for about 1.1 billion in 1995. Of this number 913 million lived in developing countries and 160 million in developed countries. The world's two most populous countries, China and India, embrace approximately 200 million young people (The Alan Guttmacher Institute, 1997)

Young people are not a homogeneous group but have diverse special needs associated, for example, with gender, ethnicity, social and educational disadvantage, family breakdown and sexual orientation. The global picture of adolescents' life experiences is quite alarming. Looking into the demographic trends, for example, prominent facts according to UNFPA (2002) report include:

- Globally, nearly half of all people are under 25-representing children, adolescents and youth.
- Most adolescents come from developing countries. Some 715 million (62%) live in Asia, 184 million (16%) in Africa, 105 million (9%) in Latin America and the Caribbean, 98 million (9%) in Europe, 43 million (4%) in North America.

- Half of all girls under 18 years of age are married in some countries, often in response to poverty and/or societal norms that are enveloped with patriarchy and gender inequality.
- Percentages of girls aged 15-19 who are already married include: 74% in the Democratic Republic of Congo, 70% in Niger, 54% in Afghanistan, 51% in Bangladesh (UNFPA report, 2002), and 61% in the Occupied Palestinian Territories (PCBS, 2001).
- The size of 15-24 years old in the European Union country members accounts for 48.6 million; about one quarter suffer regularly from psychosomatic symptoms. The teenage abortion ranges from 5-22/1000 for EU countries, very little is known about the true incidence of HIV infection, yet the annual number of new cases of AIDS in the age group 15-24 years decreased from about 1050 cases to about 460 cases. Adolescents make up a significant proportion of the population; in the United Kingdom, along with most developed countries, young people between the ages of 10 and 20 accounts for 13-15% of the total. (Hall, 2003).

Regional and local overview

- The size of adolescents of 15-19 years old in the Arab countries counts for 31 million and accounts for 11% the total population in 2000. However, this percentage is expected to decrease to 9.9% in 2010. Adolescents are unequally distributed among Arab countries, depending on the size of each of these countries. Egyptian adolescents represent one fourth of the total Arab adolescent population, while for example, both Algeria and Sudan count 11% respectively, Morocco counts for 10% and Iraq for 8% (The Centre of Arab Women for Training and Research, CAWTAR, 2003). That is to say, approximately two thirds of adolescents (female and male) live in five Arab countries all of which suffer from difficult economic conditions, and three of which suffer from wars or internal conflicts.

- Palestinian adolescents' age 10-19 years comprises 23.2% of the total population, whom 11.4% are females and 11.8% are males. This large number of young people, both males and females live in a very restrictive environment with no productive outlets for their energies (PCBS, 2000 and ICPD, 2004). The immediate needs of

adolescents for education, health care services, recreation and overall productivity remain largely unmet. This undoubtedly increases the risk of mental disturbances, domestic violence, desperate and self-destructive behaviour (Gaicaman and Johnson, 2002, and ICPD, 2004).

2.1.2 The theoretical frameworks

A feminist approach would have been an appropriate methodology to address the issue of female adolescence, but would not answer the specific research questions, which is does the intervention actually have an effect on female adolescents who receive health education instruction differently when compared to female adolescents who do not?

Therefore, to answer the research questions the theoretical frameworks chosen for this study include presentation of different approaches used in the study of adolescence; the physiological, cognitive, psychological and sociological approaches. Adolescence is a condition generated by the interaction between these approaches when they reach puberty on the one hand, as well as the surrounding social system including their family, school, and society on the other. The concept of health and wellness in young people described by the European Union Commission report (2000) covers physical capacity (e.g. fitness, vitality), psychological functioning (e.g. positive expectations about the future, learning abilities, self–esteem), social relationships (e.g. friends, sexual life, seeking one's life mate), and environmental potentials (e.g. opportunities to acquire new information and skills, possibilities for leisure activities, the physical environment).

Based on this, the adolescence developmental approaches and the concepts of the Stimulus-Organism-Response model (S-O-R) will be presented as a theoretical framework to assess Palestinian female adolescents' physiological, psychological, and social health beliefs and attitudes. The S-O-R model as described at the last section of this chapter will function as a modelling framework for structuring the intervention and evaluating the effectiveness of intervention on those beliefs and attitudes. The importance of the S-O-R model as proposed by Greene and Simon-Morton (1990) is that it is attached to the internal features of the organism; attitudes, values, beliefs, and other

intervening variables are presumably things that people somehow acquire and carry around in their heads (Darden,1973, and Greene and Simon-Morton, 1990). Therefore, introduction of health education programme based on those features may allow the participants to acquire information necessary for healthy development.

Based on this, the study adopted a combined approach using a methodological and scientific synthesis of the necessary elements that guarantee coverage of all the dimensions of adolescence.

2.1.3 Adolescence: a developmental approach

Adolescence is a period of transition between childhood and adulthood, a time of profound biologic, intellectual, psychosocial and economic change. During this period individuals reach physical and sexual maturity, develop more sophisticated reasoning abilities, and make educational and occupational decisions that will shape their adult careers. Goodchild (1996) viewed adolescence as that period when the child not only changes physically, but also develops attitudes and interests that will eventually make an adult. Another view, which is generally accepted in today's literature, is that adolescence is a process rather than a period. Swanwick & Oliver (1995) consider adolescence as a stage of development that is not fixed either in time or in its manifestation, rather than a process characterized by many personal changes: physical, cognitive, moral, social and psychological occurring between 10 and 20 years of age.

The physiological development

Adolescence is characterized by dramatic changes moving the individual from childhood into physical maturity. The fundamental biological change of adolescence is referred to as puberty. Puberty encompasses both physical growth and sexual maturation. The events of puberty are triggered by hormonal influences and are controlled by the anterior pituitary gland in response to a stimulus from the hypothalamus (Goodchild, 1996, Whaley and Wong, 1999).

Adolescence involve three distinct sub-phases: early adolescence (11 to 14 years), middle adolescence (15 to 17 years), and late adolescence (18 to 20 years). The changes,

opportunities, pressures, skills, and resources available to young people differ during these sub-phases. For example, early adolescence is characterized primarily by the changes of puberty and responses to those changes. Middle adolescence is characterized by transition to a dominant peer orientation, with all of the stereotypic adolescent preoccupation of music, dress and appearance, language, and behaviour. Mid to late adolescence is characterized by a need to establish sexual identity through becoming comfortable with one's own body and sexual feeling. Late adolescence involves transition into adulthood, including taking on adult roles and developing adult relationships (Whaley and Wong, 1999).

The physical growth includes: rapid gain in height and weight, during a one-year growth spurt, boys and girls can gain an average of 4.1 inches and 3.5 inches in height respectively. This spurt typically occurs two years earlier for girls than for boys. Weight gain results from increased muscle development in boys and body fat in girls (Swanwick & Oliver, 1995, Whaley and Wong, 1999).

Sexual maturity involves the development of secondary sex characteristics due to hormonal levels changes. This development include: (1) growth of pubic and underarm hair; (2) breast develop as early as 9 years old with full development achieved anywhere from 12 to 18 years; (3) menarche (first menstrual period for girls); (4) voice changes and penis growth (for boys).

Recent research studies suggest that adolescents' brains are not completely developed until late in adolescence. Specifically, studies suggest that the connections between neurons affecting emotional, physical and mental abilities are incomplete. This could explain why some teens seem to be inconsistent in controlling their emotions, impulses and judgments (Whaley and Wong, 1999).

Cognitive development

Jean Piaget (1972) described the shift from childhood to adolescence as a movement from concrete to formal operational thought. For most young people, emergence of formal operational thinking occurs between the ages of 11 and 14. Adolescents also

become capable of using a future time perspective rather than being tied to the here-and-now thinking of childhood (Greene, 1994). By middle adolescence, most teenagers are able to reason as well as adults; it includes a more logical thought process and the ability to think about things hypothetically. It involves answering the question, "What if...?" This development of reasoning brings with it the questioning of religious and political views and often the challenging of parental attitudes and behaviours (Piaget, 1972).

With development of formal operational thought, adolescents begin to describe the self more abstractly, and more psychological. Psychologist David Elkind (1978) points out that the intellectual advances of adolescence lead to periods of extreme self-absorption, a form of adolescent egocentrism. Adolescent egocentrism leads to two patterns of thinking that help to explain some of the health-related beliefs and behaviours of youth. First, the imaginary audience involves having such a heightened sense of self – consciousness, that an adolescent imagines that everyone is focused on his or her behaviour. Second, the pattern of thinking of adolescents or what is called the personal fable; it is the belief that one's feelings and experiences are completely unique. Harter, (1990) further described that adolescents focus more on their personal and interpersonal characteristics, beliefs and emotional states. Furthermore, when adolescents get older they move into what is called social cognition; they become to understand the perspectives of adults and see how the thoughts or actions of one person can influence those of others; also they are influenced by a range of intrapersonal, interpersonal, and socio-cultural factors.

Value autonomy and moral development

Value autonomy and moral development parallels advances in reasoning and social cognition. Garbarino et. al. (1989) described that adolescents achieve value autonomy when they develop a set of values distinct from those of significant adults in their lives and begin to struggle to clarify their own values as part of their expanded behavioural independence. According to Kohlberg and Gillian theory (1972), older children and young adolescents function at a conventional level of moral reasoning in which absolute oral guidelines are seen to emanate from authorities such as families and parents. Thus judgments of right or wrong are made according to a set of concrete rules. A major

concern of moral development is to act or behave in ways that will gain or maintain the approval of adults.

Psychosocial Development

There are five recognized psychosocial issues that adolescents deal with during their development as been indicated by many psychosocial theories. These include:

» Identity and self-representation, Erik Erickson, one of the most influential theorists in the area of psychosocial development, describes the identity achievement as one of the main psychosocial tasks of the adolescent years. Erickson in Maier (1965) identified the central problems of adolescence is establishing a sense of identity, or "who am I?" (p. 60), this question is not one that adolescents think about at a conscious level. Instead, over the course of the adolescent years, they begin to integrate the opinions of influential others (e.g. parents, other caring adults, friend, etc.) into their own likes and dislikes. Marcia (1982) described identity as: "An internal, self-constructed, dynamic organization of drives, abilities, beliefs and individual history" (p.375.). The eventual outcome of adolescence is that they form their own identity in many areas, namely their values, morals and thought processes, politics, and relationship expectations, sexuality and relationships (Marcia, 1982).

Social forces play a large role in shaping an adolescent sense of self. Erickson argues that the key to identity achievement lies in adolescents' interaction with others where they learn what ought to keep doing and what it is they ought not to do. Garbarino et.al (1989) points the importance of the role of the society in determining the range of available alternatives and opportunities for adolescents to explore a range of possible options related to their ideological, occupational and interpersonal roles before having to make identity commitment.

As part of the adolescence identity formation is to get around to the ideological events in the society, and a time when socio-political influences seems particularly powerful (Garbarino et al. 1989). For Palestinian adolescents it is obvious that their identity development is fused with the ideology of nationalist struggle, and the socio-political

condition of the Palestinians validate this fusion. For example; The PCBS Palestinian health survey (2001) data showed that 53.8% of the total martyrs were at the age of 10-24 years were martyred in OPT in the first 15 months of the current Intifada; 7 were females and 382 males. The young people's relation to the first Intifada and the current one is the dominant features of adolescence for Palestinians.

The Centre of Arab Women for Training and Research (CAWTAR, 2003) examined the methods and means used by female (or male) Arab adolescent to build their self identity and self perception. The field study shows that the process often followed by female and male adolescents in forming their identity and crystallizing their self image, differs depending on their social, and economic conditions, on the life experiences, as well as on the means they possess to direct their choices and deal with the problems and difficulties they encounter.

The study results indicated three paths that female and male Arab adolescents follow in building their identity: first, a path that is considered "obedient" and prepares the adolescent to be a full member of the traditional family group; he/she internalizes their standards and values, adopts their visions and judgments and believes in the necessity of agreeing with them so as to achieve tranquillity and avoid all causes of tension and aggravation. According to Harter (1990), close integration in the family group leads to the marginalization of the peer group's influence in the building of the personality of the adolescent who, in this case, becomes more like adults in terms of his/her behaviour and values.

The second path consists in leaving the beaten track and "rebelling" against adults by rejecting their ideas and views and by criticizing their attitudes, thereby making sure to fashion a distinctive personality. The report added; this rebellion may not necessarily and spontaneously lead to build an independent personality or to contribute to social change.

The third course is reconciliatory. It takes into consideration both internal and external changes. Here, the female (or male) adolescent resorts to respecting the standards of the family and society, while personally contributing to the shaping of a distinctive identity and avoiding clashes.

However in all cases, social comparison plays a central role. The report added; the ego image is constructed based on the "significant" or the "generalized" other as reference, through imitation and obedience, or through relatively distancing oneself from the judgments of others, or completely severing from them and attempting to build one identity and autonomy as well as one's personality away from stereotyped attitudes and prejudices.

»Establishing autonomy is one of the fundamental psychosocial tasks of adolescence. Autonomy includes emotional, cognitive, and behavioural components. Emotional autonomy is that aspect of independence related to changes in an individual's close relationships, and behavioural autonomy is the capacity to make independent decisions and follow through with them (Erickson, 1968). Establishing autonomy during adolescence really means becoming an independent and self-governing person within relationships.

»Another set of psychosocial tasks encountered during adolescence centres around achievement. Broadly speaking, achievement concerns the development of motives, capabilities, interest, and behaviours related to performance in evaluative situations (Whaley and Wong, 1999). During adolescence achievement focuses on young people performance in educational settings and on the development of implementation of plans for future scholastic and occupational career. There is a definite relationship between social class, and socioeconomic disparities in both educational and occupational achievement for adolescents (Ramafedi et al. 1992).

»The development of intimacy during adolescence involves changes in the capacity and opportunities to have intimate friendship. Intimacy refers to close relationships in which people are open, honest, caring and trusting. It is usually first learned within the context of same-sex friendships, then utilized in romantic relationships (Ramafedi et al., 1992).

»Sexual development and sexual identity are also seen to be a normal progression in adolescence and interest in the opposite sex, both as friends and as "dates" increases during these years. For young adolescents the process of sexual identity development

usually involves forming close friendship with the same-sex peers. During middle adolescence this identity is recognized by having sexual activity with the opposite sex.

The meaning and implications of sexual activity as it affects psychosocial development may be different for adolescent boys and girls; that is sexual socialization differs for males and females in any given society (Whaley and Wong, 1999). For example, the Centre for Disease Control and Prevention (CDC, 1992) indicated that 53% of males and 43% of females in the tenth grade in a national survey in the United States report having had open sexual relationship. Hall (2003) indicated the high rates of sexually transmitted infections among young people in Britain; particularly adolescent girls are a significant cause of physical health problems. Paxman & Zuckerman (1987), & McQuid et. al. (1996) reported that adolescent sexuality and fertility pose health related problems of a special kind, and unfortunately on global scale, not much solid information is available on current patterns of adolescent behaviour in this respect.

The prevailing customs, values and laws in the Arab society including the Palestinian society do not allow the establishment of open and stable sexual relations among the males and females unless they are officially married. The CWATAR (2003) study indicated that Arab adolescents feels embarrassed and shy to talk about sexual issues; they also manifest a mixture of difficulty and ignorance of those matters. The report added that females express a greater interest in emotional, moral and behavioural patterns in the person they love or desire to marry, while male adolescents shows greater interest in sex and beauty in their life partner.

For most adolescents; this identity is consistent with their own physical and mental capacities and with their societal limits and expectations, (Ramafedi and associates, 1992). However, the way adolescents are educated about, and exposed to sexuality will largely determine whether or not they develop a healthy sexual identity. Therefore; discussion on relationships, commitment, emotions and love are expected to enhance understanding and respect between sexes, between adolescents and their families and communities, allay their fears and concerns, and increase their health awareness (McQuid, et.al. 1996). Hern et al (1982, 1998) concluded that the importance of identity in adolescence is that this is the first time that physical development, cognitive skills and

social expectations coincide to enable young people to understand their past and begin to decide upon their approach to the future.

There is strong and growing evidence for the fundamental inter-relationship between physical, mental and social health (Hall, 2003). Problems in adolescence in any of these areas indicate the likelihood of long term adverse health and social consequences. In the developing and developed countries, the most prevalent health risks facing youth and adolescents today result from psychosocial, behavioural and economic factors (Yaraham, 1994), and the need for well developed health education/promotion programmes for such age group is seen as paramount (Yaraham 1994, and HDIP, 1998).

2.1.4 Broad interpretation of health

Among young people, health should be considered in its widest sense (Hall, 2003). The transition from childhood to adulthood is a period during which the individual lays down the foundations for future life, and thus a positive orientation to the future is one of the cornerstones of good health. Thus, in addition to mortality, morbidity and disorders, the concept of health and wellness in young people covers physical capacity (e.g. fitness, vitality), psychological functioning (e.g. positive expectations about the future, learning abilities, self –esteem), social relationships (e.g. friends, sexual life, seeking one's life mate) and environmental potentials (e.g. opportunities to acquire new information and skills, possibilities for leisure activities, the physical environment). Measuring of health (health is not merely the absence of disease, but a state of complete physical, psychological, and social well –being) is however extremely difficult, as comparable information on the positive and functional aspects of youth health across Europe is scarce (EU Commission report, 2000). Watson (1979) stated that health is "a subjective state that exists in the mind and body of a person" (p 14). Davis & Ware (1981) similarly stated "To a major extent it is fair to say, healthy (or ill) you are if you think you are" (p 34) in essence, health is known by the experiencing person. Therefore, the investigator of this study assumes that measuring the Palestinian adolescents' health beliefs and attitudes on their physiological and psychosocial dimensions of their development may give some information about the adolescents' health status under study.

2.1.5 Adolescents' health studies

In Palestine, there is an increasing recognition of the needs and concerns of the adolescent age group. Health and well-being in this age group have been addressed by many governmental and non-governmental institutions. National health information systems such as vital statistics provide valuable information, but in-depth analysis of data findings on aspects of health relevant to adolescents are not easily available (ICPD, 2004).

Therefore, health education/promotion programmes for children and youth is important because it enhances the development of self-reliance and responsibility for their own health and that of their families. It also enhances the adolescent individual to recognize health as an essential component of optimal quality of life. For example, the Ministries of Education and Health are collaborating in order to introduce school health education programmes (HDIP, 1998). The Ministry of Youth Affairs is in the process of promoting the social skills of young people through the development of new youth centers and the promotion of the available ones. In the analysis of a study about youth centres in Palestine, Shabaneh (1995) indicated that female centres constitute 8% while mixed centres constitute 25% of total centres. Females involved in those centres are 12 years old or less, which indicates cultural constraints for female socialization and recreational activities in the Palestinian society.

Several Palestinian studies were carried out in the last few years of which mostly were needs assessment and surveys that targeted Palestinian population in general and young people and women's health in particular. For example; Alami (1994) assessed health perception and health problems of Palestinian adolescents lived in East Jerusalem. A convenient sample consisted of 48 males and 44 females were given 50 checklist items questionnaire reflecting their beliefs, attitudes and behaviours toward their physical, psychological, and sexual health perception and needs as well as their family and school concerns and problems.

The concerns and problems identified were reported as prioritized by the participants for both sexes: 59.6% of the males and 69% of the females indicated that their sexual health

needs and problems on top of all their concerns followed by 59% of males and 67.2% of females exhibited psychological health concerns and problems. Alami referred to these responses is that they represent the conservative Palestinian culture where issues of sex cannot be spoken about loudly for both sexes, and thus leave young people under stress. These responses reflect the desired opportunities of young people to be understood and to have a better development. 57.6% of the girls ranked family problems as a third priority, while it was 43.2% of the boys who indicated to have problems with their families. These findings reflect the misunderstanding of adults toward their children due to lack of communication between parents and their adolescents. Alami further described that the cultural constraints enforced on the girls and the gender biases toward them may allowed them to have more problems with their families. School and physical problem were the least complained about for both sexes (Alami, 1994).

Kan'an and Halabi (1995) conducted an exploratory study aiming at developing a health education curriculum for Palestinian female adolescents. The study was of two types; first it assessed the health perception and needs of Palestinian female adolescents and, second, assessed health experts in the areas of education, health, women issues and counselling in order to develop the appropriate curriculum. In a convenient sample, the study targeted 100 girls aged 13-15 years in 13 youth summer camps at different sites in the West Bank. The identified needs were obtained through focus group discussions and the themes generated were prioritized by the participants as; 92% were concerned about their psychological health, 76.9% needed to know about their bodies, and 69% needed to know about their sexual health and reproductive system changes including the menstrual cycle. Nutrition, hygiene, habits and life style were the least to be concerned about. These identified health needs and concerns by the participants emphasize the need for health promotion and intervention that may contribute to adolescents' understanding of health and its relevance to enhancement of a healthy lifestyle (Kan'an and Halabi, 1995). The health professional's responses for the same purpose have indicated that psychological health concerns and reproductive health including sexuality should be the first two priorities for adolescents to have knowledge and awareness about.

The Centre for Development of Primary Health Care (CDPHC, 1999) study of 682 males and females aged 15-35 years from West Bank and Gaza Strip aimed at assessing their perceived health knowledge, economic conditions, attitudes and practices regarding their reproductive and sexual health including AIDS and sexually transmitted diseases (STDs). The study was a pioneer in terms of content and objectives particularly for the sexual components. For the family economic conditions, 64.8% described it as medium, and 70% take their pocket money from their fathers. 30% of respondents did not have any health information, 66.4% expressed their need to have sex education and reproductive health information. 60.4% have weak information or did not know about STDs; around 82% of the participants have the desire to attend awareness programmes about STDs. The results gave an overview about the Palestinian youth needs, problems and concerns from all perspectives and recommended a reproductive and sexual health awareness programme to be introduced at a national level (CDPHC, 1999).

Afifi (1999) undertook a needs assessment exclusively tackling sexual and reproductive health issues of Gazan youth of both sexes. They were asked to prioritize reproductive health topics where they would want to be educated about. Sequentially, youth ranked as high priority issues; marital relationships, communication skills in domestic relations, gender and women empowerment, and pre-marriage counselling. On the other hand areas that were given low priority were, AIDs, high-risk pregnancy, late pregnancy, physical violence, infertility, divorce and menopause.

Al-Rifae (2002) through UNFPA in Palestine examined Palestinian adolescents' knowledge and attitudes regarding reproductive health and family planning matters aiming to form a baseline data for Palestinian policy makers and planners. A total of 437 adolescent students from 25 schools in the north, middle, and south West Bank were involved in the study. The participants were given a 52 Likert scale questionnaire to measure their attitudes toward issues under study. 88.4% of the respondents think that information regarding reproductive health issues should be obtainable from families and reinforced from schools, only 29% agreed with a statement granting the right of man in making the decision for the number of children in the family. 75.5% agreed that age-sensitive relevant information should be available within the school system. Based on the

findings of the study, the researcher recommended that attention should be paid for using a strategy mix that includes crafting programmes on reproductive and sexual health education as well as gender sensitization targeting adolescents as well as their teachers. Advocacy for the women's reproductive rights should be on the agenda of those policy makers and planners. Gender norms and power dynamics often limit young women's control over their sexual and reproductive lives. Adolescent girls are especially vulnerable in the area of sexual and reproductive health (Al-Rifae, 2002).

AL-Jinedy et al (1998) study of 1186 Egyptian students from three government capital cities of Menoufia, Beheira and Beni Sueif were interviewed between October and December 1997 to determine their knowledge of and attitudes towards human sexuality. The sample comprised 620 male and 566 female students aged 13-20 years (preparatory and secondary schools). The knowledge scoring was rated as zero, 1% to <50% (low score), 50% to <75% (moderate score) and 75% or above (high score). The attitude scoring was rated as 1% to <50% (negative attitude), 50% to <75% (moderately positive attitude) and 75% or above (highly positive attitude).

The study reflects the general lack of knowledge of Egyptian adolescents regarding sexuality. In general, males had a more positive attitude toward sex education than females. An informal programme should be designed to raise adolescent students' awareness of sexuality and improve their knowledge and correct their misconceptions about the issue. The recommended programme should be organized by school teachers of biology and religion and school nurses.

Galal, et al (2001) identified self-reported health problems among Egyptian adolescents, a multistage, stratified random sample of 1002 adolescents from preparatory and secondary schools. 67.6% of the sample was surveyed in Cairo, and 32.4% in the rural district of Qaliubia. Of 863 completed questionnaires analyzed, 54% were from males and 46% from females (age range: 12–18 years). The study showed that more boys than girls perceived their health as very healthy whereas more girls considered their health to be average. Significantly, more adolescent females reported weekly occurrence of abdominal pain, headache, dizziness, backache, morning tiredness, sleep disturbance and

nervousness. The study recommended awareness-raising of parents and adolescents is necessary to allow determination of the relationship between gender and health.

There are strong differences in Arab societies and the social structure tends to be male dominant. The patriarchal structure of these societies is translated into cultural practices where women's social status is strongly contingent upon being married and rearing children, especially boys (Al- Sadawi, 1995). This status disempowers, subordinates, and weakens the status of women (Al- Sadawi, 1995 and Shalhoub-Kevorkian, 1997)). Al-Krenawi et al (2001) pointed that the world is different for girls than it is for boys in these societies. For boys, adolescence can be a time for expanded participation in community and public life. Girls, however, may experience new restrictions, and find their freedom of movement limited. In addition, socially constructed gender roles may give girls little say about their own aspirations and hopes, and restrict them to being wives and mothers (Abu Nahleh, 1999). Boys face other kinds of societal and peer pressures, as they may be encouraged to be risk-takers and to demonstrate their manhood through aggressive behaviour (Hall, 2003).

Aghabekian and Shaheen (1999) conducted a qualitative study involving 673 Palestinian including 112 young women aged 10-20 years from the West Bank and Gaza Strip. The study aimed at identifying the women perceived health needs, problems and expectations. The researcher indicated that major health needs and problems of Palestinian women were related to education/awareness and empowerment; where it revolved around their ability to use own knowledge and skills in holding a job supported by laws and allowing them to continue education and societal respect toward their right to work. Health education was perceived as a second priority for the women under study in empowering women to deal with own health, and health of the family and society complemented by community support services to working women.

Mansour and Awartani (1999) have examined the body image and dieting behaviours among 899 Palestinian adolescents' girls living in the central part of the West Bank. The results showed that 16.5% perceived themselves as being "too thin", 71.5% as an average and 12% thought that they were "too fat". The investigators of the study concluded that

the adolescents' preoccupation about weight and body image as well as unhealthy nutritional patterns is spread in the specific context of Palestine, and it is a time to develop primary prevention programmes to address this issue with adolescent girls.

The studies reviewed indicate the needs of the Palestinian and Arab adolescent to have knowledge and awareness regarding their reproductive health and the support they need to have from family and society for their development. The need for reproductive health and gender awareness, as well as the psychological and social concerns were of importance to be looked at and to be part of any planned educational programme. Gaicaman and Johnson (2002) in their Palestinian household survey indicated that the gender gap was evident in the family preferences to have males, to educate their boys to higher levels than girls in some areas of Palestine, and to let their daughters marry at early age. Very few studies related to issues in adolescents' health other than health and well being assessments and surveys were identified in the local literature

Thus, this study will try to give some elements of response through the investigation of adolescents' health in the international literature and to identify for differences in the adolescents' health needs and concerns.

In a recent study, Hassan et al (2001) examined the extent of Reproductive Health Awareness (RHA) in 300 students in relation to religion and levels of education. Data of RHA collected from 150 post-graduate and 150 undergraduate students divided into equal number of Hindu, Muslim and Sarna Students were analyzed using percentage, ANOVA and t-test. Results showed that the percentage of students having RHA was very low. The lowest awareness was observed in Sarna Students. Though Hindu and Muslims did not differ significantly in their RHA, the Sarna tribal students scored the lowest score, and differed significantly from the other two groups. The level of education was found to produce significant effects, the post-graduate students being more aware than the undergraduate.

Felts et. al. (1996) have analyzed adolescents' perception of weight loss and self-reported weight-loss activities on 10,870 black, Hispanic, and white respondents. The results

showed that 24.8% perceived themselves as being "too fat". Of that group 76.4% were trying to lose weight. Females comprised 74.4% of those reporting that they were "too fat" and trying to lose weight. Gender differences in weight perceptions were significant at ($p<.001$), with females (34.6%) being more likely than males (14.4%) to report being "too fat". Whites (26.0%) reported being "too fat" more often than did Hispanics (23.9%) and blacks (17.2%). Skipping meals and exercise were the most commonly reported weight loss strategies. Hispanics were most likely to skip meals, followed by whites and blacks. Whites were more likely than the other groups to use exercise as a means of losing weight. Adolescents who perceived themselves as "too fat" reported fewer days of strenuous activity ($p<.001$), fewer hours of strenuous exercise in physical education class ($p<.001$), and more hours spent viewing television on school days ($p<.001$) than others.

Muscari, Philips, and Bears (1997) investigated the health beliefs and behaviours of 2284 high school juniors in two rural counties of Pennsylvania. They used the Adolescents Wellness Appraisal (AWA) for their survey, to understand adolescents' health. Results demonstrated that presence of the adolescent problems, such as violence, substance usage, and poor nutrition and exercise habits. The results were compared to an earlier survey which utilized the same tool with seven hundred and nine adolescents in Michigan. Results also suggested a need for greater availability of health promotion in rural areas, as well as suggestions for future research specific to needs of rural adolescents.

Neumark-Sztainer et.al. (1997) compared the psychosocial and weight related concerns and weight control, eating, and exercise behaviours of overweight and non-overweight Native American Adolescents in a cross-sectional survey of 11,868 youth in grades 7 through 12. An analysis of variance and chi-square tests were used to examine associations between weight status and psychosocial and weight related concerns and behaviours. The results indicated that 25% of the study population was overweight. Overweight youth were twice as likely to report health concerns as non-overweight youth. The researchers suggested that interventions aimed at obesity prevention and overall health promotion strategies are essential to develop healthy weight control behaviours that will not lead to negative psychosocial consequences.

Razmus and Edgill (1993) studied the knowledge, attitudes, values, health locus of control and risk taking potential of 1,049 rural adolescents in relationship to their risk for contracting HIV. They found that the subjects had more correct than incorrect knowledge about HIV and that their personal values, of an exciting life and pleasure were related to their likelihood of not participating in high-risk behaviours. Their attitude score was negatively related to their likelihood of participating in risk behaviours.

Adolescents' health concerns, needs and problems are similar (Razmus & Edgill; 1993), and certain risks are common to all adolescents, Muscari et al, (1997) however, believes that the culture, social backgrounds, and lifestyles have an impact on prevailing needs. For example the international adolescents' health studies revealed issues of HIV infection, overweight, violence and substance abuse that need education and health promotion. On the other hand, the Palestinian adolescents' studies indicated the need for gaining information and education on issues of sexual health, psychological concerns, social support and communication patterns.

However, Palestinian health professionals began serious efforts to build capacity in health promotion, education and prevention. Among those health professionals are nurses who work in different health care setting (NSHP, 1999). Pender (1996) described nursing as "a profession that needs to spread its wings and model new systems for primary health care that are focused on promoting health and preventing disease" (p12). Hechinger (1992) added "for young people, the guiding themes for achieving and remaining healthy includes receiving information, access to health services, motivation and support of adults, and an improved environment" (p.218).

The Palestinian adolescents' health concerns and needs as revealed by the studies reviewed imply a need for raising health awareness and empowerment through the use of health educator intervention, and for building up their potential and assisting them to have a healthy development where this study intended to do.

Thus, the purpose of this study required three experimental steps and utilized the experimental research design (the Solomon 4-group design) to implement these steps: (1)

a pre-intervention data (pre-test) were obtained from Palestinian female adolescents aged 14-17 years from the 9-11 grades in two governmental female schools aimed at assessing the health beliefs and attitudes toward their physical and psychosocial health. (2) Based on the results obtained from the pre-intervention data analyses, a health education intervention programme was developed and introduced by a health educator direct instruction to females in 10th grade in two experimental schools. And (3) a post intervention data (post test) were obtained from the experimental and control subjects on the same pre-tested variables to measure for the influence the health educator made on the health beliefs and attitude of female adolescents.

2.2 The Role of Models and Theories in Health Education

Prior to the discussion of the role of theories and models in health education, a definition of health education is warranted. Green (1977) defined health education as "any combination of learning experiences designed to facilitate voluntary adaptations of behaviour conductive to health" (p. 4). Green further described "facilitate" as implying a "helping, assisting, or supporting role for the educator" (p. 4). "Teach" would also be an acceptable term because so much of health education is based on the principal figures in the teaching-learning process. Greene and Simon-Morton (1990) further added, "This definition presents health behaviour as the target outcome for all learning activities, however, it does not rule out intermediate outcomes of knowledge, attitudes, feeling, values and skills" (p.29)

Thomson (1998) defined the practice of health education/promotion, similar to that of nursing practice which must be viewed "as dynamic cycle of activity, involving several key stages, which enable nurses to achieve a desired result" (p. 409). This involves assessment of need, planning and setting of aims (what it is you intend to achieve), setting of objectives (specific, measurable, realistic, and time scale), deciding which method will achieve your set objectives and then evaluation of outcome. The evaluation of outcome is necessary in order to make improvements (Thomson, 1998).

Theory, as defined by Polit & Hungler (1995), "is an abstract generalization that presents a systematic explanation about the inter relationship among phenomena" (p22). Pender (1996) defined theories in relation to health promotion "as assumptions of how behaviour relates to factors influencing it" (p. 190). Green (1977) added, "theories can help us understand the nature of behaviour (explanatory theories), and suggest ways to achieve behaviour (change theories)" (p158). While models integrate a number of concepts, they are planning frameworks that can help to structure an intervention. They usually consist of logical interactive steps that guide the planning process (Pender, 1996).

Theories tell which factors that should be looked at, while models tell how, when, and where to target these factors (Green and Kreuter, 1991). For example, a theory will suggest that it is more likely for smokers to quit smoking if they perceive that the consequences of smoking on their health are severe. A model will help plan an intervention that uses this perception to increase the chances of quitting. Theories by themselves will not produce an effective intervention, but a model based on theory will (Green, 1977).

According to Quttieneh (1997), most of the models and theories in health education/ promotion today were developed in the context of the Western societies, where people may have more control over their lives, in contrast to people in developing countries. However, there are many common elements related to human nature in any society. A successful application of a model or a theory developed elsewhere should consider its flexibility and adaptation to the local context (Quttieneh, 1997).

Theories and models focus predominantly on negative behaviours that need to be changed (Green 1977, & Pender 1996). However, there is sometimes a need to encourage the existing positive behaviours rather than combating the existing negative ones. For example, the Stages of Change Model by Prochaska & De Clemente (1983) explain how people change rather than why they do not. These stages are: (1) Pre-contemplation, where the individual is content with the existing behaviour and sees no reason to change or not intending to make changes. (2) Contemplation, the individual is considering a change. (3) Preparation, the individual is making small changes. (4) Action, a change in

behaviour is attempted or actively engaging in a new behaviour, and (5) Maintenance, the behaviour is continued, and the individual is sustaining the change over time.

Nursing models have been considered important in health. Butterfeild (1990) suggested that "nursing has to reconcile the difference between population centered practice and nursing theories that primarily define nursing in terms of individually focused care" (p. 215). Increasingly, the individual is now recognized as individual, group, family and community, and health is viewed as a relative subjective and holistic concept in which the individual and society have responsibility (King, 1994). King added, "Nurses must move from the traditional to an egalitarian relationship promoting client autonomy and empowerment" (p. 212). Pender (1996) defined empowerment as "the process of enabling people to increase control over and thus, to improve their health" (p. 192). Kiger (1995) added and stressed that health education is based upon the assumption that the health status of individuals or communities may be influenced purposefully.

This study intends to adopt such approach purposefully aiming at affecting the health beliefs and attitudes of female adolescents through education, thus empowering them toward a better healthy lifestyle and for further influence on their communities.

There is a wide range of ways in which models of health education in their purposes and methods are applied according to the health status and needs of the individuals and the society. For example, Kiger (1995) listed the approaches to health education as:

- The information – giving or medical model.
- The educational model.
- The propaganda or media model.
- The enabling or community developmental model.
- The political model.

Kiger (1995) stated that "models are not discrete, some share certain elements with others, and they do not have to be operated in isolation from each other, and that health educators often use strategies which draw on more than one model" (P. 45). For effectiveness on the health beliefs and attitudes of adolescents in the study, the

educational and community development models were adopted as a reference for the health education programme at the intervention phase of the study. Kiger (1995) has summarized the educational and community development models in terms of their assumptions, strategy, tactics and role of educators/practitioners in Table 2.5.

Pisharoti (1975) described the educational model of health education as having "knowledge, attitude and behaviour component" and being aimed at "individual, family and community behaviour" and their interaction patterns (P5). Pisharoti also stressed that health education was a "process" rather that a single procedure, and that learning takes place through the efforts of learners, while the health educator provides the circumstances in which the learning take place.

The educational approach emphasizes that health education should be concerned with affective (emotional) as well as cognitive (intellectual) aspects of learning (Tones, 1990). With this approach, much of the activity directed at helping the person develop skills in decision-making and in clarifying values and beliefs about health (Kiger, 1995).

Table 2:1 a summery of the educational and the community development models

The educational model			
Assumption	Strategy	Tactics	Role of practitioner
Education will elicit potential and achieve autonomy. Exploration of values and feelings will activate health action.	Assess learning needs and readiness with reference to the group concerned and relevant research, then generate a systematic approach.	Set clear objectives Identify evaluation criteria. Ensure feedback.	As educator/enabler, lead the person to learning discoveries, set up opportunities to discuss feelings and challenge 'facts'
Community development model			
Assumption	Strategy	Tactics	Role of practitioner
People have strengths. They will want to use them to improve their health on their terms	Offer a "let's get together and talk about this" approach to determine felt needs	Organize discussion and communication among a wide range of individuals on given health issue to arrive at consensus	As educator/enabler help the person express discontents, encourage organization to facilitate change

Kiger (1995) described the enabling (community development) model, in that people have strength and abilities which they will be willing to contribute on their terms, to the process of learning about and achieving health. Kiger (1995) further described this model "offers the opportunity to improve human relationships, develop problem-solving skills and increase self-esteem in a way that will make health education relevant to multiple-deprived groups in society" (p. 41).

Based on priorities of needs and concerns presented by the adolescents as a result of the pre-intervention data, the investigator assumes that the two models combined together will be the base for the intervention phase of the study.

2.3 The Role of the Health Educator

The health educator is an expert in a variety of individual, group, and education approaches, as well as knowing which educational media and materials to be used effectively. The health educator uses different methods of communication depending upon the situation he/she needs to develop in his/her educational programme (Greene & Simons-Morton, 1990).

Davis & Ware (1981), in Greene and Simons-Morton (1990), summarized the characteristics and role of the health educator and the practice of health education as:

1. Health educators must have knowledge of what determines behaviour, and what strategies to use to deal with any aspect of health related behaviour
2. Health educators must be able to assess the effectiveness of the planning, and implementation of activities, designed to accomplish a behavioural objective
3. Health educators must have a body of knowledge and skills to be able to assist people in their own self-care
4. Health educators must have the skills to help people evaluate possible alternatives for actions which may or may not result in any subsequent health related change
5. Health educators have responsibility for helping people, not just to be healthy, but to have something to be healthy for (p. 31).

Freudenberg (1984) suggested that health educators approach their task from two divergent viewpoints as: "one, health educators focusing on the internal psychology of individuals and emphasizing the changes of individual behaviour (Darden, 1973 and Green, 1977), and two focusing on organizing people to change health-damaging institutions, policies and environment" (Zaltman and Duncan, 1990, p.372).

Health educators might be described as falling in two groups: those who assume that they have a duty to use persuasive strategies to help people learn new patterns of behaviour, and those who assume that health education is aimed at assisting rather than persuading people to change (Tones, 1993). Tones further added "health educators are divided not only on the issues of weather or not to persuade, but also on how persuasions are achieved, who needs to be persuaded and how persuasion should be applied" (p. 394). That is health education is a multifaceted activity, employing a variety of means and strategies to deal with the promotion of health in society (Greene and Simons-Morton 1990, and Kiger 1995).

The activities for which health educators are best known is the delivery of direct health education when serving as: teachers, trainers, health counsellors, consultants, and community developers (Greene and Simons-Morton 1990, Kiger 1995, and Pender 1996). They added, during much of the time they are in contact with a specific target audience. Many health educators are responsible for reaching audiences by selecting, developing, and employing media (Greene & Simons-Morton 1990).

- Health educators are teachers, as such they are concerned with gathering, interpreting, and disseminating information to those who have a need to know (Greene & Simon-Morton, 1990). Teaching is the art and practice of creating learning experiences to achieve specific educational objectives. Health educators as teachers:

  - Select appropriate educational objectives
  - Develop appropriate learning activities
  - Conduct learning activities to increase knowledge, influence attitudes and/or develop skills of the target audience. (Greene & Simons- Morton, 1990. Kiger, 1995)

Kolbe (1990) further described that the health educator enhances best learning when he/she:

- Permits free exploration
- Gives opportunities to discover a problem
- Gives feedback on consequences of action
- Allows for self-pacing
- Allows discovery of different types of relations
- Facilitates interconnected discoveries about physical, cultural, and social worlds (Kolbe,1990)

The following studies elaborate on the role of the health educators through health education programmes in affecting the learner's knowledge, attitudes, beliefs and behaviours. Ellickson and Bell (1990) developed a health education programme called ALERT to curb drug use in twenty schools. The programme utilized an adult health educator for direct–instruction that taught the seventh–grade in ten schools, and a high school students as leaders from neighbouring high schools assisted the adult teachers in other ten schools. The ten control schools did not receive the project ALERT curriculum, and were allowed to continue traditional drug information programmes they might have. The curriculum impact was assessed at 3, 12, and 15 month follow-ups after receiving a booster sessions when the students reached the eighth-grade.

The results of project ALERT reduced levels of cigarette and alcohol use, especially for baseline experimenters and after the delivery of the booster lessons. Smoking have declined by 50% in the teen leader schools (P=0.006) and by one third in the health educator (adult) group (P = 0.09).

This variation allowed the researchers to test whether the curriculum was more effective when older teens were involved than when it was taught solely by adults. Ellickson and Bell findings suggested that direct-instruction and booster lessons were important for maintaining and strengthening programme results.

Brent and DiOblida (1993) compared the scores of children with direct instruction model for grade two pupils in one elementary school in New Jersey with scores of children with traditional based programmes in another school; they found that the direct instruction students were superior to their counterparts in the other school.

- As *trainers,* the health educators teach health professionals how to carry out health education responsibilities. The emphasis is on the process of health education. The learners are usually other professionals or staff who are responsible for important health education functions, for example, nurses, physician and schoolteachers. Quttieneh (1997) developed a training guide based on the PRECEDE-PROCEED model to be used as a tool for continuing education to improve the planners and supervisors in primary health care settings in Palestine. This guide adopts simple training procedures that do not require special resources or management efforts. For example, the guide used simulated case studies and situations relevant to the developing countries. Overall training is usually conducted in short but intensive workshops or courses (Kiger, 1995).

- Health educators act as counselors, counseling is an increasingly important direct service provided by the health educators (Society of Public Health for Education, SOPHE 1976). Counseling helps people to achieve personal growth, improve interpersonal relationships, resolve problems, make decisions and change behavior. Counseling is a natural extension of the teaching-learning process (SOPHE 1976, and Maibach & Parrot, 1995).

- Health educators as consultants provide consultation to clients on specific health problems, content, process or programmes (SOPHE 1976). They act as a resource person and information disseminator, participate in discussions or planning groups and use different methods of communication (SOPHE, 1976 and Maibach & Parrot, 1995). For example, Marion (1993) used an intervention programme for increasing condom use-intentions among 109 unmarried, sexually active Black adolescent women attending an Urban League AIDS prevention programme. The intervention was designed with the help of focus groups comprised of adolescents from the

community. The participants were lead by a Black women health educator for three group sessions. Factual information was presented and reinforced by discussion, videotapes, games, and exercises. The last session focused on skill building and self-efficacy on condom use. Analyses indicated that post intervention scores were higher on intentions and self- efficacy to use condoms, AIDS knowledge, outcome expectancies regarding condom use. Increased self-efficacy and more favourable expectancies, beliefs that condoms decrease sexual enjoyment and the women's perception of her partner's support were significantly related to increased intentions to use condoms. In general increased AIDS knowledge and specific prevention-related beliefs (STD and pregnancy prevention) were not associated with increased condom- use intentions.

✧ Health educators have traditionally served as community organizers. Their goal is to promote better use, organization and/or availability of resources (Greene & Simons-Morton, 1990). They serve as change agents who function in institutional and community settings; they also seek to alter the social environment as it affects people's health (Freudenberg 1984, Greene & Simons-Morton, 1990). This could mean, for example, working to introduce school health programmes, or to facilitate access to health services in a rural community. The health educator must involve local leaders the gatekeepers, local organization, and intersectional coordination (Freudenberg, 1984). For example, Carr (1988), as project manager of a health education programmes for the Catholic Relief Services in Jerusalem, has reported on the success of health education programmes for mothers in 200 villages in West Bank over a period of more than 10 years.

The project personnel developed a curriculum about breast-feeding, nutrition, personal hygiene, child development and first aid. Carr reported that the health educators were nurses, village health workers or school-teachers, who were trained by supervisors of the project. Carr argued that the success of the programme was evident in three areas: the decline in infant deaths in the participating villages, and the difference in behaviours of the mothers in attending the antenatal clinic, at a rate of three times more than mothers who were from non-participating villages. A behaviour

change was evidenced by the reduced use of bottle-feeding by the participating mothers (Carr 1988).

- Health educators use media through a number of channels, including print sources, mail, television and radio. Media can be effective in disseminating information, reinforcing previously learned information or existing attitudes, and/or stimulating psychological association (Maibach and Parrott, 1995). Nearly every health educator is at times called upon to select audiovisual aids and materials for the use in his education programme (Maibach & Parrot 1995, Greene & Simons-Morton, 1990). For example, Kim (1998) has surveyed 412 Korean adolescent female students for their attitudes, norms, and intentions toward breastfeeding and developed a campaign consisted of a teaching session that featured a 30-minutes videotape that explained the importance, benefits, and advantage of breast-feeding. A panel including the researcher of the study, a nurse, a paediatrician and several mothers who breastfed spoke to the students about breast feeding, and encouraged them to support the practice of breast feeding. The data for the control group was collected after class by the investigator, and the post-test was administered immediately after the campaign.

Kim's study examined the differences between the two group's scores of attitude, norms and intentions to breast-feeding and bottle feeding and found that adolescents are highly influenced by audiovisual media, the choice of audiovisual as a teaching tool is developmentally appropriate for such age group. Kim (1998) emphasized that "audiovisual media have proven to be very effective teaching tools and are used increasingly in nursing or health education" (p. 236).

Nurses like all other health educators have had a developing role in health education; Clarke (1991) & Caracher (1994) have described health teaching as a nursing tool to be used to promote spiritual, mental and physical health. Beaver (1986), Long & Irving (1993) have gone further and suggested that the nature of nursing is such that teaching is of the very essence of nursing.

According to Kiger (1995) The Royal College of Nursing in 1989, suggested that one way in which nursing can move towards professional excellence is by incorporating "activities related to the promotion of health, prevention of disease and an approach which encourages individuals to take responsibility for their own health" (p.6). Pender (1996) further argued that nurses have a major role to play in health promotion since they constitute a large health care workforce and have the opportunity to work closely with individuals, families and communities.

Perhaps one of the best-known and most widely accepted statements on nursing is by Virginia Henderson in Kiger (1995). She describes the unique function of the nurse "as assisting the individual, sick or well, in health-related activities which he would perform unaided if he had the necessary strength, will or knowledge" (Kiger, p57). This reflects the implicit health education role of the nurse. Moreover, Henderson indicates that the nurse assists the person to gain motivation as well as knowledge and skills, and directs her energies to the well and the sick populations (Kiger, 1995).

With the changing patterns of health and disease, there is an increasing emphasis on prevention, which means that; there is a need for nurses to take a more active role in all aspects of health education (Thomson 1998). Nurses in Palestine have considered health education in their practice, yet it is not been taken as a primary role in their function (HDIP, 1998). In that, the dual role of the nurse, of provider of care and promoter of health requires that nurses strive to devise innovative strategies to perfect enabling, empowering and promoting skills in their clients (Thomson 1998).

In conclusion, the Palestinian adolescents' studies presented earlier have identified and explored the health needs, concerns and problems of the adolescents. The study by Carr (1988) has evaluated the impact of health education programme and the role of health educators in changing some health practices of Palestinian women. Thus, assessing, educating, and evaluating health education programmes and the role of health educator's intervention are of prime importance to evaluate their effectiveness for developing health promoting beliefs and attitudes and thus the lifestyle of adolescents.

The appropriate site for implementing such programmes is the schools. Hern et al (1998) stated "schools are being recognized as an optimum site for health promotion programmes, it's through health education, schools can provide opportunities for role modeling, peer pressure and consistent support and education" (p. 273). These are the elements that often work when trying to enhance or change adolescents' health beliefs and behaviors. Since peer influence is a critical motivation for this age group, the adolescent years may be a developmentally appropriate time to perform group education, about the need to instill healthy beliefs and attitudes that result in positive health attitudes and behaviors.

The health educator activities and health educational material to be introduced in this programme were based on the adolescents' health needs and concerns as indicated by the pre-intervention data. Thus the health educator have used different educational methods; direct instruction, audiovisual aids, distributed health education handouts and leaflets that were appropriate to adolescents educational needs, to help them acquire knowledge and instill healthy beliefs and attitudes toward a healthy living.

2.4 The Stimulus-Organism-Response Model

In this section the conceptual and operational definitions of the concepts used in this model will be discussed. The discussion will be guided by a theoretical analysis of related literature and comparison with other health education/promotion models.

The importance of the model (S-O-R) as been proposed by Greene and Simon-Morton, (1990) is that it is attached to the internal features of the organism. Attitudes, values, beliefs, and other intervening variables are presumably things that people somehow acquire and carry around in their heads (Darden 1973 and Greene & Simons-Morton 1990). Although people may change over time, these changes typically occur slowly and many values, beliefs, and attitude appear to remain essentially the same for years and provide a consistent, predictable quality to many of a person's behaviour (Greene and Simon-Morton, 1990).

Health educators and scientists, Darden in Greene & Simon-Morton (1990), Green (1977), Greene & Simons-Morton (1990), and Green & Kreuter (1991) have related health education to the following four theoretical orientations in explaining human behaviour: (1) Behaviourism; primarily concerned with environmental effects on behaviour. (2) Internal psychology; focuses primarily on internal cognitive and affective disposition (beliefs, attitude, cognition and values). (3) Social learning approaches; attempt to bridge the behaviour and internal psychological dispositions. (4) Social change approaches; concerned with altering the conditions of people's lives rather than their personal health behaviour.

Darden (1973), Green (1977), & Greene & Simons-Morton (1990) have focused on the internal psychology of the individual (cognition, beliefs, attitudes, skills and values). They do not deny the importance of the environment, they are concerned about behaviour, but they are interested in "what goes on inside the person's head" (p. 158) and they seek to influence behaviour through mediation of internal dispositions. Darden (1973) emphasizes the individual as the primary target of health education and the affective domain (attitudes, values, and feelings) are the major focus of health education programmes. Greene and Simons-Morton (1990) emphasized that the stimulus in S-O-R model seeks to mediate the internal psychology (organism) of the individual and how it is related to effects and interaction of knowledge, skills, attitudes, values and beliefs; "things inside the head" (p. 158).

For application of the Stimulus-Organism-Response (S-O-R) model in (Figure 2.1) as one of the theoretical frameworks used for this study, one must need to define and clarify the concepts of the model commencing with the internal elements of organism concept and the value of its integration to the proposed study.

Davis & Ware (1981) indicated that perceived health is viewed as a non-specific measure of health status because it allows respondents to indicate the objective information and knowledge they have about their own health and how they feel about or evaluate that information. Greene & Simon-Morton (1990), indicated that "knowledge is based on a certain degree of subjective judgment, from a scientific standpoint all knowledge is

relative, rather than absolute, and thus subject to change in the light of new development" (p.161).

An interesting similarity between knowledge and skills is that their development within the individual learner can take place without any great change in his or her value structure or attitudes (Greene & Simons-Morton 1990). On many occasions the inappropriate or ineffective health behaviour of an individual may result from the lack of specific skills (Greene & Simon-Morton (1990). Skill, as defined by the Oxford English Dictionary (1971) "is the capability of accomplishing something with precision and certainty, practical knowledge in combination with ability, cleverness and expertness" (p 1550). Greene and Simons-Morton (1990) added "the process of skill or knowledge acquisition requires some degree of emotional involvement by the learner if it is to occur" (p.163). They further stated that emotional involvement always carries the potential for attitudinal change, whether planned or unplanned (Greene & Simons-Morton 1990).

The terms attitudes, values, and beliefs are concepts used so "freely in the literature of modern-day education that it is easy to lose sight of the fact that no one has ever seen or touched any of these entities which seem so real to the educator" (Greene & Simons-Morton 1990 p.159).

Although educators from a variety of fields regard values as important, few clear explanations are offered to precisely explain what a value is. By implication, if not by definition, values refer to those things which one holds in high regard or esteem (Greene & Simons–Morton 1990). Value clarification attempts to help individual learners identify and examine the important values they already have (Greene & Simons-Morton 1990). Rath et al (1978) described values as "people grow and learn through experience and out of experiences may come certain general guides to behaviour, these guides tend to give direction to life" (p.26). Rath et al (1978) further described values "as more complex than attitudes and may represent a focal point for a whole system of interrelated attitudes" (p. 26).

Green & Kreuter (1991) provide a clear definition of beliefs as "a conviction that a phenomenon or object is true or real, the words faith, trust, and truth are used to express or imply belief" (p.72). Beliefs are classed as true or false by an external observer even though the holder of a belief by definition believes it to be true (Rokeach 1966). Rokeach further described that an "individual's beliefs are formed into an orderly structure based upon their relative importance" (p.164). However, he bases the importance of a belief, not upon the intensity with which it is held, but on the number and strength of its connections with other beliefs. Rokeach further described beliefs as existential and are regarded as quite central to one's belief structure that directly concern "one's own existence and identity in the physical and social world" (p164).

Rokeach (1966) defined attitude as "a relatively enduring organization of beliefs about an object situation predisposing one to respond in some preferential manner" (p.54). The term belief in definition of attitude provides further evidence of the overlapping nature of these two variables. Attitudes, according to the view of Rokeach and others, consist of series of beliefs organized in such a way that they predispose one to act or respond to some situation in a predictable manner. However, Greene & Simons-Morton (1990) added, "when a belief interacts with others to produce a ready potential for action, then the term attitude properly applies" (p. 165).

Since the S-O-R model functioned as a modelling framework for the health education intervention. The organism in this context refers to the assessment of the female adolescents' health perception and how they look at it through their values, beliefs and attitudes at a baseline and post intervention phases. The stimulus refers to the health educator intervention by the application of the educational and community development models mentioned in the previous section for the purpose of affecting the adolescents' health beliefs and attitudes toward a healthy living and better life-style. Response is the impact of the health education intervention programme on the adolescents' health beliefs and attitudes whether it affected them or not to toward a healthy living.

The response will be re-assessment of the beliefs and attitudes of female adolescents under study after the education intervention phase. In other words, it is the evaluation of

the role of the health educator intervention. Greene and Simons-Morton (1990) elaborated on the response element in the S-O-R model that "although the health educator in general tend to place heavy emphasis on facilitating specific behavioural change as a long term goal, most of their immediate educational objectives are directed toward such tasks as knowledge gain, attitudinal change, or value clarification" (p. 158). They added that the health educator attempts to build a better store of knowledge and foster a more constructive attitude relying on the persistence of knowledge and attitudinal change in affecting the learner.

Therefore, the investigator of the study has considered the S-O-R model for its relevance to the proposed study since it is an assessment of the beliefs and attitudes and intends to have a belief and attitudinal change in female adolescents toward healthy living. Also it fits well with the experimental research design, that allows for pre-test (first-time assessment or what is referred to as the pre-intervention data), then the health educator intervention to allow for knowledge gain and attitudinal change (the stimulus element), then, the post-intervention assessment or evaluation of whether the health educator intervention has affected and made a change within the adolescents' health beliefs and attitudes or not (the response element). Please refer to the S-O-R figure at the end of this chapter

Many health education programmes have used different concepts, theories and models, as theoretical frameworks for their health education/promotion programmes (Pender, 1996). The following health education programme studies are presented for clarification of the different health education models and theories utilized and for comparison with the health education model utilized for this study.

For example, Marion study (1993) referred to earlier designed AIDS prevention intervention programme based on the Social Cognitive Theory and the Theory of Reasoned Action in order to increase the condom use among 109 unmarried, sexually active, Black adolescent women. Tones (1993) explain that the Health Action Model seeks to explain the factors which generate a given intention to act within three interacting systems: The first of this three-interaction system is made up of a number of important "beliefs". The second, "motivation system" is concerned with values, attitudes,

feelings and emotional state, and the third, the "normative system", emphasizes the importance of various kinds of social pressures on people's health decisions. The Health Action Model in particular takes a strong psychosocial perspective, viewing behaviour as it happens in the social and economic environment rather than solely behaviour per se (Thomson, 1998).

The PRECEDE-PROCEED model adapts a comprehensive approach, taking into consideration both environmental and behavioural factors influencing health related practices (Quttieneh 1997). Green and Kreuter (1991) addresses predisposing, enabling and reinforcing factors that influence an individual's intention and ability to make successful health behaviour changes. Predisposing factors (PF) includes an individual's knowledge, values, beliefs, and attitudes regarding specific health practices. Enabling factors (EF) are either barriers or facilitators affecting one's ability to engage in a specific behaviour (Green &Kreuter, 1991). Reinforcing factors (RF) are those consequences of actions that determine whether the individual receives positive or negative feedback and is supported socially after it occurs (Green & Kreuter, 1991).

Pender et, al. (1996) suggested that health protecting (preventive) and health promoting behaviours might be viewed as complementary components of a healthy life- style and proposed the Health Promotion Model (HPM), a paradigm for explaining promotive health behaviour. Pender (1996) described the HPM as a competence or approach model, unlike the Health Belief Model (HBM). The HBM provides insights regarding the patient's beliefs, their perception of susceptibility, perceived seriousness and threat of a disease, and the relative costs and benefits as they affect readiness to change (Thomson, 1998). HPM does not include "threat" as sources of motivation for health behaviour. Pender (1996) added, "Although immediate threats to health have been shown to motivate action, threat in the distant future lack the same motivational strength" (p.52). Thus, avoidance-oriented models of health behaviour are of limited usefulness in motivating over all healthy life styles in people, in youth, and early adulthood as well as in other individuals who for varying reasons perceive themselves to be invulnerable to illness. Because the HPM does not rely on "personal threat" as a primary source of motivation, it is a model with potential applicability across the life span (Pender, 1996).

Many health education programmes have used the Health Belief Model (HBM, Pender, 1996). This model was developed in the 1950s and 1960s by social psychologists in the USA and attempts to explain what motivates people to engage in activities aimed at preventing and avoiding diseases (Greene & Simons-Morton, 1990). The model described by Rosenstock (1966) suggests that an individual's motivation to take preventive action is dependent on:

- Perceived level of susceptibility: how vulnerable or at risk to the disease or condition the individual feels.
- Perceived severity: how serious the physical, emotional and social consequences of having the disease or condition are believed to be.
- Perceived benefits: how beneficial or effective the actions are believed to be in preventing the condition or reducing its severity.
- Perceived barriers: the physical, psychological, financial and other barriers that the individuals would need to overcome them (Greene & Simon's Morton, 1990).

The model suggests that a stimulus or cue is required to trigger the process so that the individual becomes aware of a potential health risk and initiates the appropriate behaviour. Things such as a television programme, a health care professional, an advertisement or an article in a newspaper or magazine may provide cues or a stimulus. Greene & Simons- Morton (1990) added, the model also suggests a number of demographic, psychological and cultural factors that modify the individual's perceptions of the benefits of and barriers to preventive actions.

Health educators may find that the health belief model helps them understand which people perceive them to be susceptible to a particular health problem, and therefore target their educational activity better. It will also help the educator to alleviate a client's particular anxieties and plan activities with the client that will meet their specific needs.

Petosa and Wessinger (1990) used the Health Belief Model as the conceptual framework in examining HIV educational needs of seventh, ninth and eleventh grade students by identifying adolescents' knowledge beliefs and intentions regarding the prevention of

HIV infection. Their assessment helped educators use instructional time more efficiently by: reinforcing correct beliefs specifically addressing misconceptions and using appropriate strategies to emphasize the application of preventive actions to personal lifestyles.

The studies reviewed have utilized health education/promotion models and theories as a base for investigating health perception, environmental influences, social and economic variables. They indicate different approaches to the assessment of health beliefs, attitudes and behaviours of the adolescent population. Thomson (1998) indicated, "No single behavioural change framework provides a full explanation, though they all provide insight" (p. 410). The SOR Model, as proposed by Greene & Simons-Morton (1990) seems to be an appropriate conceptual framework for the proposed study as viewed by the investigator for its relevance to the proposed study.

To have a clear understanding of the concepts of the SOR Model, in Greene & Simons-Morton (1990 p.45) and the concepts of the HBM in Greene & Simons- Morton (1990, p.175) a comparison of the two models is presented in terms of their advantages and disadvantages as follows:

Table 2.2 A comparison between the advantages and disadvantages of the HBM and the SOR Models

The Health Belief Model

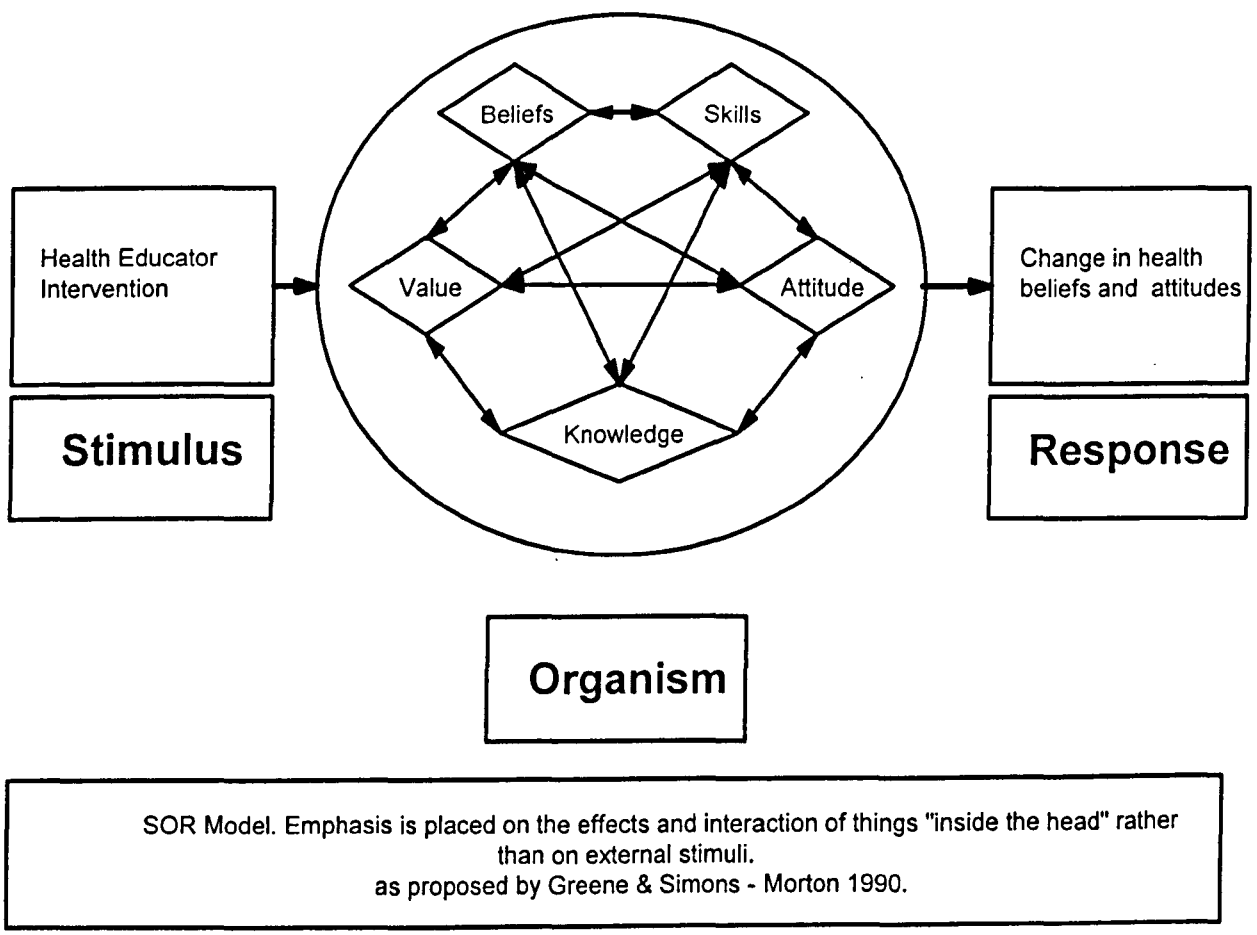
Advantages	Disadvantages
• Emphasis is placed on beliefs. It examines how people interpret the fact, it is logical and realistic	• Too-much of an orientation towards disease, too-much compliance emphasis
• Use variables to construct questionnaire	• Social organization need to be more emphasized
• Good basic message coding as severe, susceptible and benefit	• Micro training and lengthy application.
• Good foundation for needs assessment and programme planning	• Does not prioritize the variable and what to emphasize more

The Stimulus-Organism-Response Model

Advantage	Disadvantage
• Facilitate specific behavioural change as long-term goals.	• Problems with the conceptual definition of the variables of the model (Beliefs, attitudes, values).
• Use different variable to construct questionnaire.	• Limitation in measuring each variable and questioning each variable distinctly.
• Micro and macro training and lengthy application	• This model is not used much as theoretical framework in research reviewed for this study

Greene & Simons-Morton (1990)

Figure 2.1 the Stimulus Organism Response Model as proposed by Greene & Simons-Morton (1990, P 45)



Chapter Three
Methodology

Introduction:

This chapter includes many sections. The first section is an overview of the various research methods used in nursing research and the distinction between quantitative and qualitative research for the purpose of identifying kinds of research. And second, a presentation of the experimental research methods with emphasis on the Solomon-4 group design that was utilized in this study.

Thirdly background information is included about the setting of the study and sampling plan for which the study is conducted. Fourthly gaining access to the study settings and ethical consideration for conducting the study are also discussed. Fifthly instrument construction is dealt with, and lastly, data collection and data analyses procedures with reference to the validity and reliability of the measures are presented. The aim and objectives are stated again, the plan and time scale are set, and the expected outcomes of this study are identified.

3.1 Nursing research methods

Polit and Hungler (1995) described nursing research "as a systematic search for knowledge about issues of importance to the nursing profession" (p.11). Nursing research has experienced remarkable growth in the past three decades, providing nurses with an increasingly sound base of knowledge from which to practice (Polit and Hungler, 1995). Polit and Hungler (1995), added that the "ultimate goal of any profession is to improve the practice of its members, so that the service provided to its clientele will be maximally effective" (p.1).

The methods that the nurse researchers use to study the problems of interest in the development of a scientific basis for nursing are diverse. This diversity in the scientific

approach and attainment of knowledge, according to Polit and Hungler (1995), is critical to the spirit of science and discovery of knowledge. The scientific approach means using systematic, disciplined and controlled processes. Problems of interest to the nurse researchers can be addressed using a wide range of asking questions, identifying sources of information, gathering and analyzing that information (Polit and Hungler, 1995). A distinction is often made between two broad approaches to gathering and analyzing scientific information: qualitative and quantitative (Burns and Grove, 1993, Polit and Hungler, 1995).

Quantitative research involves the systematic collection of numerical information, often under conditions of considerable control, and the analysis of that information by using statistical procedures. Quantitative research, sometimes referred to by some as hard science, tends to emphasize deductive reasoning (developing specific prediction from general principles), the rules of logic, and the measurable attributes of the human experience (Burn and Grove 1993, Polit and Hungler 1995).

Qualitative research involves the systematic collection and the analysis of more subjective narrative materials, using procedures in which there tends to be a minimum of researcher-imposed control. Qualitative research, referred to as soft science, tends to emphasize the dynamic, holistic, and individual aspects of the human experience (Burns and Grove 1993, Polit and Hungler 1995).

The selection of an appropriate research method depends to some degree on the researcher's personal taste and philosophy, but it also depends in large part on the nature of the research question (Polit and Hungler 1995). The following table indicates the differences between the quantitative and qualitative in relation to strength and weaknesses of each approach

Table 3:1 The strength and weaknesses of the quantitative and qualitative research approaches

Quantitative Research	Qualitative Research
• Focuses on a relatively small number of specific concepts	• Attempts to understand the entirety of some phenomenon rather than focus on specifics
• Begins with preconceived hunches or theoretical propositions about how the concepts are interrelated	• Has few preconceived hunches or theoretical propositions, stresses the importance of peoples interpretation of events and circumstances, rather than the researcher's interpretation
• Uses structured procedures and formal instruments to collect information	• Collects information without formal, structured instrument
• Emphasizes objectivity in the collection and analysis of data.	• Attempts to capitalize on the subject as a means for understanding and interpreting human experience
• Analyzes numerical information through statistical procedures	• Analyzes narrative information in an organized, but intuitive fashion

Polit and Hungler (1995, p15-16).

3.1.1 Types of Qualitative Research Method

- Phenomenological research, as defined by Burns and Grove (1993), "is an inductive descriptive approach developed from phenomenological philosophy. It is an understanding of the response of the whole human being, not just parts, or behaviours" (p.30). The aim of this type of research is to describe the experience as it is lived by the person.
- Grounded theory research as defined by Burns and Grove (1993) "as an inductive research tool. It is useful in discovering what problems exist in a social scene and the process persons use to handle them, and it emphasizes observation for the development of practice-based intuitive relationship between variables" (p30). The research process involves formulation, testing and redevelopment of propositions until a theory evolves (Burns and Grove 1993).
- Ethnographic research investigates cultures through an in-depth study of its members. Ethnographic research requires a systemic collection, description and analysis of data to develop a theory of culture behaviour (Burns and Grove, 1993, p.31).
- Historical research as indicated by Burns and Grove (1993) "is a narrative description or analysis of events that occurred in a remote or recent past, it is

obtained from records or verbal reports" (p.30). This type of research has the potential to provide a foundation for and direct the future movements of the profession.

- Philosophical research has three categories; foundational inquiry, philosophical analysis, and ethical analysis. According to Burns & Grove (1993) philosophical research involves "using intellectual analysis to clarify meanings, make values manifest, identify ethics, and study the nature of knowledge" (p. 31).

3.1.2 Types of Quantitative Research

1. Descriptive research studies, as described by Burns and Grove (1993), are usually conducted when little is known about a phenomenon. In descriptive research, investigators often use interviews, unstructured observation, structured observation (observation guided by a checklist), and questionnaires to describe the phenomenon studied. Burns and Grove (1993) added that descriptive studies provide the knowledge base and potential hypotheses to direct the conduct of correlational, quasi-experimental and experimental studies.

2. Correlational research was defined by Burns and Grove (1993) as "the systematic investigations of relationships between two or more variables, to allow the researcher determine the type (positive or negative) and the degree or strength of the relationships" (p.29). Correlational studies are the means for generating hypothesis to guide quasi-experimental and experimental studies that focus on examining cause-and-effect relationships.

3. Quasi-experimental research is similar to experimental research because there is manipulation of one independent variable. It differs from the experimental research in either there is no control group or there is no use of randomization to assign subjects to groups (Talbot, 1995).

4. Experimental research design is the appropriate research strategy when the questions to be answered require the testing of theory and causal relationships. It is defined by Burns and Grove (1993), "is an objective, systematic, controlled investigation for the purpose of predicting, controlling phenomena and examining its causality" (P.24).

Brink and Wood (1998) further defined experimental research as "tests that involves at least one treatment (independent variable), units (e.g. subjects), to be analyzed by assignments or non-assignment to a treatment, and a comparison for inferring effects that may be attributed to the treatment" (P.21). Burns and Grove (1993), Talbot (1995) and Brink & Wood (1998) added that experimental designs are powerful methods for testing hypotheses of causal relationship between variables. The emphasis of experimental research is based on main four criteria: (a) Establishing causal relationship, (b) manipulating an independent variable, (c) measuring the impact of independent variable on the dependant variable, and (d) minimizing or accounting for the effects of factors other than the independent variable on the dependant variable.

To test a relationship and most confidently to test the result, experimental designs must be characterized by three essential elements: randomization, manipulation, and control (Burns and Grove (1993), Talbot (1995) and Brink & Wood (1998)

- Randomization basically eliminates bias by spreading variability due to extraneous variables equally across the groups under study (Pedhazur & Schmelkin, 1991). Random selection of subjects means that each individual has an equal chance of being included in the study, and to equalize the test variables for both groups prior to the start of the experiment.
- Manipulation is the process of maneuvering the independent variable so that its effect on the dependant variable can be observed (measured). Manipulation strength is an assessment of the "likelihood that the treatment could have its intended outcome" (Brink & Wood, 1998, P. 28)
- Control involves elimination of threats to valid inference. Some of the subjects in the study receive the treatment (experimental group) and some do not (control group), while all other factors and conditions are the same for both groups.

Salkind (1997) stated that "a well-controlled study allows the researcher to more easily determine the impact of the experimental intervention, and the results of such a study can be generalized to a similar setting and population" (p. 238).

Types of experimental designs

True experiments are of the following basic designs: Pre-test-post-test control group design, the subjects are randomly assigned to either the control or the experimental group (Burns and Grove 1993, Talbot, 1995). Each group is observed for the variable treatment applied (the pre-test); one group receives a treatment, while the other does not. The researcher then observes the dependant variable once more (the post-test) to determine what effect, if any, the treatment had. In a well-designed experiment, the only difference between the control and experimental groups should be the treatment. Whatever extraneous events that happen between one observation and the next should happen to both the control and treatment groups (Talbot, 1995, p. 219). However, the shortcoming of this design is the test-treatment interaction which may be responsible for a significant difference between the experimental and control groups post-tests.

The post-test-only group design is quite similar to pre-test-post-test group design; however it is considered a weaker design because there is no pre-test. This design is particularly useful in situation in which it is impossible to obtain a pre-test measure. The advantage of this design is that with randomization it controls for threats to internal validity, and eliminates effects of testing. The disadvantage of this design is the lack of pre-test measures decreases ability to determine strength and direction of the responses

The Solomon four-group design is a rigorous design for controlling effects on the dependent variable that may be due to factors other than the independent variable. It is essentially a combination of the pre-test-post-test and post-test only designs described above (Brink and Wood, 1998). Talbot,(1995), Brink and Wood,(1998), pointed to the Solomon four-group design, is that the study participants are randomly assigned to one of the four groups to promote statistical equivalence at the outset of the experiment (Please refer to tables 3.2 and 3.3). Lines one and two; (pre-tested experimental and pre-tested control groups) control for the effects of history and maturation. Line 3 (un-pre-tested experimented group) controls for the effect of pre-testing. And the fourth line (un-pre-tested control) controls for contemporaneous effects occurring between pre-and post testing effects. Talbot (1995) also described this design that "it increases the internal validity, controls for the effects of history, testing and maturation" (p.222), also it is a

good design for large samples (Burns and Grove 1993, Talbot 1995, Salkind, 1997). Having the post-test only experimental and control groups along with the pre and post-test experimental and control groups will mostly take care of the test-treatment interaction effect.

Strength and weaknesses of experimental research designs

A major strength of experimental designs is their ability to diminish bias, which refers to misinterpretation of the effect of the independent variable on an outcome(s), because of systemic differences in the treatment and control participants have been selected or measured or because another variable confounds the estimate of the true relationship between the independent variable and the outcome (s) of interest (Salkind, 1997, Brink and Wood, 1998). They further added, experimental research designs are not perfect and have their weaknesses.

Although it is a rigorous design, it has its weaknesses and seldom employed in nursing because: First, the four groups require a large number of homogenous participants. Second, conducting the four groups concurrently to avoid temporal extraneous variables is demanding and usually requires multiple investigators and a great deal of coordination of research activities. Third, the four groups do not produce complete sets of data, leading to a more complex statistical analysis.

Yet, experimental design at community level and in schools in specific was found in many health education/promotion studies that utilized evaluative methods. For example, Kvalem et al (1996) in Norway developed a school-based sex education programme to prevent sexually transmitted diseases and unwanted pregnancies have utilized the Solomon four-group design. Hausman et al (1996) evaluated the impact of violence prevention education on student's behaviour in a school setting used a quasi-experimental design. Those studies and other studies are well presented under the research design section. Brink and Wood (1998) indicated that experimental research design is the appropriate research strategy when the questions to be answered require the testing of theory and causal relationship as the case of the proposed study. Therefore, the investigator of this study have chosen experimental design to answer the research

question, which is does the health education intervention actually have an effect on the adolescent health beliefs and attitudes?

Table 3:2 types of experimental designs, their advantages & disadvantages.

Name of Design	Notation	Advantages	Disadvantages
Pre-test-post-test control group	R O1 X O2 R O1 O2	Decreases threat to internal validity by controlling for history, maturation, testing, selection, and interactions with selection.	Differential influence of mortality, limited generlizability of the results.
Post-test-only control group	R X O R O	Controls for threats to internal validity, and eliminates effects of testing	Lack of pre-test measures decreases ability to determine strength and direction of responses.
Solomon four-group design	Treatment group 1 R O1 X O2 Control group 1 R O1 O2 Treatment group 2 R X O2 Control group 2 R O2	Strong design, increases internal validity, controls for the effects of history, testing, and maturation.	Require increased resources and has the potential for increased observational bias

Talbot (1995, p. 218)

R, Randomization: O, observation: X, treatment

Clinical Trials

Clinical trials, or intervention studies, focus on clinical outcomes, and can be either experimental or quasi-experimental based on the degree to which randomization is used to select subjects (Burns & Grove, 1993, p30).

The two major types of clinical trials are preventive and therapeutic. Preventive trials are designed to determine if a specific treatment reduces the risk associated with developing a specific disease. In therapeutic trials, the aim is to determine how effective a treatment is in reducing symptoms, preventing relapse or reducing risk of death associated with a specific illness (Talbot, 1995).

Drug studies are one of the most common types of clinical trials and are designed to test the efficacy of new types of medication (Talbot, 1995). For example, Nkrumah et al (1998) in a randomized controlled trial compared AIK-C measles vaccine in infants at 6 months of age with Schwarz vaccine given at 9 months. Seroconversion rates at 3 and 6

months after immunization in the two groups were comparable and similar. The geometric mean titres achieved were, however, significantly higher in the Schwarz group ($p< 0.05$). Based on the results the WHO recommended Schwarz vaccine administration at 9 months of age especially in highly endemic countries, with high measles associated morbidity and mortality.

3.1.3 Triangulation:

Triangulation was described by Burns and Grove (1993) as "is the use of multiple methods in the study of the same phenomenon" (p31). The phenomenon investigated is usually complex, like the human ability to cope with chronic illness which requires in-depth study from a variety of perspectives to capture reality. This applies to the present study where measuring health beliefs and attitudes of female adolescents required to utilize the methodological type triangulation. There are five types of triangulation: (1) investigator triangulation, (2) data source triangulation, (3) theoretical triangulation, (4) analysis triangulation, and (5) methodological triangulation:

1. Investigator triangulation occurs when multiple observers, interviewers, coders and analysts, each with expertise and with prominent roles in the study deal with the same raw data (Talbot, 1995). Kimchi et. al. (1991) further stated that investigator triangulation is achieved when each investigator has a major role in a research project, and the investigators have different areas of expertise that are used to inform the design and implementation of the project.
2. Data source triangulation, according to Denzin (1989), one can triangulate data sources in terms of time, person, or space. This triangulation strategy directs one to collect data over time from a variety of persons in a variety of contexts.
3. Theoretical triangulation refers to building multiple perspectives and hypotheses into a single study. The hypotheses may be formulated at the onset of the study and formally tested, or they may be working hypotheses that emerge during the course of data collection and analysis and evaluated in terms of competing explanatory frameworks (Talbot, 1995). In theoretical triangulation different ways can be interpreted to illuminate, disclose, and capture the phenomena at hand (Denzin, 1989)

4. Triangulation of the unit of analysis entails deliberately varying the analytic focus of the investigation (Talbot, 1995). To use multiple units of analysis, separate analyses must be performed for each analytic unit of interest (Talbot, 1995). If the measures yield consistent results, the investigator is more confident in the validity and confirmation of the findings (Talbot, 1995).
5. Methodological triangulation refers to the use of different data collection techniques in the same study. The techniques are deliberately selected because their respective strength and weaknesses ought to counterbalance one another. Methodological triangulation often involves the use of relatively unstructured techniques such as intensive interviewing and participant observation in combination with more structured data collection techniques such as standardized questionnaire or observational protocols (Talbot, 1995). Evaluation of education can use qualitative methods and answer complementary questions, since quantitative approach can only deal with some aspect of the issue under study. For this study the quantitative data collection utilized structured questionnaire and the qualitative data utilized open ended questions to ensure assessing range of relevant outcome measures about the female adolescents' health beliefs and attitudes.

When any one of the five types of triangulation is used in a single study, it is referred to as simple triangulation, while when using two or more types of triangulation used in a study, then it is referred to as multiple triangulations (Talbot, 1995). Burns and Grove (1993), Polit and Hungler (1995), and Talbot (1995) view triangulation as a method for linking qualitative and quantitative research, they further described triangulation as a complex method requiring an expert research background. Yet Talbot (1995) elaborated on triangulation, that there is disagreement in the research community regarding the merit and the use of triangulated research approaches

3.2 The Study Research Design

The purpose of this study is concerned with assessing the health beliefs and attitudes of Palestinian female adolescents aged 14-17 years, and evaluating the role of health educator intervention in affecting change on those beliefs and attitudes. The study is

structured as an experimental research method, the Solomon four-group design, to have confidence in the outcome measures as an indicator that the use of health educator intervention does or does not affect those health beliefs and attitudes.

The Solomon four-group experimental design is the most powerful design to achieve the purpose of the study, because it has the greatest degree of internal validity, that is the ability to conclude with greater confidence that the variations observed in the post-test scores are due to the treatment. For example, Brink and Wood (1998) indicated establishing cause and effect relationship.

This is because the Solomon experimental design has two experimental groups and two control groups. The subjects are randomly assigned in each group which insures equivalency of the groups before the treatment is applied to the experimental groups. The treatment is applied concurrently to both experimental groups to reduce the effects of history (Malotte and Morisky, 1994 & Talbot, 1995)

In this study, however, some changes were necessary to make due to the inability of the investigator to take school girls out of their school environment and assign them randomly to the different experimental and control groups. So instead, 4 schools were randomly chosen in which randomly assigned as experimental and control groups, however measuring for equality of the four groups at pre-test was necessary to make sure that the groups possess similar characteristics for the variables tested. Kvalem, et. al. (1996) suggested a prerequisite for studying the difference between intervention and control groups at post-test, is that the groups possess the same characteristics at the time of pre-test including the socio-demographic variables.

The second change from the classical Solomon experiment is the concurrent application of the treatment to the two experimental groups. Here, since it was decided to have one health educator (to control for style difference which can play a role in effecting change) the application of the treatment is applied to the two groups, close to each other to allow for consistency of the health education contents discussed in the assigned sessions given to both intervention groups.

To have an in depth understanding of the proposed research design, the following experimental research studies has been reviewed for their relevance, and may provide groundwork for the proposed study. As some of these studies have integrated health education programmes related to adolescents' health, others have focused on the role of health educator intervention. To add more understanding of the design and how it is measured for its effectiveness, an explanation of the statistical measures used in these studies are presented too.

For example, Cilchrist and Schinke (1983) conducted a study about coping with contraception for 34 students drawn from different classes and randomly assigned to one condition in a Solomon four-group design. A 6 months follow-up showed more habitual use of contraception and less reliance on inadequate birth control methods among the trained students than in the control group. They found no effect of pre-test or of interaction between pre-test and intervention.

Brent and Dioblida (1993) developed an experimental design to implement the direct instruction model in one of the elementary schools in the city of Camden, New Jersey. The standardized achievement test scores of Grade 2 pupils who experienced the direct-instruction model were compared with the scores of pupils who experienced traditional programmes. The traditional programmes were aligned with the standardized Comprehensive Test of Basic Skills (CTBS) used by the district. An additional factor included in the evaluation was the effect of student mobility on achievement. The achievement of mobile students was compared with the achievement of stable students. Finally, stable students were given an additional standardized test, the Metropolitan Achievement test (MAT), to assess the effects of the programmes independent of the aligned curriculum.

The results based on ANOVA analysis indicated that (a) the direct-instruction students did as well as the aligned students on the CTBS, the F^{a} value was highest for mathematics = 7.26**. (b) The achievement of stable students was generally higher than that of mobile students on the CTBS reading subtest ranged from p<. 05- p<. 01 and (c) the direct-instruction students were superior in mathematics on the MAT subtest.

Explanation of the statistical measures for the studies presented is needed to explain what actually they mean: Analysis of variance (ANOVA) is a significance test for comparing the means of quantitative variables between two or more groups. It is an extension of the independent samples t-test, used with just two groups. ANOVA weighs the total variability found in an outcome variable of interest and divides it into a between-groups component and a within-groups component (each of these further divided by the appropriate number of degrees of freedom to produce a mean square). The significance test for differences between groups is based on the comparison of these two components of variability, under the assumption that no differences exist between groups (Null hypothesis). If this hypothesis is true, there should be no difference between within and between group's variability and their ratio is equal to 1. This is known as F-test or variance ratio test (Pereira-Maxwell, 1998, P.3)

F-test or variance ratio test, a significance test used in analyses of variance as a method of assessing whether the population means of several groups are similar or not, by comparing the between-groups and within-groups variability. Under null hypothesis of no difference among the populations being compared, these two quantities are the same and their ratio (F- statistic) is equal to 1. The F- distribution (which is followed by the F-statistics when the null hypothesis is true) has two sets of degrees of freedom: the number of groups -1 (between groups), the total number of observations minus the number of groups (within groups). When comparing two independent groups, the F-test yields the same result as the unpaired t-test. (Pereira-Maxwell, 1998, P.25)

P-value in the context of significant tests, the P-value represents the probability that a given difference is observed in a study sample (between means, proportions etc.), when such a reality does not exist in the relevant population (all individuals similar to those in the study sample). Small P-values indicate stronger evidence to reject the null hypothesis of no difference (Pereira-Maxwell, 1998, P.53).

Ellickson and Bell (1990) conducted a multi-site longitudinal experimental educational design to curb drug use in seventh-grade students in cohort of 30 junior high schools in California and Oregon. An education intervention programme through the project

ALERT curriculum was based on the social-influence model. The programme was implemented between 1984 and 1986; the curriculum's impact was assessed at 3-, 12-, and 15- month follow-ups.

The programme, which had positive results for both low- and high-risk students, was equally successful in schools with high and low minority enrolment, differences are statistically significant with $P<0.001$, except for percentage of Hispanic ($p < 0.01$). These results indicated that education programmes based on social-influence model can prevent or reduce young adolescents' use of cigarettes and marijuana.

The study by Malotte and Morisky (1994) was based on the Solomon four-group design, and described how a non-contact comparison group, followed through medical records, can be used in combination with a randomized experimental control design to assess pre-test and monitoring effects. A total of 75 patients receiving chemo-prophylactic tuberculosis therapy were randomly assigned to a special education intervention (SI) group, or to a usual care (UC) and followed for 12 months. Eighty-five patients who constituted a non-contact comparison (NCC) groups were also followed through medical chart reviews for the same period.

Life table analyses of the proportion of subjects completing prescribed therapy showed significant differences by group at 6 months of treatment, with 64% of SI subjects, 30% of UC subjects and 21% of NCC subjects still in treatment ($p < 0.01$). Median time in care was 52 (SI), 13 (UC) and 5 weeks (NCC). There was no difference between the UC and NCC groups in percentages of subjects completing 1 year of therapy.

Kvalen, et. al in Norway (1996) developed a school-based sex education programme to prevent sexually transmitted diseases and unwanted pregnancies. A Solomon four-group design, with random assignment to different conditions, was used to evaluate an intervention based on cognitive social learning theory and social influence theory. The main goal of the intervention was to increase use of condoms. A stratified sample of 124 classes (2,411 students) was drawn at random from all the upper secondary schools (High schools/colleges) in one county in Norway. The results indicate a consistent interaction

between pre-test and intervention, which seems to have an effect on condom use while Cilchrist and Schinke (1983) study contradict this as they found no effect of pre-test on intervention. Pre-test or intervention alone did not contribute to this effect. The odds Ratio is 0.78, $p< 0.05$. The interaction effect appeared among the students with few sexual partners.

Morton, et. al (1996) used a pre and post intervention questionnaire to measure the levels of HIV/AIDS knowledge and sexual practices of 2,169 high school students in the St. Louis area in 1996. Data revealed that 56.4% of the respondents were sexually active, with 70.4% having multiple partners and 61.0% admitting to unprotected sex. These measures demonstrated a statistically significant gain ($P. < 01$) in their knowledge about HIV infection after the educational programme.

The study also indicated that adolescents are sexually active and more importantly, they are practicing behaviours that put them at risk for HIV/AIDS, a risk which they recognize. Finally, the educational intervention did increase student's knowledge of HIV/AIDS as a first step, but is not translated as a change in behaviours (Kvalem, et.al. 1996).

Hausman et al (1996) has evaluated the impact of violence prevention education on student's behaviour in a school setting using a quasi-experimental design. School records were obtained for three panels (1985, 1986, and 1987) of urban public high school students ($n = 1,523$). The students were non-randomly assigned to three different conditions of school-based violence prevention education programme as: (1) in class-specific comprehensive educational intervention, (2) as part of a school-wide violence prevention initiative and, (3) no exposure.

Changes in suspension status from sophomore to junior year were tracked within exposure groups, controlling for age, gender, race, absenteeism, and previous year suspension. The results indicated significant reduction (71%) in suspension rates (RR = .286, CI .12, .66) in class-specific exposed group compared to not exposed group from the same school. The school-wide exposure shows reductions in and maintenance of very

low rates of junior year suspension in each cohort year, although these are not always statistically different from the not-exposed groups. The researchers concluded that violence prevention education could reduce negative school behaviours, particularly when other supportive curricula and activities are added (Hausman, et. al. 1996).

Shechtman (1997) developed an experimental intervention programme to enhance social relationships and to adjust behaviours of schools children in the Israeli classrooms. A teacher-led classroom intervention aimed at affecting social relationships in diverse classrooms was studied at both elementary and secondary school levels. The study employed a pre-post-test comparison design.

Effects were examined separately for regular and special needs students. Results of the repeated measures analyses of variance (ANOVA) on the class-level analysis indicated no significant differences for the elementary–level regular students but did indicate significant gains in adjusting behaviour for elementary level special needs students. On the other hand, results for the secondary level students indicated progress in social expectancy for both regular and special needs students. With no significant differences between the experimental and control group, $F(1, 18) = 4.08$, $P = .06$, and $F(1, 17) = .75$, P = NS (non significant) respectively.

No gains where observed in adjusting behaviour for special needs students. Results of the ANOVA on the students level analysis indicated a significant difference between experimental and control groups, on the classroom environment scale, $F(1,407) = 8.97$, $P < .01$. The importance of this study is two fold: (A) it reflects some changes in social relationship, especially in the social inclusion of special needs adolescents in regular classrooms, and (B) it indicates change in the behaviour of special needs elementary level students.

These results where obtained by trained teachers (as opposed to mental health professionals) suggesting that teacher can make a difference in classroom relationships and deal more effectively with growing diversity in the classroom. Multivariate analysis of variance (MANOVA) results indicated an overall significant treatment effect, multivariate $F(5,102) = 4.12$, $P < .01$.

Kim (1998) developed a quasi-experimental, non-equivalent post-test-only design. The study examined the differences between two groups' scores of attitudes, norms and intentions to breast-feeding and bottle-feeding. Students exposed to the campaign showed positive attitudes and norms toward breast-feeding and indicated their intent to breastfeed ($P < 0.05$). The control group who were not exposed to intervention (breast-feeding campaign) showed more positive attitudes and norms toward bottle-feeding and indicated their intent to bottle-feed rather than breast-feed ($P< 0.05$). Both groups differed significantly between the two groups ($p< 0.05$).

The studies suggest that experimental research methods in which health beliefs, values, attitudes and practices of children and adolescents were explored and aimed at evaluating the effects of educational intervention in terms of change toward a healthy living. The effects of intervention were measured statistically and comparison was made at the pre and post intervention stages. Many of the results indicated a significant difference between the pre and post-tests, on the other hand, some results indicated no statistical difference between the pre and post-tests.

The purpose and objectives of this study was to evaluate the role of the health educator in affecting change in the beliefs and attitudes toward healthy living among female adolescent (students) aged 14-17 years in four governmental female schools in the West Bank.

To achieve this purpose, the Solomon-4 group research design was suggested to gain a greater understanding of the role of the health educator. The following three experimental steps were employed to achieve this purpose as follows:

1. Pre-intervention assessment of female adolescents' health beliefs and attitudes toward their health status and healthy living.
2. A health education intervention programme based on the pre-intervention assessment was implemented to experimental groups through the use of the health educator instruction as the intervention phase of the study
3. A post-intervention assessment of the adolescents' health beliefs and attitudes to

evaluate the effectiveness of the health educator intervention provided to adolescents under study.

This design has allowed the investigator to imply multiple comparisons between the experimental and control groups, and to interpret recorded data at the pre-intervention data and the post-intervention data, to evaluate the role of the health educator intervention for effectiveness and to indicate if there is a statistical difference between groups under study.

Table 3.3 illustrates the Solomon-4 group design with the names of the four schools participating in the study with the different conditions employed for each school (group). For clarification, the groups are summarized and denoted as follows: (1) Betunia school is the P+ I group, the first experimental group that received pre-test, intervention (health educator intervention) and post-test, (2) Birziet school is the P group, the first control group that received the pre-test and the post-test but not the intervention, (3) Al-Bireh school is the I group, the second experimental group that received intervention (health educator intervention) and post-test but did not receive the pre-test, and (4) Silwad school is the C group, the second control group that received neither intervention nor pre-test, but only the post-test.

Table 3:3 the Solomon four-group design with the names of the schools

First phase of study			2nd. Phase for one month	3rd. phase of study
Group	**Randomization**	**Pre-test**	**Intervention**	**Post-test**
Experimental group1 (Betunia school)	R (P+I group)	O1	X, Health educator intervention	O2
Control group 1 (BirZeit school)	R (P group)	O1	---	O2
Experimental group 2 (Al-Bireh school)	R (I group)	---	X, Health educator intervention	O2
Control-group 2 (Silwad school)	R (C group)	---	---	O2

Talbot (1995) *R: randomization,* O: *observation or data collection, X: treatment or health educator intervention.*

Since the study was experimental method, the subjects (by school and not students) were four randomized schools selected from the target population. The target population was all female governmental high schools in Ramallah district in the West-Bank, from which the researcher hopes to generalize the findings of the study. Talbot (1995) stated "an effective way of doing this is to demonstrate statistically how the sample compares favourably to known, critical parameters of the reference population" (p220).

The Solomon four-group design has been described by Burns and Grove (1993), Talbot (1995), Polit and Hungler (1995), and Salkind (1997), as a very strong design which greatly increases the level of internal validity that can be achieved. They added that the effects of history and maturation are controlled for by the pre-tested group, the groups without the pre-test control for the effect of testing. Moreover, the non-pre-tested control group allows the researcher to assess the impact of maturation without treatment (Talbot, 1995), taking into consideration the normal development of the target population under study.

In the Solomon four-group design, there are two experimental groups and two control groups which required multiple comparisons between the four groups at pre-test and post-test. The subjects were 10th graders in 4 female public schools randomly assigned to one of the groups. For example; the first experimental group (Betunia School) with a pre-test had the initial observation (pre-intervention data), have got the health educator intervention, and then observed again (post intervention data) immediately after the intervention.

The first control group (BirZeit School) with a pre-test had the initial observation (baseline data), had no intervention by the health educator, and observed again. These two groups were observed statistically at post test for the impact of the pre-test and intervention effect for one group compared with the second group who received pre-test only. Polit and Hungler (1995) indicated that "when data are collected both before and after an intervention, the pre-test (initial) measures sometimes have the potential to distort the results" (p.126). That is, the post-test measures may be affected not only by the intervention but also by the exposure to the pre-test.

The second experimental group (Al-Bireh School) did not get the pre-test, got the health educator intervention only and was observed afterwards (post intervention data). The second control group (Silwad School) which received neither pre-test nor health educator intervention and observed to compare for the effectiveness of health educator intervention since it was the only difference between these two groups. All the comparisons between the different conditions in which the groups were assigned to are presented in the results chapter. Salkind (1997) and Brink& Wood (1998) argues for this design, that many types of comparisons can be made to determine what factors might be responsible for certain types of outcomes. For the four groups, observation was done immediately after the intervention in which Salkind (1997) indicated such measurement "will allow the researcher to have a more consistent evaluation for the effectiveness of the intervention" (p 342).

It is noteworthy that all groups have got same health education material related to the topics covered by the health educator instruction given to experimental groups, attempting to empower the students by increasing their health knowledge and promoting their beliefs and attitudes toward a healthy living.

3.3 Setting and sampling plan

The girls spend a large part of their everyday life in school. Going to secondary school is an important turning point, potentially stressful and decisive for their future as the "Tawjihi" (General Secondary Certificate Examination, GSCE) is at the end as well, a serious decision related to plans for future. In Palestine, admission to university is conditioned by the Tawjihi grades. The school system requires the student to stay single or engaged to be able to continue her education, otherwise there is no place for her.

There are three types of school in Palestine: Public or governmental (responsible for educating the majority of school age children), private (mainly coming under religious communities or belonging to individuals as investments), and schools managed by the United Nations Relief and Work Agency for Palestinian Refugees (UNRWA). Education is compulsory up to 14 years of age, provided free in UNRWA schools and on payment of very minimal fees in government schools (Fasheh and Adwan, 1997).

The UNESCO (1995) report that schooling frequently takes place in difficult conditions, while in the West Bank Village schools are rather small, those in towns and camps may cater for hundreds of pupils and function in shifts. As there are not enough classrooms, the premises are used in the morning for half the pupils and in the afternoon for the other half. In addition, the classrooms are very small (16-20m2) compared to the large number of students occupying them makes it worse. There is often neither enough ventilation nor lighting, and no specialized rooms such as laboratories and suitable playgrounds or sport facilities are available (Fasheh and Adwan, 1997).

Despite the constant efforts that have been done to improve the situation since 1992, its clear that the physical conditions the students have to struggle with, are still far from constituting an environment conductive to the best possible development of their capacities (Fasheh and Adwan, 1997). It is rather an environment that endangers frustration and tension for both students and teachers. Indeed the quality of education has been deteriorating regularly over recent years, whereas traditionally the Palestinian People were regarded as the best educated in the Arab world (Fasheh and Adwan, 1997).

The study only looks at students in female government schools, and not female schools compared with mixed schools or other high schools (private, charitable or mixed schools) available in the West-Bank for several reasons: (1) the study design (Solomon 4-group) requires considerable time, human and material resources. (2) The number of government female schools in the West Bank is almost 120 schools compared to 34 mixed schools, mostly private schools (PCBS, 1997), and (3) Governmental (Public) schools are underprivileged when compared to private schools (Fasheh and Adwan, 1997) where health education is needed more. For example, Rutter (1981) reported that some English public sector schools instead of being a place in which the students are structured, on the contrary these schools contribute to accounting failure, ill-being and behavioural problems.

Based on the given facts and for reasons of cost, feasibility and time constraints it is impossible to draw the study sample from all female high schools in the West Bank. The study sample was drawn from female government schools (public schools) in a smaller

geographical area, which is Ramallah/Al-Bireh district. There are 17 government female high schools in Ramallah District (PCBS, 1996) from which four schools were selected randomly. In conclusion, female government schools are more representative of the general Palestinian female adolescent population. (Please refer to Appendix F for the names of high schools and the Map of all schools in Ramallah District). It is noteworthy that the map presented was designed by the MOE officials upon the request of the investigator.

Ramallah/Al-Bireh District is geographically located in the centre of Palestine, 16 Km. north of Jerusalem. It is recognized by its strategic location and by the different services it offers, such as schools: non-governmental and governmental, higher education institution, and for the industry and trade which attracts many educated professionals from all across the West Bank to live there (Younis & Al-Ansari, 1991). The total population of Ramallah district is 7.3% of the total number of the Palestinian population (PCBS, 1997). Ramallah is surrounded by 100 villages with easy access and is very much intertwined with another city, Al-Bireh. A large number of village students (60%) are enrolled in government schools and 12.5% are enrolled in non-governmental schools in Ramallah/Al-Bireh (Younis & Al-Ansari, 1991). Thus the schools under study constitute a large number of girls from villages as well as girls from the town and the cities.

The sample design is cluster sampling, the variables taken into consideration were the type of the school (female governmental), and the location of the school (City, town and village), and the size of subjects within the school, which allows a probability sampling for a population that is not easily listed in a sampling frame (Talbot, 1995).

Random assignment of students in schools themselves is not possible because of: (1) the large number of students per class 30- 35 (PCBS, 1997), and (2) for the control of research as to avoid contamination between the experimental and control groups that may distort the results (Salkind, 1997). Therefore, the unit of sampling was the school.

Random assignment entails allocating sampling units (female schools) to treatment and control conditions by any known random method (Talbot, 1995). The random sampling

method used for this study is the "fish-bowl" method (Talbot, 1995). The names of the seventeen schools were written on separate slips of paper; all of the slips of paper were deposited in a bowel and stirred. The first four slips drawn by the investigator from the bowel and the names on those slips designated the schools to be studied. Those schools have almost an equal number of subjects that were assigned to experimental and control conditions.

The Solomon four-group design requires a large number of subjects who are available at the same time. Each randomized school in the study has on average the same number of students at the three different educational levels: primary 1-6 grades, preparatory 6-10 grades and secondary 11-12 grades (PCBS, 1997). This report also indicates an average number of students per class to range from 30-35 students for 9th -11th grades in female government schools for the age group 14-17 years required for the study. This means there is an average of 120 to 140 students (subjects) per school.

The researcher has limited the study sample to female public schools to be able to have similar extraneous variables in order to minimize the external differences such as the socioeconomic status, cultural background, family status and geographic location. The researcher intends to increase the level of internal validity by having similar age groups, same sex, similar socio-economic background, and similar educational setting.

The research design of the study required three stages: first stage; the data collected (the pre-test or the baseline data) from 4 classes in two schools. The classes were 9, 10, and 11th.grades. The eleventh grade has two sections, each section is completely independent of the other, and in other words it was another class. For the second stage; the intervention stage was implemented in two schools and for the 10th graders only. It was based on the results of the baseline data and according to the adolescents' health needs and concerns as an outcome of the first data analyses, a health education package was developed by the investigator and the term intervention means the health education activities carried by the health educator.

The intervention was introduced by a nurse lecturer and researcher specialized in reproductive health and gender issues at Al-Quds University, School of Public Health. The intervention was done under the supervision of the researcher of the study to ensure consistency and to check for quality of intervention and to control for any bias. The third stage; the post intervention data collected from all 10th graders in the four schools under study. A comparison of all groups under the different conditions, in which each group was assigned for, at either experimental or control group for the pre-test or the intervention and for those who got neither intervention nor pre-test.

3.4 Instrumentation and questionnaire development

Different measures are used in different studies for adolescents in order to measure their health concerns, problems, needs and development. The following studies have been reviewed for their relevance to assist the investigator in the development of the study instrument and in measuring the concepts under study. For example, Walker et al (1987) described the development and initial psychometric evaluation of an instrument to measure Health-Promoting-Lifestyle is based on responses from 952 adults in Mid-Western Communities. The Health-Promoting-Life Style Profile was evaluated using item analysis, factor analysis, and reliability measures. Factor analysis isolated six dimensions: self-actualization, health responsibility, exercise, nutrition, inter-personal support, and stress management. These six factors counted for 47.1% of the variance in the 48-item measure. Second order factor analysis yielded a single factor, interpreted as Health-Promoting-Lifestyle. The alpha reliability coefficient for the total scale is .922; alpha coefficients for the subscales range from .702 to .905. Further evaluation of the measure with different populations appears warranted. Walker et. al. (1987) added, "this instrument will enable researchers to investigate patterns and determinants of health-promoting life-style, as well as the effects of interventions to alter life-style

Davis and Ware (1981) developed the General Health Rating Scale Index (GHRI) to create a reliable and valid measure of perception of general health. Factor analysis was used to determine the multidimensionality of GHRI. Accordingly, concurrent validity was obtained by appreciable correlation found between the GHRI and various measures

of physical and mental health. A coefficient alpha reliability of .89 was obtained for GHRI in a sample of 4717 respondents aged 14 to 67 (Davis and Ware 1981). In Yarcheski and Mahon (1992), the coefficient alphas were .89 for the local sample, and .88, .90, .88 for early, middle and late adolescents respectively. This measurement tool was considered for many studies because of its reliability.

Hester (1984) used the Child Health Self-Concept Scale (CHSCS) for school aged children, 6-13 years old, to measure the collection of perceptions a child has concerning health and health related behaviours. Four beliefs were central to CHSCS: The first belief was that individuals develop health self-concepts during childhood. The second belief was that an individual's health self-concept unconsciously influences an individuals use or lack of use of positive health behaviours. The third belief was that knowledge of an individual's self-concept is of value to health professionals in the planning and evaluation of interventions that are directed toward altering or sustaining an individual's health behaviours and perceptions, for example, psychosocial counselling and health education. Finally, the healthy self-concept was believed to be measurable. The estimation of reliability and validity was accomplished through a sample of 940 children. Critical analysis of findings led to the conclusion that the CHSCS had moderate stability and high internal consistency, reliability, evidence of content validity, but no evidence of construct validity. Hester (1984) recommended additional research is needed to evaluate its potential usefulness for nursing research and practice.

Mahon and Yarcheski (1992) examined loneliness in adolescents aged 12-14 years. They used the situational and characterlogical theories, while measuring loneliness with the revised UCLA loneliness scale. This scale is 20 item Likert scale that measures the subjective experience of loneliness. Extensive data on concurrent and discriminative validity of the instrument has been reported. The study clearly points out the need for continuing replication. In 1992 the same researchers revised the UCLA loneliness scale, participants completed instruments linked to either the situational or characterological explanation of loneliness.

The 25-item Likert Personal Resource Questionnaire scale was used to assess the relation of perceived social support and the perceived health status. Acceptable alpha reliability coefficients have been reported. The coefficient alphas for early, middle, and late adolescents were .89, .91, and .89 respectively. Then found that higher scores of perceived health status indicate higher levels of perceived social support.

The findings from Yarcheski & Mahon, (1992) studies have suggested that early adolescence may be the peak life period for experiencing change. Kelder et. al. (1995) indicated that girls report a higher frequency and intensity of physiological problems than boys. Muscari (1997) added that middle adolescence is a crucial period for the shaping of health practices, which begins with identification of health belief, attitudes and practices.

The fact that there is scarce data about Palestinian adolescents–except for data related to the impact of political violence (Mansour & Awartani, 1999), and for the Palestinian studies given in this study which was knowledge, attitude and practices surveys. It could be a privilege for the investigator to design an in depth questionnaire about the beliefs and attitudes of female Palestinian adolescents to be culturally appropriate and to get as much information as possible about them. To use a questionnaire in order to get to know the adolescents, to administer it in schools, and to focus on adolescents females is a deliberate choice for the easiness of administering and evaluating the data given (Mansour & Awartani,,1999).

3.4.1 The Instrument Construction

The instrument designed for the study was self-administered questionnaire introduced to female adolescents aged 14-17 years in 4 schools. Although the questionnaire may seem simple to use and analyze, their design is by no means simple (Yarcheski & Mahon, 1992), particularly when the issues under investigation are culturally sensitive (Razmus & Edgill, 1993). The adolescents' self-administered questionnaire was used to help them to respond to sensitive questions and to allow confidentiality.

The instrument developed contained socio-demographic variables, beliefs and attitudes toward the adolescents' physical and psychosocial development, reflected in rating scales

and some narrative questions. The physical, psychological and social developmental approaches and the concepts of S-O-R Model, the theoretical frameworks of the study were the reference terms used in the questionnaire. The questionnaire developed in a way that Palestinian adolescents provide their realistic insights, with emphasis on their perspective of health concerns, needs, beliefs and attitudes considering the cultural demands in designing the items.

The Palestinian culture as part of the Arab culture, view women as minors and vulnerable to do wrong actions (Mansour & Awartani, 1999) thus, exposing the girls to questions related to sexual and reproductive health issues for example, may jeopardize their purity and decency. For example, the Director of General Education at the MOH emphasized that questions about sex, alcohol, drugs and AIDS issues were troublesome items because it was felt that it might increase the students' awareness and interest in such issues that are believed not to be a problem in the Palestinian school system (personal communication, 1999).

Prior to the development of the instrument, the investigator has revised international lifestyle assessment and wellness inventories and the available local Palestinian tools used for measuring the health perception of children and adolescents.

Some of the international lifestyle assessment and wellness inventories were used as a reference guide for the development of this study instrument, while others gave insight to the broader aspect of adolescents' health beliefs, attitudes, and behaviours. Health experts describe lifestyle as one of the most important factors affecting health. According to Walker et al (1987), the lifestyle assessment and wellness tools tend to be focused more on health promotion than are health risk appraisals, which deal primarily with health-protecting behaviours, it also assist clients to identify ways to promote health and personal well-being.

One of these international tools revised was the WHO questionnaire (Health Behaviours of School Children, HBSC) for Palestine. This tool was rejected by the MOE officials as the Director of General Education, believed that many items are adopted from cultures

that are not appropriate to the Palestinian culture and that, it does not meet the needs of the Palestinian school children and their culture (personal communication, 1999).

Another two international tools were used to assess school children in England. First, the Health Survey for England: on behalf of the Department of Health; Social and Community Planning Research (SCPR, 1995). This survey has used a "Booklet for 13-15 Years Old". This booklet contained different categories and different rating scales to identify adolescents' health needs. Under the general health rating scale of this survey, the items were arranged in a Likert scale of 4-point response format, this format was organized as; "more so than usual, same as usual, less than usual, much less than usual'. This English tool was the reference guide for the investigator of this study to adopt this rating system for the questionnaire developed. Also it was helpful to adopt many items that reflected the adolescents' psychological and social health needs and concerns.

The second one was the West Midland Young Peoples' Lifestyle Survey that aimed at assessing young people views on health and lifestyle on more than 30.000 young people in the West Midlands in England in order to plan better health services for them. This survey was also another resource for the investigator to adopt and modify some of its items for the development of this study instrument.

The last international tool utilized as a resource for the investigator to develop the study questionnaire was the Health Promotion Lifestyle Profile: Development and Psychometric Characteristics developed by Walker, et al (1987). This tool was also a reference in adopting and modifying some of its items to be included in this study instrument since the concepts of these items were related to the study concepts. Altogether these tools have helped the investigator to develop the questionnaire required to answer the study purpose, objectives and research questions

For some of the Palestinian surveys and studies that assessed the adolescents' health needs and concerns presented earlier in the study: The questionnaire that was developed by Alami (1994), in a Comparative Study for male/female adolescents problems in East-Jerusalem and the tool developed by the Centre for Development in Primary Health Care

(1999), for their youth study has been revised. As both tools contained many items that were culturally appropriate and meet the aims and objectives of this study. The last one was the Kan'an & Halabi (1995) interview questionnaires for health assessment of young women added a clearer idea and identified some related issues that helped in the formulation of this study questionnaire.

Prior to describing of how the validity of the instrument obtained, we need to define validity. Validity is defined by (Talbot, 1995,) "as the truthfulness of the measure in assessing the phenomena of interest in a given sample or population" (p 280), or in other terms, validity refers to the extent to which a score measures what is intended to measure. The methods chosen to assess validity should be based on the researcher's knowledge of the variable of interest and related design issues. According to Talbot (1995) the steps that are important in the instrument design are also essential to achieve content validity; a correctly designed instrument is one that considers the total domain of interest. The first step is to list the objectives that guided the instrument development, the definitions of concepts of the study and, the list of items developed, this package of information is then given to a panel of experts. The experts are chosen based on their practical or academic knowledge, or both, of the domain of interest (Talbot, 1995).

The questionnaire developed by the investigator was guided by the study purpose, objectives, and research questions, and based on the concepts of the theoretical frameworks. Content validity was established by giving the questionnaire to two local experts; one in research, and the other in mental health who have examined the instrument, and according to their comments, the investigator of the study made the changes required where rewording, adding or deleting some items was needed. The tool was developed in Arabic language first, the items adopted or modified from the international tools were written in English, and these items were translated into Arabic language to complete the questionnaire. Then when the questionnaire was completed in Arabic, translation into English language was made for the items that needed translation. The English version was revised and modified by the advisor and then corrected according to his comments received.

Then the Arabic version was corrected according to the English version again, and was revised by an Arabic language professor at Al-Quds University for its language, and style, which helped in making it clearer, and more easily read by the subjects under study. (Please refer to Appendix B for the English version and Appendix K for the Arabic version of the questionnaire)

The self-administered questionnaire "The Beliefs and Attitudes of Female Palestinian Adolescents toward their Physical and Psychosocial Health Needs and Concerns" contained quantitative data in a 92 item checklist, and qualitative data type consisted of two open ended questions. The approach of using multiple methods or triangulation described by Brink and Wood (1998), is that "it helps to counteract systemic biases that may be present in some measures, in which these biases can lead to false conclusions of effectiveness on the part of the researcher" (p 47). The questionnaire items were arranged under the following 5 categories:

I. Demographic data.
II. Items reflected the female adolescents' beliefs and attitudes toward their physical growth and physical health.
III. Items reflected the female adolescents' health beliefs and attitudes toward their psychological and emotional development.
IV. a- Items reflected the female adolescents' health beliefs and attitudes toward their social development.
    b- Items reflected the female adolescents' perception of the Palestinian societal norms and attitudes toward young girls
V. Two open ended questions (qualitative data type) allowed the subjects to write their perception about being adolescent, and to write about the problems they encounter within their family, school, and society systems.

Category 1, the demographic data included age, class, social status (single/engaged), place of residence, family status, fathers' and mothers' jobs, and family size.

Category 11, Beliefs and attitudes toward physical growth, the items are arranged in a 3-point response format to obtain a frequency measure on yes, no, need more information,

with a subclass for some items. For example, the items related to physical health and physical changes, are arranged as agree, disagree and not sure.

For categories 111 and 1VA, the beliefs and attitudes questions concerning psychological and social development, the items were arranged in a 4-point response format to obtain an ordinal measure of frequency (more so than usual, same as usual, less so than usual, much less than usual) of reported beliefs and attitudes. The term "Same as usual" was chosen to represent the most frequent response category because it suggests a regular pattern of beliefs and attitudes characteristic of their lifestyle (Walker, et al 1987). The items under category 1VB, the female adolescents' perception of the societal norms and attitudes toward young girls were arranged on 3-point response format on agree, disagree, and not sure.

Category V questionnaire is a qualitative type data which consisted of two subjective questions and allowed the girls to express their concerns and needs in an open and free choice, the two questions were as follows:

- V.A. "Being a Palestinian female adolescent, would you like to write about your feeling and perception toward this stage"?
- V.B. The question contains three sub titles "Would you write about the problems and concerns that you encounter when you deal with: Family, School, and Society"?

3.5 Gaining Access and Ethical Consideration

In order to gain access to the 4 governmental female schools, the General Director of Education at the Ministry of Education (MOE) was formally approached. A formal letter was written by the investigator and approved by the Dean of the Faculty of Health Professions, describing the purpose of the study and asking for permission to conduct the study at the schools. The MOE official agreed to meet with the investigator for further explanation, but prior to that a copy from the questionnaire was sent for revision as part of the MOE policy. The MOE official gave the preliminary approval after revision and modification of few words in some items in the Arabic version of the questionnaire. It

was also decided that the study could be carried out from the age of 12 years and above because it was believed that under this age, the female students are too young to be questioned.

In January 1999, another interview was conducted between the investigator and the MOE officials for gaining access into the schools for pilot testing as a first step of gathering data. The names of the four schools that were randomly selected for the study, and two types of consent forms were submitted. One of the consent forms was for the student participants aged 16 years and above, the other form was for parents of the younger students, 16 years and less (Please refer to appendix C for the consent forms). For the younger group the MOE official has agreed to consent as a guardian, for two purposes as he described; first it is the Ministry responsibility to take care of the students and to be fully aware for any event or extraordinary activities that rises in the school including data collection procedures, and for the purpose of easing the process of the data collection phases. Paxman and Zakerman (1987) described the legalities of consent as "For the age of fourteen, as a minor the consent of parent or guardian is required and for the ages of 14 and 16 either the participant, the parent or guardian may consent" (p11). For the present study the school officials have consented for the data collection through their letter of agreement, although the consent form was attached to each questionnaire given to each student. In April/May for the year 1999 the initial data collection was obtained

For the purpose of maintaining ethical and legal standards, the investigator was concerned with:

1. The right of participants to give informed consents to participate in the study, the cover letter includes information about the nature of the study, why it is to be conducted and a statement assuring voluntary participation for the 2 types of informed consents.
2. The right of participants for anonymity, confidentiality, and to be treated with respect and dignity (Talbot, 1995). Students (participants) and MOE officials were assured that anonymity and confidentiality will be maintained at all stages of data collection.

3. The students are basically protected when the MOE officials grant permission. (Please refer to Appendix E for the letters of agreement).

The Research Committee at Al-Quds University, which has responsibility for giving ethical approval for research, was approached through drafts of the proposal and the questionnaire with the two consent forms. The committee gave the approval officially (Please refer to appendix D for the Ethical Approval from Al-Quds University).

In January 2000, for implementation of the proposed educational programme sessions and for gathering the second data collection (post-test), another lengthy process of writing letters explaining the next steps of the study to MOE officials. A letter included the name and qualification of the health educator who will be conducting the sessions and included a brief outline of the educational sessions to be conducted. Another letter included the names of the four randomized schools under study. After that, another interview was made between the study investigator and the MOE official that granted the permission to implement the health education programme in the two experimental schools, and to conduct the post-test in the four randomized schools under study.

The access to the classes for intervention was not an easy task; first the MOE officials sent letters to the directors of the schools informing them about the study and the investigator. The second step was the arrangement made between the investigator and the directors to allocate the proper time for conducting the educational sessions. The third step was to inform the teachers as well as the students about the data collection before the actual day of collection. This process needed more than two months to get it done. (Please refer to appendix E for the investigator letters and MOE letters of agreement).

Please note the details for gathering the data from students in classes at the two phases of the data collection taking into consideration the ethical principles in conducting this study and the girls' responses toward their participation in the next two sections (under the data collection procedures).

3.6 Data collection procedures

Prior to the collection of the data, a pilot testing was conducted on 46 female students aged 14-17 years in which it allowed the researcher to evaluate item clarity and response variance and to estimate the questionnaire reliability. Students' comments revealed a lack of clarity in wording of few items which were modified accordingly. Pilot testing helps predict the expected findings of the study and provides data to indicate that the proposed study will produce the expected results (Talbot, 1995). The study design and study objectives required two data collection and two data analysis: the pre-intervention data and the post-intervention data. It is worth mentioning that the field study was conducted prior to the eruption of the current Intifada initiated September 2000.

3.6.1 The pre-intervention data collection

The first data (pre-intervention test) was conducted in May 1999, it was collected from 260 students aged 14-17 years in their 9-11 grades (before the school closure for the summer holiday) in two randomized governmental schools (Betunia and BirZeit). The first pre-tested school was in Betunia. Betunia is a small town located 4 miles away west of Ramallah, it is very close to Ramallah and its residents consider themselves living in a city rather a small town. The second pre-tested school in BirZeit; also a small town located 7 miles away north of Ramallah city. The two towns are considered a central area for many villages surrounding them, and thus the two schools have a large number of students coming from these villages.

When the directors of the two schools were approached by the investigator on the day of the data collection which already they knew about, they were very helpful and called for the teachers of the four classes who were available at that hour. The investigator first justified her permission by the MOE letter of agreement, and then explained to them the aim and importance of the study, the process of the data collection and the further follow up needed for the study.

In the classes, the questionnaires were distributed to the students by each teacher available in her class with the presence of the investigator. For each school there were 30-35 students in each class, for the four classes. The four classes were: 9th, 10th, and the

11th grade sections A & B. The twelfth grade (the graduating class) was excluded because they will not be available for the following phases of the study, so the chance of losing subjects is minimized.

In each class, the investigator described the purpose of the study and the importance of the students' input in filling out the questionnaire, also it was pointed to all students to have a free choice if they are willing to participate or not in the study. For the 9th and 10th graders, it was described to them that the MOE officials have agreed to the study to be conducted and to be responsible for any misinterpretation by them or by their families. For the 11th grades, also it was pointed to them about the MOE agreement and to the consent form attached at the front page of the questionnaire, they were asked to read it and to sign it if they are willing to participate. All the students in all classes have agreed to participate and signed the consent form. The questionnaire was anonymous, it was labelled with numbers and each student was informed about her number so they can use it at the post-test. The students were also promised for anonymity and confidentiality. The questionnaire was administered collectively in each class and the time used for filling the questionnaire was 20-30 minutes.

The students were responsive, cooperative and happy, as some of them found it an opportunity to express very personal feelings and report difficulties in their environment. (For example, one girl wrote in the subjective part of the questionnaire that her father once almost killed her although she had done nothing wrong; another one stated that she would like to get married soon to get rid of her family). Since the questionnaires were anonymous there was no possibility of follow up for such particular concerns.

The girls systematically expressed their interest in the questionnaire and their emotional quest was obvious to the investigator as they used it as a base for discussion, and as stated in the purpose and objectives of the study, with the hope that it could lead to develop appropriate health education programmes answering the adolescents' health needs and concerns.

The first set of data analysis was done in June/July of the year 1999, then interpretations and reporting of the results needed 3-4 months. Based on those results, a health education package was developed and needed two months to be done. The health education intervention programme was introduced mid February through mid March 2000. A week later, and at the beginning of April 2000 the second data collection (post-test) was obtained

3.6.2 The post-intervention data collection

The post-intervention data (post-test) was conducted in April 2000. The same process and protocol was followed with the MOH to allow permission for collecting the data, the case for the first data collected and as described earlier.

The questionnaire was collected from 132 students in the 4 randomized schools under study. The instrument contained items on socio-demographic variables and 46 items reflected the female adolescents' psychological and social health beliefs and attitudes, or the dependent variables. The physical items that were introduced at pre-test were deleted at post test because the analysis of the pre-intervention data (pre-test) indicated that Palestinian girls concerns and needs were related to psychosocial issues and not physical ones. Also the health education intervention programme implemented was related to empower them from psychological and social perspectives.

With the agreement of the supervisor, and for the purpose of convenience in terms of time, cost and effectiveness for the health education intervention programme, the educational sessions were employed to 10th graders only and not the four grades in the two experimental schools Betunia and Al-Bireh. The other 10th graders in the other two schools BirZeit and Silwad were the control schools for the intervention. Thus, the post-intervention data (post-test) were obtained from 10th graders of the four schools which were assigned to different conditions required by the Solomon-four group design adopted for this study.

3.7 Data analysis procedures

Two data analysis were required too; for the first data (the pre-intervention data) interpretation and discussion of the results are presented in the next chapter. The analysis have utilized the SPSS computer analysis for the two sets of the data

3.7.1 The pre-intervention (pre-test) data analysis

The pre-intervention data analysis were conducted on 246 questionnaire, 16 of them were discarded because they were not completed by the respondents. The data was of two types quantitative and qualitative:

The quantitative data analysis

The quantitative data included 92 items organized under three categories (physical, psychological and social health beliefs and attitudes). The items were ranked in a Likert scale under either three or four measures. Ranking of items is a way of analyzing an issue in order to distinguish the relative importance of different aspects of the issue investigated (Brink and Wood, 1998). Analysis of the items to measure adolescents' health beliefs and attitudes was based on the following scale:

1. For items with high frequencies
2. For items with low frequencies
3. For items in category 11, "beliefs and attitudes toward Physical health" as some items were arranged in a 3-point response format to obtain a frequency measure on: yes, no, need more information, other items were arranged under agree, disagree and not sure responses for the same purpose.
4. Categories 111 and 1V.A "beliefs and attitudes questions concerning the adolescents' psychosocial health needs and concerns", the items were ranked in a 4-point response format to obtain an ordinal measure of frequency (more so than usual, same as usual, less than usual, much less than usual) of reported beliefs and attitudes. The responses of "less than usual" and "much less than usual" items, were combined together as both items indicate same beliefs and attitude. Category 1V.B, the female adolescent perception of the societal norms and attitudes toward young adolescents, items were arranged in a 3-point response format to obtain a frequency measure under agree, disagree, and not sure responses.

The quantitative data were computer analyzed by the SPSS system. For categories 111 and 1V.A, which entails 38 items, the items were arranged in a Likert scale at 4 response format, and their value label were coded as follows: 4 for more than usual, 3 for same as usual, 2 for less than usual, and 1 for much less than usual, and 9 for missing response. The value label given was a minimum of 1 and maximum of 4 for all items. It is noteworthy that there were a few negatively stated items in which the values given were reversed and coded as: 1 for more than usual, 2 for same as usual, 3 for less than usual, and 4 for much less than usual. A descriptive analysis was obtained on each item; for frequency, valid percent, mean, and standard deviation.

For category 1V.B which entails 8 items, the items were arranged in a 3-point response format, the value label given were coded as: 2 for agree, 3 for disagree and 1 for not sure. According to Talbot (1995) when observations consist of numbers that indicate differences in an amount or count, the data are quantitative data.

Reliability was obtained on 135 questionnaires. The reliability coefficient alpha was stronger in the items related to the beliefs and attitudes about psychological/emotional and social development concerns and needs. The reliability coefficient alpha was = .7180 for the items under category III (Beliefs and attitudes related to psychological/emotional development) and .6354 for items under category IV.A (Beliefs and attitudes related to social development) and .6802 for 1V.B (statements about the societal norms and attitudes toward young Palestinian adolescents).

Reliability pertains to the consistency of the score or the extent to which scores are free of random error (Pereira-Maxwell, 1998, P.84), in other words, reliability is the proportion of true variance to total variance in an instrument. According to Talbot (1995), when considering how to assess reliability, three attributes are important: stability, equivalence, and consistency. Each attribute is an important aspect of reliability, but not every attribute is relevant to all types of measures (Talbot, 1995). The consistency attribute was relevant for measuring the reliability of the present study instrument.

Consistency indicates that the instrument is consistent within itself; that is, most of the items show a consistency of scoring. The most common assessment method for homogeneity is Cronbach's coefficient alpha, which is referred to as alpha (Talbot, 1995). Alpha assesses the internal consistency of the instrument by correlating each item with all other possible combinations of other items (Nunnally, 1987). Talbot (1995) added that alpha provides a good indication of internal consistency as long as the items on the scale are all related to one concept.

By the virtue of the categories designed for the study instrument, the items were arranged as subscales under each category and the alphas for subscales were determined. In general, the more items included in a scale, the higher the alpha is (Talbot, 1995). Because the alpha compares all possible combinations of items, only one administration of one instrument to one sample is required (Nunnally, 1987). Once the scores are obtained, the alpha was quickly performed by using the SPSS. Reliability for each item scale was tested using the scale mean, the scale variance, and the corrected item-total correlation. The alpha for each item and then for all subscales were obtained. The computer printout provided the investigator with substantial information including the alpha for the total instrument.

Table 3.4 is one example of a computer printout reliability analysis using Cronbach's coefficient alpha for a subscale (the cognitive dimension) of the psychological health beliefs and attitudes data.

Reliability coefficients are estimates of the proportions of the total variance that it is true score variance as opposed to error variance. Although some researchers have suggested that reliabilities above .50 are acceptable for group comparisons (Pereira-Maxwell, 1998, P.84).

The goal for the study instrument was to achieve reliability coefficients alpha around .70. This alpha represent a respectable alpha for a newly developed scale, but would be problematic if the scale was well established (Talbot, 1995).

Table 3.4 Item-total statistics of the cognitive items sub dimension

Item Number	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alpha if item deleted
III 8	22.9699	28.6051	.3572	.6964
III 9	22.9549	26.6343	.5186	.6722
III 10	23.0902	27.5221	.4982	.6775
III 11	23.2857	26.1905	.5761	.6627
III 12	23.4211	26.9729	.5396	.6705
III 13	23.1805	26.9520	.5093	.6744
III 14	23.0301	29.3476	.3159	.7052
III 15	23.7218	31.3387	.1536	.7271
III 16	24.2256	31.7063	.1690	.7221
III 17	23.7970	29.4206	.2693	.7136
III 18	24.0677	33.4878	-.0040	.7384

Number of cases =133 Number of items = 11

Reliability coefficient = .7180

The qualitative data analysis

Qualitative analysis was utilized to collect and analyze non-numerical data as presented by the open-ended questions that have allowed the respondents to report their perceptions and feelings, toward themselves, their families, school and society.

Category V of the questionnaire is a qualitative data type which consisted of two subjective questions and allowed the girls to express their concerns and needs in an open and free choice, the two questions were as follows:

- V.A. "Being a Palestinian female adolescent, would you like to write about your feeling and perception at this stage"?
- V.B. The question contains three sub titles "Would you like to write about the problems and concerns that you encounter when you deal with: Family, School, and Society

According to Talbot (1995), qualitative data analysis generates themes and recurring commonalties and/or patterns, and validation of these themes by sharing the quantitative

data utilized for the same purpose. For content validity of the present analysis, the investigator has established a thorough review of literature related to qualitative analysis, and consulted a researcher and professor in public health prior to the process of the analysis.

To develop the themes of the qualitative data, the investigator began the analysis by reading the entire description written by the respondents, the data collected were assembled and carefully read through and thoroughly, until the investigator became intimately familiar with the statements written. The investigator focus was on noting regularities in the data or the themes identified reflecting each participant's view and perspectives as been written.

According to Talbot (1995) inductive analysis requires breaking the data into smaller pieces or parts to generate schemes or concepts developed directly from the data. The open-ended questions for the present study were already designed into categories; this has facilitated formation of the themes by clustering and coding the statements written by the respondents under each category. Then these themes were sorted out in a list form for their frequencies, as the list was arranged from the more frequent to the less frequent statements.

To ensure reliability of the data obtained and the themes developed by the investigator, these data were given to the same health professional and to a researcher and women's health specialist for content analysis synthesized, in which they provided their input prior to its final frame.

The various themes were integrated and connected together in order to provide an overall structure to the entire body of the qualitative data under this category. Talbot, (1995) elaborated, when observations consist of words or labels or numerical codes indicate differences in kind, then the data are qualitative (Talbot, 1995).

The results obtained from the four classes in the two pre-tested schools (pre-intervention data) have identified the Palestinian female adolescents' health beliefs and attitudes

toward their physical, psychological and social needs and concerns. Also it allowed the health educator to develop a health education intervention programme based on those needs to assist them in developing a healthy lifestyle.

3.7.2 The post intervention (post test) data analysis

The only practical way to sample subjects when the intervention is designed for classes and meant to be implemented in the classroom is to use classes as sampling units (Talbot, 1995). To account for a possible violation of the assumption of independence in the statistical analyses, the formally correct way to analyze such data is to use classes as the units of analysis (Talbot, 1995 and Kvalem, et al. 1996). The study sample of 10th graders in the 4 schools was classified into groups and each group was assigned to different condition. The study has utilized the individual data as the unit of analysis, which then was obtained at group level to compare the score means for differences between the pre-test and post-test data on the same items.

Descriptive statistics were utilized to analyze the socio-demographic variables at pre-test and post test in frequencies and percentages. A comparison between the two pre-tested groups was made first to compare for similarity or difference prior to introduction of the intervention. Also a comparison between the other two un-pre-tested groups at post-test is presented too. In general the findings indicated that the four groups possess similar socio-demographic characteristics and thus, met the criteria for their equality.

The adolescents' psychosocial beliefs and attitudes or the dependent variables entailed 46 items; 38 of them were arranged in a Likert scale at 4 response format, and the value label given were coded from 4 to 1. For example, a value of 4 for more than usual, 3 for same as usual, 2 for less than usual, and 1 for much less than usual. The other 8 items related to the participants' stance on the Palestinian societal norms and values toward young girls, in other words, their perception of the society toward young girls. These items were arranged in a 3-point response format, the value label given were coded as: 3 for disagree, 2 for not sure and 1 for agree.

The T test for independent groups is a statistical technique used to assess the difference between the means of two groups. The T-test for independent groups was utilized to compare differences between two group means, at pre-test to assess for equality of the groups at the onset of the experiment. Also to compare for differences between each two groups on the post test for effects of pre-test, the health educator intervention, and for the pre-test intervention-interaction for all assigned groups.

The study research design (the Solomn-4 group design) has employed different conditions for the groups participating in the study. These groups were denoted as follows: (1) P+ I group is the experimental group that received pre-test, intervention (health educator instruction) and post-test, (2) I group is the experimental group that received intervention and post-test but did not receive the pre-test questionnaire, (3) P group is the control group that received the pre-test and the post-test but not the intervention, and (4) C group is the control group that received neither intervention nor pre-test, but only the post-test.

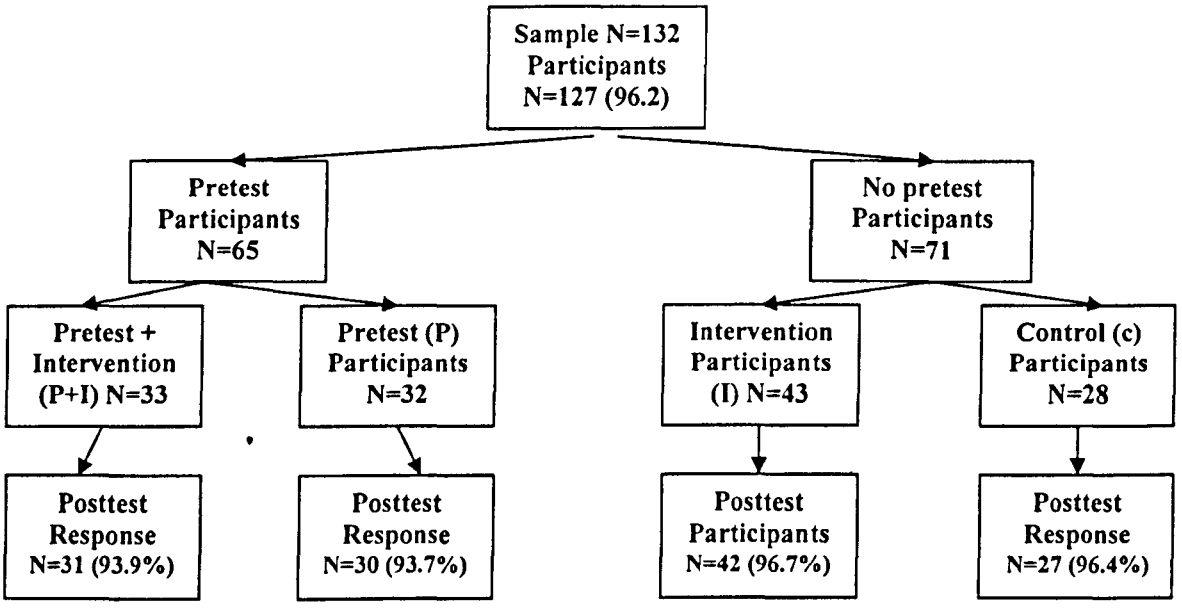
To evaluate for effectiveness of the intervention and to answer the research question in an experimental research design, three distinct assumptions were concluded from Brink and Wood (1998) to measure the effectiveness of the programme implemented; (1) the use of methods and tools of research that can be applied in an action setting "action research", (2) when the research question ask about effectiveness as the case of this study, and (3) when the research study incorporate some of the control techniques of an experimental design while using both quantitative and qualitative data methods. This study have met this criteria and thus allowed to explain the analysis of the data as a result of the research design, also the developmental approaches in the study of adolescence with the concepts of the SOR model have allowed to rank those concepts and to assign them into 8 psychosocial dimensions. These dimension included beliefs and attitudes that reflected the participants' health and well-being components. Comparison of these dimensions at the pre-intervention for equality and at post intervention for effects of pre-test, health education programme implemented, and for interaction of both pre-test and intervention gave a clear distinction to the effects of each.

3.7.3. Sample and Response at post test

A total of 132 students (10th graders) of four schools received the questionnaire and thus participated in the study. The response rate was controlled by having the students fill the questionnaire in their classes, questionnaires that were not completely filled were omitted from the analysis and thus the response rate was 96.2%.

Figure 3.1 reveals the number and response rate for each group under the different assigned conditions. To ensure that differences in the outcome measures between the different conditions at the post-test were not attributed to different samples, the students who did not participate in the pre-test were excluded from participation in the post-test . Although the questionnaire was anonymous, yet it was labelled with numbers and each participant in the pre-test group was aware of her number. This has facilitated analysis of outcome measures for significance of score means at the student level first, then at group level for the pre and post-test groups.

Figure 3.1: The number of participants and response rate of four groups:



The participant's psycho-social health beliefs and attitudes were measured by a 46 items instrument that reflected three broad dimensions that were subdivided into: 18 items

reflect the adolescents' psychological health beliefs and attitudes as one dimension with two subdivisions; 11 items for cognitive sub dimension and 7 items for emotional/affective sub dimension. 20 items reflect the adolescents' health beliefs and attitudes toward their social health as one dimension with three subdivisions; 8 items related to family, 7 items related to school, and 5 items to society; the last dimension includes 8 items that reflects the adolescents' stance on the Palestinian societal norms and values toward young girls.

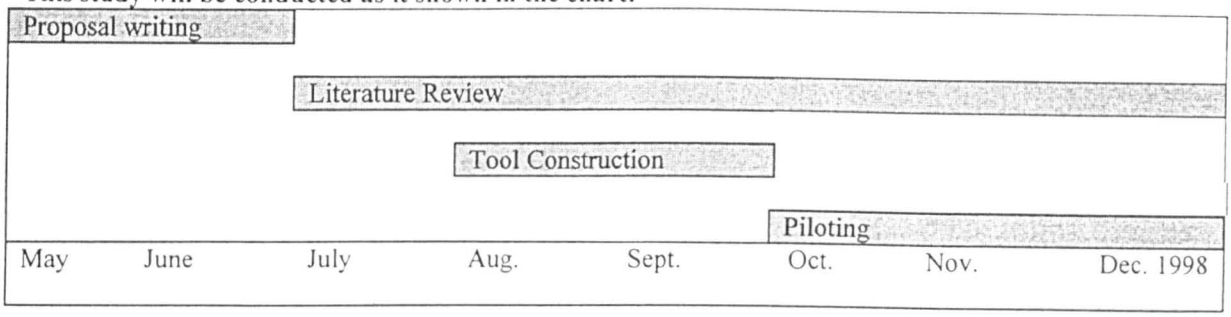
3.8 Expected outcomes

This research project have assessed and identified the Palestinian female adolescents' health concerns and needs based on their perception toward a healthy living through a self-administered questionnaire. The theoretical frameworks of the study which included the adolescents' developmental approaches and the S-O-R Model were the basis for the development of the questionnaire, and the basis for the intervention strategies, including the health education programme development. Health education intervention programme included the direct health instruction to experimental groups, supporting this instruction with a health education material related were distributed to all girls under study with the hope of empowering them and helping them to a better healthy life style. The study will evaluate the effectiveness of the health educator as a change agent toward building a positive healthy life style in female adolescents and thus, is expected to propose helpful recommendations for educative strategies, to be followed at schools in order to achieve an understanding of health in young Palestinians females. It is also expected to highlight the role of the nurse as a change agent in the community, as a health educator, beside her other functions.

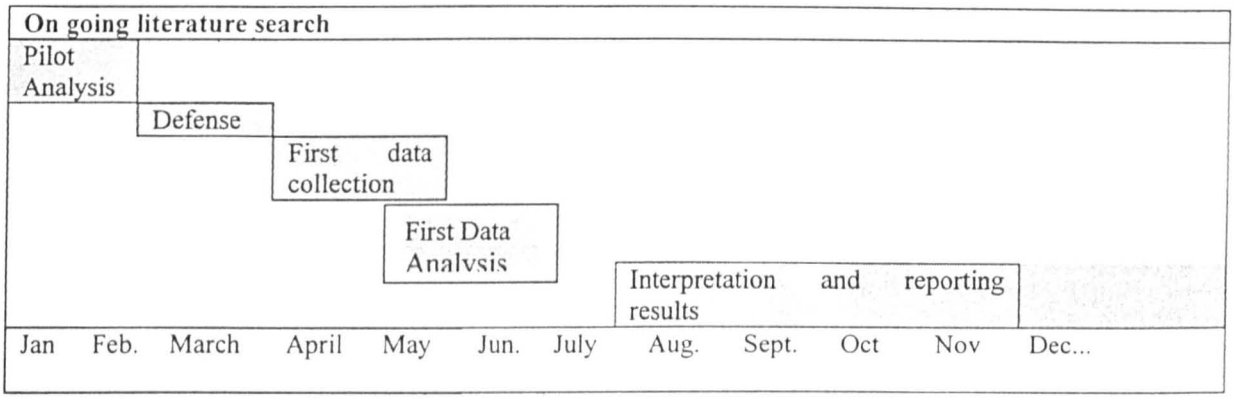
The study time frame

Phase one(1998):

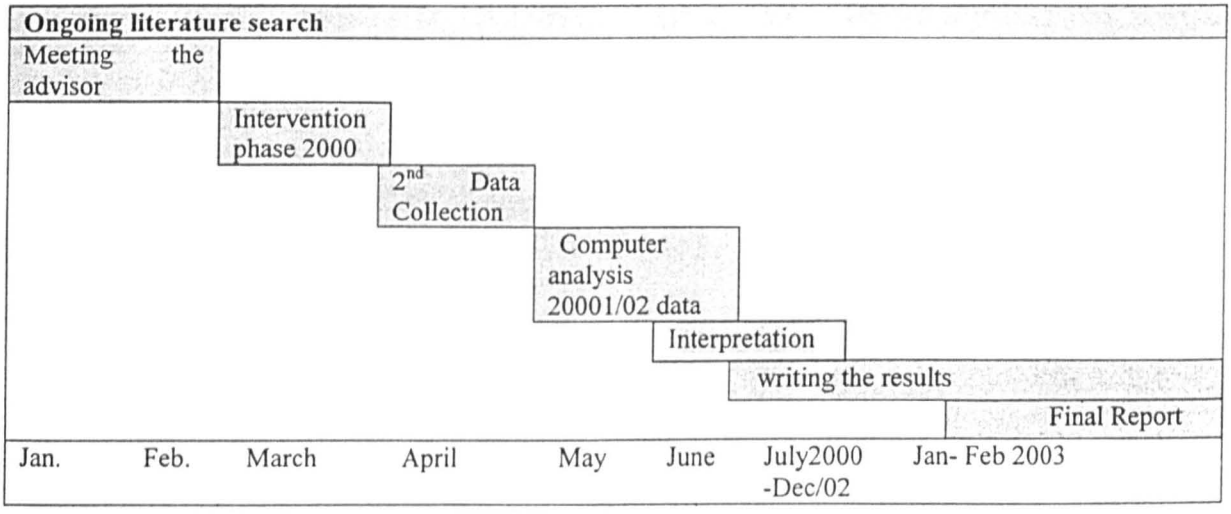
This study will be conducted as it shown in the chart:



Phase two (1999):-



Phase three (2000-2003)



Chapter Four
Pre-intervention data analysis and findings

Introduction

This chapter presents the analysis, interpretation and discussion of the results of the pre-intervention data. The pre-intervention data were obtained from 4 classes in each school from the two randomized schools (Betunia & BirZeit). The analysis has focused on category 111 and 1V of the questionnaire, the psychosocial health needs and concerns as indicated by the female Palestinian adolescents themselves. The questionnaire items are ranked in ordinal measure of frequency and presented in tables for the number and percentages. Some of the items are presented in figures too (please refer to Appendix I for the analysis of these items). For category V, the open-ended questionnaire, where written responses by the participants are clustered in themes and presented in the form of tables from the more frequent to the less frequent themes. Then a conclusion of the pre-intervention results was highlighted.

4.1 The pre-intervention data analysis

The methodology for this study required two data collections and two data analyses to meet the purpose and objectives of the study, and to answer the research questions of the study. For the first data analysis, two hundred and sixty questionnaires were given to students aged 14-17 years available in 4 classes in two randomized schools (Betunia & BirZeit), 14 questionnaires were deleted because they were not completed, and therefore 246 questionnaires were analyzed.

The findings of the pre-intervention data have met the first experimental step for the purpose of the study (to identify health-related concerns of female adolescents aged 14-17 years towards their health status and healthy life style through the assessment of their health beliefs and attitudes). The analysis provided an opportunity to look at how young female adolescents perceive their own health needs and concerns within their socio-

cultural context. The adolescents' health beliefs and attitudes toward physical health needs and concerns (Category 11) were evaluated by items related to knowledge, beliefs and attitudes toward physical growth and general health concerns and were rated by a scale of "agree, disagree, or not sure".

The statistical analysis of the items was presented by the distribution of responses in frequencies and percentages which indicated that female adolescents are well aware of physical changes and have quite reasonable knowledge related to general health. For example, around 72% know about the danger of smoking, 93% agree that exercising is good for health. Thus, the physical health data were not considered for the health education programme intended to be employed to the adolescents in the study.

The few items that needed attention under the physical category were the ones related to diet, reproductive health, and sex education. For example, the questions related to diet "what I eat makes a difference to my health" in which 29% agreed with this statement, 33% disagreed and 37% were not sure. Such distribution of responses on a vital issue, diet, warrants attention.

For the questions about reproductive health issues and sexual development, almost two thirds of the respondents did not know and were not sure of their knowledge, or of their feeling about such issue. For the same issue and under the psychosocial items related in categories 111 and 1V, the participants expressed a lot of concerns and needs. Thus the need for getting health information and education about such matters was evident more than anything else related to physical health needs and concerns. This need was also emphasized by the girls under their subjective responses in the qualitative data too.

Analysis and interpretations of adolescents' beliefs and attitudes toward psychological and social health needs and concerns indicated that the girls expressed a lot of concerns that needed attention and education to affect their beliefs and attitudes and thus to promote their development. Darden (1973) emphasized when health education targets individuals, the affective domain (attitudes, values, and feelings) are the major focus of health education programmes.

With the agreement of the supervisor, the investigator has limited the health education intervention programme to be implemented to one class of each experimental school instead of the 4 classes for the following reasons; ① 8 classes in the two experimental schools require an enormous time and financial resources to be conducted. ② The health educational sessions given to the experimental classes were conducted instead of the school regular classes, in which it needed a lot of arrangements with the directors and teachers in the two schools. ③ The health education programme aimed at empowering the participants in the experimental groups toward healthy living, and promoting their healthy life-style, therefore, to have an effective intervention a longer time is required to conduct the educational sessions. The intention by the investigator was to have a longer and effective health education programme implemented to the two groups, instead of short sessions to 8 groups.

4.2 Analysis of category III (female adolescents' health beliefs and attitudes toward psychological/emotional development)

This category included 18 items. The 18 items were clustered under two subcategories or dimensions as they reflect the cognitive and emotional health status of the respondents. Darden (1973) discussed that internal psychology of an individual focuses primarily on cognitive and affective disposition (beliefs, attitude, cognition and values)

Table 4.2.1 presents the analysis of the first subcategory or dimension which encompasses the respondent's cognition by their answers to awareness and capability statements which were used as indicators of the psychological status of respondents. These statements held the numbers; 3, 4, 5, 6, 7, 13, 14, 15, 16, 17 and 18 of the questionnaire as indicated by number and percent in the following table.

In fact, these statements reflect the view of respondents' self image and confidence level in terms of their ability to understand self and accept behaviours as evident in their responses to statement No.5 in which 37.5% of respondents know more than usual of what they are doing and accepting their behaviour. This hints at their sense of worth quite reasonably being accepting criticisms and advice as emphasized by their responses in statement 6 in which 41% gave more than usual. Yet, they are not aware of their stress as statement No. 7 which indicated 35% for less and much less than usual as clarified in

graphs 4.2.1 & 4.2.2. This could be related to the impact of society demands on females as traditionally taken from families and to avoid confrontation with.

Table 4.2.1: Adolescents' responses to statements reflective of their cognitive status toward psychological development

Items	More so than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
3. Been able to face up to your difficulties	58	23.8	114	46.9	41	16.87	30	12.3
4. Been capable of making decisions about things	60	24.4	113	47.6	42	17	26	11
5. Been understanding yourself and accepting your behaviours	92	37.6	108	45.7	28	11.7	12	4.9
6. Been accepting criticism and advice	99	41	96	39.5	32	13.1	15	6.3
7. Been aware of your stress	43	17.5	115	47.4	58	24.2	26	10.8
13. Been concerned with other's thinking of you more than what you think of yourself	47	19.4	69	29.2	54	22.8	67	28.5
14. Been depending on others to solve your problem	33	13.7	71	29.2	60	24.8	77	32.1
15.Been aware of your strength and weaknesses	83	35	92	38.5	34	14.8	28	11.7
16. Been liking achievements	148	61.2	63	26.7	12	4.9	12	7.2
17. Been liking to be a member in youth clubs and communities	112	45.9	57	23.4	32	13	42	17.6
18. Been capable of doing useful things	111	45	100	41.7	17	7.15	18	6.1

Figure 4.2.1

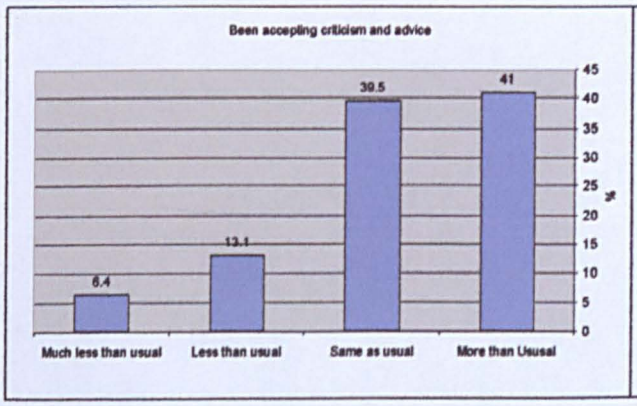
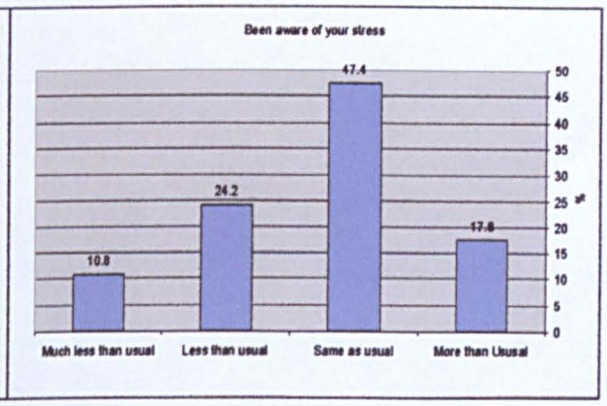


Figure 4.2.2



This was proved in their scattered responses to statement No. 3 and No. 4 that reflect their abilities to face up difficulties and their capability of making decisions. One has to think in terms of gender issues that family protection and the social impact on girls that does not allow them to make decisions themselves. There is a need to understand further how

they cope with this in reality and how can they be empowered. A pooling of responses under the "same as usual" option and some responses under the "more so than usual" one implies that the mental status of the respondents is quite positive.

With the exclusion of statements number 13 and 14, which are the only two negatively stated ones, the responses were positive in terms of their self-concern and their ability to solve their problems. This suggests that adolescents are in need of great assistance in areas of concern of both statements dealing with the image and dependency concerns. But then given responses are in total congruence with the Palestinian social value system where there is a tendency for granting much worth to the view people hold of each other regardless of its rightfulness. The response manner as shown in the table presents a slight shift in this area among the new generations. In other words, the adolescents are starting to question this social value as reflected in their response to statement number 13.

The same matter applies to statement number 14. Being dependent on others is an upbringing issue that is well rooted in the sociopolitical heritage of Palestinians. The scattered responses manner clearly presents that dependency level is becoming less for this generation which describes that each individual Palestinian has to challenge for his life as clarified in figure 4.2.3. This challenge has been emphasized by adolescents who gave a great value to "Achievements" with most positive responses given to statements 16 as clarified in figure 4.2.4, and statement 18 as both are achievements–related statements and girls see themselves as achievers. This calls for adults to promote and give space for adolescents to meet this need.

Figure 4.2.3

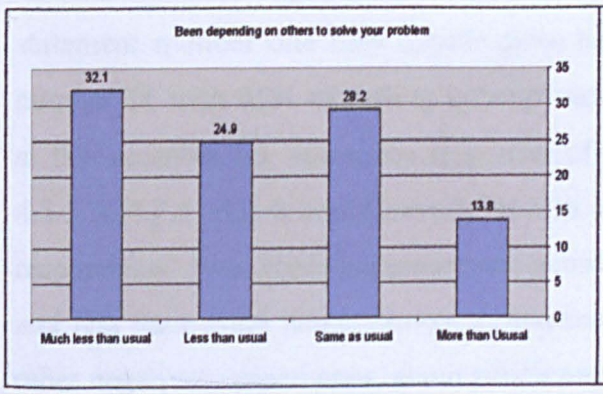
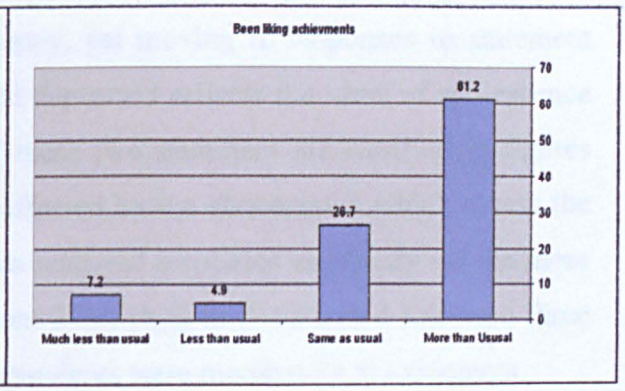


Figure 4.2.4



Adolescents are aware of, and are eager to be members at youth clubs and communities, as expressed in statement 17 in which 46% of respondents indicate the highest agreement to that statement. This seems to confirm the fact that parents put limitation to social contacts out side the family environment. In spite of that, the high level of awareness of strengths and weakness, as demonstrated in statement No. 15, is indicative of the comparative maturity respondents enjoy with reference to their age group and life stage

Table 4.2.2 presents the analysis of the second subcategory which encompasses the respondent's emotional/affective status by their answers to their feeling, attitudes and values statements which were used as indicators of the psychological status of respondents. These statements held the numbers; 1, 2, 8, 9, 10, 11, and 12 of the questionnaire as indicated by number and percent in the following table.

Table 4.2.2: Adolescents' responses to statements reflective of their emotional status toward psychological development

Items Number	More than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
1. Been able to enjoy normal day-to-day activities	32	13	162	68	35	15	10	3.9
2. Been feeling reasonably happy, all things around you considered	51	20	112	46.4	53	21.5	26	12.1
8. Been loosing confidence in yourself	25	10.5	74	29.9	58	23.2	89	36.3
9. Been thinking of yourself as a worthless person	34	13.6	54	22	59	24.3	97	40
10. Felt you could not overcome your difficulties	41	16.2	76	31.3	73	30.1	55	22.3
11. Been feeling unhappy and depressed.	56	22.2	79	32.8	49	19.8	61	25.1
12. Been feeling embarrassed for any reason	61	27.5	86	35.8	48	19.6	47	19.5

Adolescents seem quite ambivalent about their state of happiness. Responding to statement number one they appear quite happy, yet moving to responses to statement number 11 with 45% of feeling unhappy and depressed reflects the view of adolescence at this unstable life stage, the responses of these two statement are clarified in figures 4.2.5 & 4.2.6. But it could have been also affected by the statement 2 which assess the respondents' reasonable happiness and shows scattered responses especially for the more and less than usual items. However, statement 2 which is in itself stated followed three other negatively stated ones, about which respondents were moderately in agreement.

Figure 4.2.5

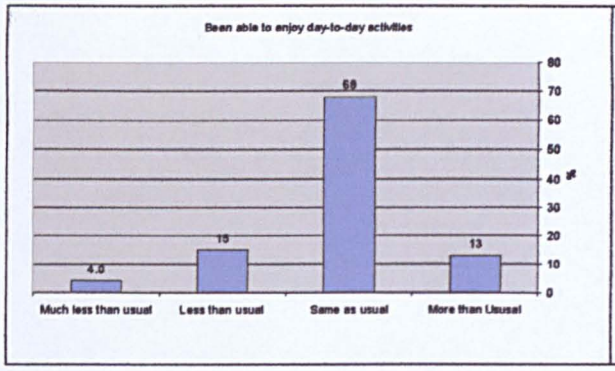
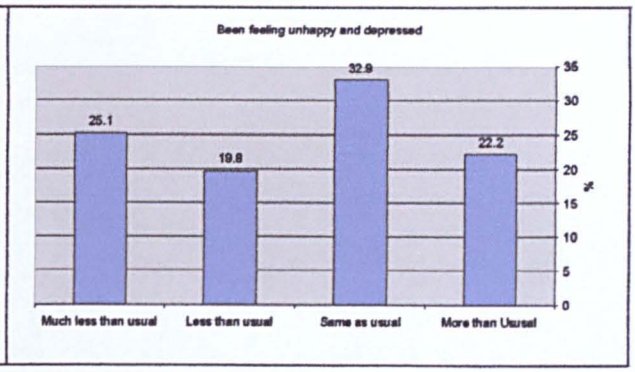


Figure 4.2.6



Yet, the scattered responses related to losing confidence in self in item 8, and the scattered responses to the feeling as worthless persons in item 9 complemented with the feeling of being embarrassed for any reason as been indicated by 27.5% for more than usual response in item 12 confirms the unstable psychological/emotional wellbeing, regularly associated to adolescence in the international literature. Having the scattered responses in their feeling to overcome their difficulties in item 10, could be associated with the level of relationship and support they get from their family and society, bearing in mind the social pressure and gender inequalities that is dominant in the Palestinian society.

Adolescence may be anxiety provoking, in addition to the limitations imposed on girls by family. As it seems many of them have internalized a negative image of themselves that justifies the constraints imposed upon them by the society too. For that, logically speaking these areas need to be looked at, and an effort toward helping in building their self-confidence and self-image for a better future health and lifestyle is required by health professionals not only as preventive health, but also as constructive health effort.

4.3 Analysis of Category IVA and 1VB (beliefs and attitudes of female adolescents toward social development)

This category included two parts: IV.A consisting of 20 items which were clustered in three subcategories or dimensions as reflected in the statement relevance to family, school, and societal levels of social development. IV.B consisted of 8 statements measuring the girls' perceptions of the societal norms and values toward the young female Palestinian.

IV.A: Table 4.3.1 encompasses respondents' answers to social development at the family level, they hold the numbers: 5, 7, 8, 9, 10, 11, 12, and 13.

The overall responses reflected the Palestinian social system within the family context. At the time when most respondents expressed understanding and respect by their families, as manifested in item 7, figure 4.3.2. Yet 70% do not feel that their families support them or are concerned about their feelings and needs, as clarified in figure 4.3.1. Al-Saadawi (1990) described women as being less valued in relation to Arab family hierarchy regardless of age, educational status or socio-economic conditions. Minors are considered property of their fathers and decisions about basic issues in life are of the family concerns not the girl herself.

Table 4.3.1: Adolescents' responses by their social development at the family level

Items	More so than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
5. Felt that your family supports you and is concerned with your needs and feelings	29	12.1	44	17.9	42	17.1	125	52.5
7. Felt that your parents understand you and respect you	101	41.6	82	33.8	29	11.9	32	12.6
8. Been opposed and criticized by your family	51	20.5	77	31.3	50	20.7	67	27.4
9. Felt embarrassed to talk with your parents about personal matters	79	32.7	93	37.9	40	16.3	32	12.5
10. Felt that your opinions and ideas are accepted by your family	58	23.9	123	51.5	39	16	21	8.5
11. Felt that you like to deal with your older sister more than mother	81	34.4	80	34.6	32	13.6	41	17.5
12. Been feeling embarrassed to talk about sex with any family members	97	39.9	58	24	45	18.8	41	17.2
13. Preferred your friends more than family	76	31	81	37.2	32	13.4	51	21.4

Figure 4.3.1

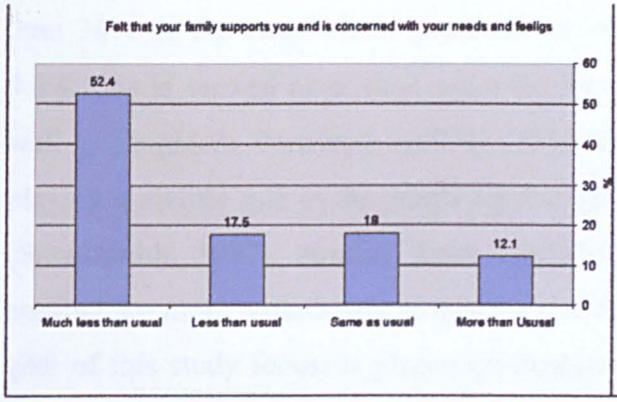
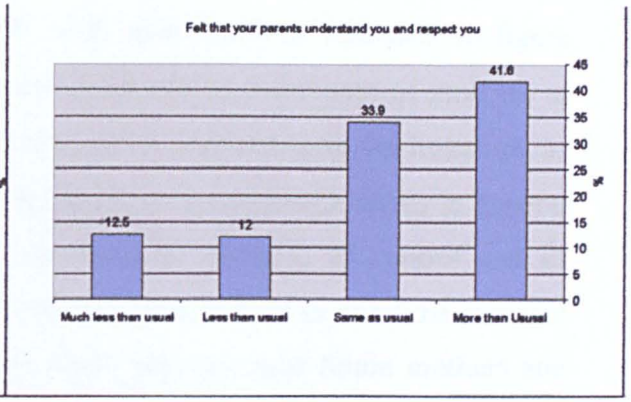


Figure 4.3.2



A substantial number of the adolescents, 24% did not think that their opinions and ideas are accepted within the family. Another 24% think the opposite as indicated in item 10. Such distribution could be related to the educational and cultural background of the parents. Furthermore, item No. 9 indicates that 33% of respondents agreed to "more than usual response" to feeling embarrassed to talk with parents about personal matter, and a larger number 40% do not dare to talk about sex issues as manifested in item 12 and clarified in figure 4.3.3. What is interesting though is that only 20.5% of them seem to be faced with opposition and criticism inside the family as indicated in item 8 and 31% preferred friends more than family as indicated in item 13. This is, indeed, atypical of the Palestinian families; a shift appears to have occurred with regard to concept of "authority" as perceived and practiced within the Palestinian family. Nonetheless, communication patterns seem to still be defective as responses to most statements indicated.

Figure 4.3.3

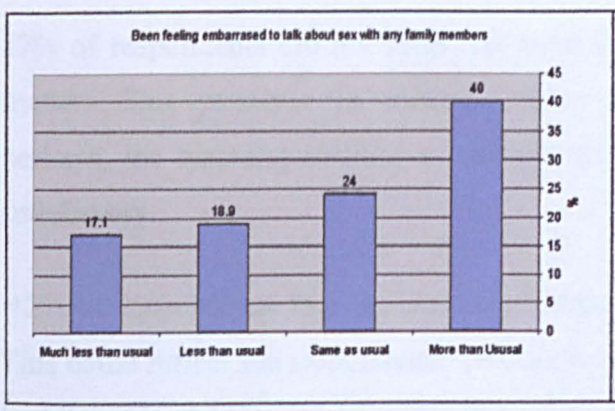
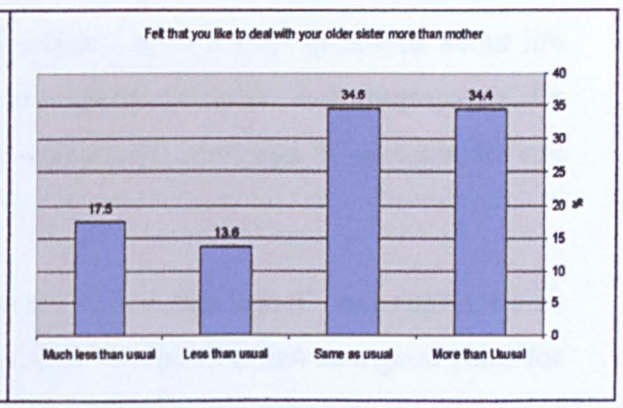


Figure 4.3.4



The most critical gap remains the one related to the mother–adolescent relationship. More than 34% of the respondents preferred to deal with older sister as indicated in figure 4.3.4; this is viewed as critical and calls for a need for raising awareness of mothers as well as daughters. Parenting variables have been regularly referred to in the literature, as playing a pivotal role in the youth psychological functioning and health status in general (Shucksmith, 1997). Among those variables the level of support, of control and of conflict are more specifically pinpointed. However, we need to bear in mind the strategic goal of this study focus, is placed on daughters where they are near future mothers and many are current caretakers of siblings.

The following analysis in table 4.3.2 encompasses respondent's answers to school system as indicated in item numbers 2, 3, 4, 6, 19, and 20.

Table 4.3.2: Adolescents' responses by their social development at the school level

Items	More so than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
2. Felt that school subjects answers your question about life matters	38	15.5	67	27.8	92	37.25	48	19.45
3.Been liking the school environment and felt its' encouraging to build friendship with others	103	42.4	88	36.5	23	9.8	27	11.3
4. Preferred teachers from the other sex	49	20.0	65	26.5	48	19.3	81	33.7
6. Preferred to deal with your teacher for personal matters	89	37.05	93	38.5	23	9.1	38	15.3
18. Preferred marriage to school	33	13.85	25	10.6	34	14.5	144	61.05
19. Felt a need to have sex education	113	47.1	65	27.3	31	12.8	31	12.8
20. Preferred to be in a mixed school	64	26.20	51	22.7	46	19.6	76	31.5

57% of respondents did not think that school subjects answer their questions about life matters. This questions the adequacy of the educational material, and programmes. Or perhaps, the teaching abilities to convert the educational materials to students are not satisfactory.

42% of respondents like the school environment "more than usual" and appreciate it. This could reflect the respondents' perspectives from two points; first as a good place for building friendships and second it is a place where they are permitted to go to without

family permission. Whatever the reason is, this implies that students have a positive attitude toward school, which should be capitalized on and invested in for the purpose of building friendship, and for the educational process to include health education. Sex education was pinpointed in which 47% of respondents felt a need for sex education "more than usual" and demanded information as manifested in item 19.

This issue of liking school was supported by responses to statement 18 where around 75% of respondents preferred schools to marriage, given the fact that about 3% of females leave school to marry in the 10th and 11th grade (PCBS, 1999).

37% of respondents prefer to deal with their teachers for their personal matters "more than usual" opposed to 24% who do not as indicated in item 6. For those who prefer to deal with their teacher, they may do not have an open relationships with their family members or with any of the adults within the extended family members, so teachers become the primary persons in discussing matters regarding their concerns and needs. On the other hand, for those who do not go to their teachers, they are either satisfied within their family context or they do not evoke their private concerns, as traditionally family problems have to remain in the family.

When the girls were asked about their preferences to have a male teacher, or to be in a mixed school as presented in items 4 and 20 in which 53% and 51% consecutively ranked such issue "under less and much less than usual". This issue of mixing with the other sex is very strongly affected by the religious and social environment of Palestinians where women especially the adolescent girls are socialized to avoid mixing with the other sex even as teachers or students. This kind of upbringing especially for those who are coming from the villages where conservative culture prevails has allowed the girls to view mixing with the other sex is of no importance and not usual.

The following analysis in table 4.3.3 encompasses respondents' answers toward their society as indicated in items 1, 14, 15, 16, and 17.

Table 4.3.3: Adolescents' responses by their social development at the societal level

Items	More so than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
1. Been reading books and other sources about health issues	49	19.9	116	46.6	54	22.5	27	11
14. Been liking to have a friend from the opposite sex	46	18.85	74	30.75	31	13.3	88	37.1
15. Been feeling embarrassed to talk or meet with the friends of the other sex	54	22.5	87	36.9	36	15.3	50	25.3
16. Accepting the societal norms and values in relation to your relationship with men	44	18.05	79	32.75	52	21.6	66	27.6
17.Believed in the emotional relationship between the man and woman	59	24.5	71	30.05	40	16.7	68	28.7

For item one, there are scattered responses in relation to reading books about health. 50% of the respondents do not like to have a friend from the opposite sex as manifested in item 14. This is supported by responses in item 17, in which 47% do not believe in the emotional relationship between man and women. This could reflect the religious and cultural attitude the adolescents acquire within their upbringing. The nature of Arab-Muslim societies facilitates control and abuse of women through issues of honour, shame, sexuality and the potential influence of seducing men (Al-Saadawi, 1990),.

Although 40% do not feel embarrassed to talk or meet friends from the other sex as manifested in item 15, this contradicts their responses to item 16, in which almost 49% do not accept the societal norms and values in relation to male/female relationship. It could be interpreted because of the transition that Palestinians are going through is affecting the beliefs and attitudes of the adolescents as many of them rebel against the social pressure and constraints put on females especially when they are at this age.

Category IV.B the female adolescents' perception of the societal-norms and values toward young females as perceived by the respondents. This category consisted of 8 items of three response format on agree, disagree and not sure presented in the following table.

Table 4.3.4: The adolescents' perception of the societal norms and values toward young girls

Item	Agree		Disagree		Not Sure	
	No	%	No	%	No	%
1. Most young girls are not allowed to go out alone.	122	50.2	98	39.9	24	9.9
2. Most young girls have to get married as early as possible	33	13.3	173	70.9	39	15.80
3. Females are only for marriage	22	9	199	82.1	21	8.9
4. Females are not allowed to have an emotional relationship with boys	65	27.20	127	51.3	52	21.5
5. Females are not allowed to talk about sexual matters	60	25.45	130	52.95	52	21.6
6. Females should not be independent	60	23.35	139	57.3	46	19.35
7. Young Females are not allowed to participate in youth clubs	45	18.55	165	67.7	33	13.75
8. Young girls are not allowed to participate in social activities	37	15.15	178	73.25	28	11.6

Given the Palestinian socio-cultural norms and attitudes toward young females, overall responses to this theme gained a high level of disagreement. Kim (1998) described norms as standards of action by which individuals live their own social lives. The norm restricts the individual's behaviour and suggests some criteria to individual behaviour. In this study, norms mean the social pressure that women perceive subjectively when thinking about their way of living and socialization, this perception was emphasized by disagreement of respondents at a rate of 67.7% and 73% respectively to the statements 7 and 8 "not allowed to participate in youth clubs and social activities". The adolescents' perception toward independence, free movement and socialization issues was very much different from what is believed to be a societal norm.

The social pressure is presumed from the adolescents' females significant others such as family, school, friends and local community (Kim, 1998). The respondent's refusal to the societal perception toward young females about the marriage issue in statements 2 and 3 with a response of 71% and 82% respectively disagreed about it. This could be interpreted that the marriage issue is not a priority on the adolescent's agenda.

For item one, 50% of responses toward not allowing the girls to go out alone agreed to that, but it was surprising when statement 6 calls for female independency 57% they have

disagreed too. Respondents either, adhere to those norms based on their faith in traditional values and religion, or they feel supported by their families, so why is the society?

Items 4 and 5 that indicate females are not allowed to have emotional relationship and not allowed to talk about sex matters. Almost 50% of respondents disagree with that. It is either it reflects the gap between this generation and that of their parents, or the social norms that suppress the girls. A great deal of responses depends on the atmosphere the girls' lives in, the atmosphere of their families and that of their society.

4.4 Analysis of subjective questions in category V of the questionnaire

For the purpose of comprehensive assessment of the adolescents' perception of their own selves, their health needs, and concerns within their families, school, and society, the following questions were asked to allow the girls to write their responses and express their feelings in a subjective way (the questions were categorized as: V.A and V.B).

The qualitative data have been utilized as a reasonable information-gathering tool (Talbot, 1995) of adolescents' health needs, problems and expectations as perceived by the respondents themselves in which 27.6% of participants have responded to this question.

It is noteworthy for those who responded, many of them were very grateful and could write things that are believed to be very confidential, as some have expressed their problems and needs in depth and found it a way to ventilate through.

V. A: Being a Palestinian female adolescent would you like to write you perception about it?

65 participants have responded to this question with 13 themes ranking from the most frequent to the least frequent statements as indicated in the following table.

Table 4.4.1: Themes related to adolescents' feeling and perception of adolescence.

Priority	Statements	No. of Respondent
1	Adolescents need to have developmental awareness	26
2	I hate to be a girl	18
3	Feel embarrassed for any reason	15
4	Feel good, becoming recognized by others	19
5	Like to know about sex matters, and physical changes	18
6	Sensitive period, need guidance	16
7	Prefer loneliness and sometimes feel depressed	14
8	Cannot find who understand me	12
9	Feel emotional and feel love	10
10	A phase for marriage	5
11	I don't like this phase, fear to talk about it	8
12	Not allowed to express my feelings	8
13	Need to be careful in my behaviours	6

The responses in table 4.4.1 were clustered according to their frequencies and analyzed for the themes that ranged from 26-10 responses first, then for the rest of the statements.

The perceived felt need for knowledge and awareness regarding development as written by the respondents "adolescents need to have developmental awareness", this statement indicates a positive attitude of respondents and indicates the importance of the issue in strengthening their potential to deal better with their own physical and psychosocial well-being.

This demand for knowledge and awareness was emphasized by the respondents as indicated in theme no. 5 and theme no. 6 respectively, "like to know about sex matters and physical changes", "sensitive period, need guidance". Such statements emphasize the adolescents' need for education and raising their awareness about physical changes especially when it comes to reproductive health issues and the associated psychological / emotional development.

Not surprisingly, the analysis revealed that the respondents were critical of themselves, a relatively large number of them reported "I hate to be a girl", it is during childhood, where children are exposed to many factors which influence their attitudes and behaviours regarding their gender role. Other participants wrote "prefer loneliness, and sometimes feel depressed", the issue of low self-esteem is quite significant by these responses, Borg (1996) indicated that people with low self-esteem will draw socially. This notion was emphasized when they wrote "feel embarrassed for any reason", finding difficulty in getting on with others as stated that "no one understands me". This self imposed segregation could be related to stressful life events these girls are experiencing, and to the cultural roles that they should be adopting. These roles are likely to provoke an insight conflict which is usually associated with stress and low self esteem (Borg 2002)

During this stage the values, beliefs and attitudes with which a girl grows up are confirmed and define the limits of her role as a woman. Without understanding and guidance from those around her, there is every likelihood that the negative effects of such social pressure will lead to frustration, lack of confidence and security as indicated by their response "I don't like this phase, fear to talk about it". In most cases, social restriction becomes intensified for the adolescent girl; she becomes afraid for her safety and afraid of "people's talk" or gossip. The family begins to watch her closely, and question any movement they see as out of the ordinary when some of them stated "can't find anyone who understands me".

The issue of self-control either at the level of expression of feelings or behaviours was present too when some of them wrote "need to be careful in my behaviours" or "not allowed to express my feeling". Such statements often lead the girls to be withdrawn, feels lonely and dependent on others or unable to make own decisions. This could be manifested by the theme expressed by some of them "adolescence is a phase for marriage" this theme reflects the social attitudes toward the girls' restriction of freedom in mobility, as well as in expression of their beliefs. This psychosocial restriction very often leads them to think of marriage as a way of granting independence, worth and respect. On the other hand, many of the respondents expressed a positive attitude toward

this phase as "feel good, becoming recognized by others". This feeling could be reflected as a result of the support and guidance they receive from their families and others around them. But relatively these respondents are few in number compared to the other themes reported in this analysis.

Category V: Would you like to write about the problems and concerns that you face when you deal with: (1) family, (2) school, and (3) society?

(1) Family: For the family issue themes, 68 responses were given by the respondents in terms of problems and concerns, ranked from the more frequent to the less frequent statements as perceived by the participants and indicated in the following table.

Table 4.4.2: Themes related to family problems and concerns as perceived by the adolescents:

Priority	Statements	No. of Respondents
1	My family prefers boys over girls	30
2	Our families need guidance when dealing with their adolescents	22
3	No problems; feel well, supported and listened to	18
4	My family does not allow me to go anywhere except school (freedom restriction)	18
5	I have problems with mother	16
6	My brother is in charge of me	10
7	My family is over protective	10
8	Not allowed expressing my feeling and problems	8
9	Poor communication within family members	8
10	Financial problems	9
11	I take care of my younger brothers and sisters	8
12	Agree to family rules and follow my Islamic faith	4
13	Father hits and curses me	2

In many Arab societies including Palestine, the male is the leader and the highest authority in the household and women are classified in less valued position in the family hierarchy, and considered a property of the man as a father, brother, husband or son (Giacaman, 2002 and Kernwi, 2001). The most indicative statements to gender inequalities are expressed by 30 respondents when they wrote "my family prefers boys to girls" and ten respondents wrote "my brother is in charge of me". The men in the family,

especially the father and older brother sometimes increase their efforts to make their daughters submissive as reported by two of them "my father hits and curses me". It's during adolescence where seems to be a significant pressure for the girls to adopt traditional roles (Borg, 1996), these roles are more likely to provoke conflict with parents; the girls are considered sexually mature and need to abide by the societal norms which purely works against the adolescents' need for freedom in expression as well as in motion. The family and the society begin to watch the growing girls very closely, and to question any movement they see as out of the ordinary when the participants wrote "my family is over protective" coupled with "my family does not allow me to go anywhere except school, freedom restriction".

This sense of control by the adolescents' can cause frustration and lack of confidence; being constantly watched and prohibited by the family members and the society. To confine to family rules, with no opportunity to widen their relationships with others, all may put the adolescents' mental and emotional health at stake?

Regretfully, the mothers' role is often a negative one as many of the respondents reported "I have problems with mother". The mother may causes fear of the girl of her father as some mothers believe that the men are more knowledgeable in matters concerning the family members especially the girls (Mansour, 1999). This reaction towards family members was highly expressed in the statement "our families need guidance when dealing with their adolescents".

Other mothers have a higher level of awareness, either because they are educated or because they were encouraged when they were young to think for themselves. These mothers encourage their daughters to develop their abilities and personalities as many of the respondents reported "No problems, feel supported and listened to". Few respondents agree to family rules and follow the Islamic faith, and the belief they acquire from their family and community.

Many have reported the communication pattern within the family members and the financial status of their families are the source of their problems and not being a girl is

the problem that faces them. Surprisingly, few reported that they take care of their younger sibling, it could be either considered as a normal pattern of living for many girls or the young girls are not taking a responsibility of their siblings as indicated in the theme related.

For the school issue themes, 46 responses were given in terms of problems and concerns, ranked from the more frequent to the less frequent statements as perceived by the participants as indicated in the following table:

Table 4.4.3: Themes related to school problems and concerns as perceived by the adolescents

Priority	Statements	No. of Respondents
1	Teachers discriminate between students	18
2	There is no trusting relationship between students and teachers	18
3	Teachers need to be educated how to deal with students	17
4	Some teachers do not listen and do not feel with students	16
5	School restrictions for students to move around	10
6	No friends and feel lonely at school	8
7	No problems	9
8	School problems with peer	7
9	Study pressures	4

Like most adolescents in other societies, the Palestinian girls included in this sample spend a large part of their time in school, have worries concerning their grades, and have positive and negative relationships with teachers and other students.

From the responses obtained under this theme, it is obvious that schoolteachers do not act as a model for students. It seems that the mistrust and the feeling of favouritism of teachers of one student over the other, increases the girls' worries and affects their psychosocial health. In other countries, the school system may have doctors, social workers, counsellors or psychologist. In Palestine, these professional categories are either unavailable at all, or under-represented to satisfy needs, or not trained to answer the specific needs of adolescents (Mansour, 1999).

Within this situation coupled with responses "teachers need to be educated on how to deal with students" allows the girls to either solve their problems by themselves and without guidance, or may leave them with the feeling of "no friends and feel lonely at school" or with facing problem with peers as indicated in the theme "school problems with peers".

This issue is of importance that needs to be highlighted in the recommendation for better future teaching abilities. Few of them did not have any problems, this could be related to either they were good achievers or have their family support.

Table 4.4.4 Themes related to problems and concerns at societal level as perceived by the adolescents

Priority	Statements	No. of Respondents
1	Society discriminates between girls and boys	22
2	No value for the girls	16
3	Girls are not allowed to move within their community	16
4	Society suppresses the girls and no respect for their feeling	15
5	People interference with girls' life	8
6	Society does not appreciate the female role	13
7	People around us want girls to behave as adults to be ready for marriage	9
8	I like my society	6

For the society issue themes, 39 responses were given in terms of problems and concerns, ranked from the more frequent to the less frequent statements as perceived by the participants are indicated in the above table:

Respondents under this theme rebel the societal discrimination toward girls and the responses under this theme speaks for itself.

The girls' feeling of discrimination, not valued, suppressed and is not respected within their society as indicated by 22 and 15 respondents respectively when they wrote "society discriminates between girls and boys", "society suppresses the girls and no respect for

their feeling". The impact of "freedom restriction and being not appreciated for their roles within their society" all together influences their psychosocial well being.

They feel that they are victims of an unfair system, and feel isolated in their distress. Females, especially in their teens, are perceived as having some kind of defective internal control (Mansour, 1999), of course the girls' self-image is quite negative especially if the level of parental support is low.

Therefore, it is very important to pave the way toward the elimination of social attitudes and practices, which prohibits the girls from developing healthy through education, awareness and empowerment.

4.5 Conclusion of the pre-intervention results

Given the analysis of the quantitative and qualitative data; one can summarize that the majority of the participants have concerns and needs toward their biological and reproductive system changes and the associated psychological and social development. The need to have information regarding their sexual and reproductive system was evident when the majority stated "Adolescents need to have developmental awareness", "Like to know about sexual matters and physical changes". The participants' sense of responsibility toward their sexuality was present when around 50% ranked the item "need to have sexual education" on more than usual measure in the quantitative items. Such responses were remarkable indicators for the investigator objectives, to increase knowledge and raise awareness regarding their biological and reproductive system changes that occur at adolescence in the first session of the educational programme, to enable the participants to understand the associated psychological and sociological developmental concerns and needs.

The need to promote their health and social status was highly significant when 61% indicated "liking school and liking achievements" and "preferring school to marriage". Their feelings of being unhappy and feeling of embarrassment for any reason were also evident in their responses under the psychological and social quantitative data. Those

responses allowed the investigator to take these concerns into consideration to develop a health education programme that answers and meets their needs accordingly.

The majority reported that they encounter problems with their families and society, reflected by their feeling of discrimination, gender inequalities and social injustice as indicated by their statements "my family prefers boys over girls", "my brother, is in charge of me". This could have contributed to their psychological and social well-being by the feeling of frustration, anger and not being recognized within their environment. For example, many of them wrote "society suppresses the girls and no respect for their feeling" or "society discriminates between girls and boys".

It seems there is a gap between the parents and their daughters in understanding each other; 42% responded positively to item "felt that your parents understand you and respect you", on the contrary around 70% responded negatively to item "felt that your family supports you and is concerned with your needs and feelings". Also there is a gap in communication between the parents and their daughters, around one third of the respondents felt embarrassed to talk with their parents about personal matters and preferred to discuss it with friends and others rather than their families, or with their older sisters rather their mothers

The school system which is expected to give more space for the girls' freedom in expression and mobility was on the contrary not supportive. The support they need is to be listened to their concerns and feelings from their teachers, this was not the case for study participants when 18 responses wrote "Some teachers do not listen and do not feel with students". The school system does not allow the girls to move around except in the school playground when they are out of the class; also they have to be constantly watched for any extraordinary activities, this was manifested by their responses "School restrictions for students to move around". The respondents seldom mentioned that their teachers could be of help as indicated by 17 respondents "There is no trusting relationship between students and teachers", "Teachers need to be educated how to deal with students". Yet 42% indicated that they like school environment and felt it was

encouraging to build friendships, but they felt that school subjects does not answer their concerns about life matters

The respondent's attitude toward the school complemented their attitudes toward their families and society. Thus to promote a better mental and social health for the students in schools, it is required to promote the school teachers attitudes toward dealing with these students beside having a school counsellors and/or school nurses that can help them to have a better development and better living. However, but this can be considered in the recommendation section of the study.

The double standards of communication and dealing with young females in the study sample reflect the Palestinian society traditional culture and values toward female adolescents; it was obvious from two aspects, at one hand they were treated as adults when they stated "people around us want girls to behave as an adult to be ready for marriage" and "I take care of my younger brothers and sisters". At the other hand, they need to be protected, watched constantly, denied free mobility and treated as minors when they stated "my family is overprotective", and by their society system when quite a large number wrote, "society discriminates between girls and boys", and when their responses indicated that 50% do not accept the societal norms and values toward female adolescents.

This contradictory way in dealing with the Palestinian female adolescent at all levels mentioned may have affected their psychological and social well-being and contributed to their feeling of low self-worth, low self esteem as reflected to a large extent by their statements "feel embarrassed for any reason" and "no value for girls". This feeling of inferiority and discrimination was surmounted when some of them wrote "my family prefers boys over girls" and "I hate to be a girl".

Values and attitudes that perpetuate gender inequalities are instilled in childhood. Adolescence may be one of the last opportunities to offer alternatives (Hall, 2002).. Moreover, the investigator assumes that health education programme for the adolescents under study including the biological and reproductive system changes and sexual matters,

the associated psychosocial development with emphasis on gender awareness, and discussion on their social roles, communication and relationships may contribute to improve their understanding of themselves and of others which may allow them to foster a positive attitudes toward themselves, their families and their communities for a better healthy living.

(Please refer to the tables of analysis for category 111 and 1V in Appendix G and in figures in Appendix I).

Summary

This chapter presented analysis and interpretation of the results obtained at the pre-intervention data. The pre-intervention data were obtained from 4 classes in each school of the two randomized schools (Betunia & BirZeit). The analysis has focused on category 111 and 1V of the questionnaire, the psychosocial health needs and concerns as indicated by the female Palestinian adolescents themselves and the items of the questionnaire are presented in tables for their frequencies and percentages with some items are presented in figures too. The qualitative questions under V, the written responses by the participants were clustered in themes and presented in the form of tables from the more frequent to the less frequent themes. Then a conclusion of the pre-intervention results has emphasized the needs and concerns of adolescents and summarized them to be a guide for the development of the health education intervention intended to be delivered for the experimental group under study

Chapter Five

The Health Education Intervention Programme

Introduction

The purpose of the study was to evaluate the role of the health educator in affecting change in the beliefs and attitudes toward healthy living among female adolescent aged 14-17 years in four governmental female schools in the West Bank.

In order to meet this purpose and objectives of the study and to answer the research question, the first experimental step was the assessment of the health beliefs and attitudes of female adolescents aged 14 -17 years toward their health status and healthy life style (the pre-intervention data or pre-test) as presented in the previous chapter. This assessment helped the investigator and the health educator to design an educational programme based on the identified health needs and concerns.

The second experimental step was the health education programme implemented by the health educator instruction and to use the time for instruction efficiently by reinforcing correct beliefs and attitude, and by using appropriate teaching strategies to emphasize self-responsibility toward their personal and future lifestyle.

Therefore, this chapter presents the health education intervention program which included the rationale for intervention, the educational process, the implementation tactics, the educational sessions and evaluation of intervention.

5.1 Rational for intervention

The intervention strategy was based on the results obtained from the pre-intervention data as has been indicated under the analysis chapter, and as summarized in the conclusion section. The analysis provided an opportunity to look at how young female adolescents

perceive their own health needs and concerns within their socio-cultural context. Therefore, the rationale of the study was to develop a health education package congruent with needs of the girls and based on the results obtained from the data for the following reasons:

1. Adolescence is recognized as a period of transition when the child not only changes physically, but also develops attitudes and values that eventually make an adult. It is more specifically recognized as a critical time in women's physical and mental development where they need support and education (Gregg 1998). It is an appropriate time to assist adolescents in adjusting to this change by giving them more information about biological and psychological/emotional and social development.
2. The biological aspect of reproductive health development as well as the need to promote responsibility toward sexuality was acknowledged by the adolescents. Sexual and marriage issues were of concern to adolescents as well as to their families and communities as has been indicated in their responses. Therefore, it is expected that giving information to raise adolescents' health awareness about such issues will have an impact on the adolescents' physical and psychosocial development
3. The adolescents' psychological/emotional well-being results indicate the adolescents' ambivalence about their self–concept and self confidence and the needs for self-actualization and self-worth. Discussion on relationships, commitment, emotions and love is expected to enhance understanding and respect between both sexes, between adolescents, their families and their communities. Such discussion may allay their fears and concerns and increase their health awareness
4. The majority of the girls reported that they encounter problems with their families, school, and society which were reflected in their feeling of discrimination, and gender inequalities. This could have contributed to their feeling of frustration, anger and being less valued within their environment. Thus, helping them to value themselves and others may facilitate a better relationship and promote their communication skills to develop social health and to be partners in sharing responsibility regarding their future plans and decisions related toward their psychosocial development.

5. Evaluation of the effectiveness of the health educator intervention on the health beliefs and attitudes of female adolescents toward healthy living may lead to an adoption of such programmes, and an increase in implementation in the use of health educators in the school system and other primary health care settings. It may add more comprehensive health care services to adolescents and the population at large, noting that effective health education requires the support of the many individuals and institutions that have contact with the adolescents.

5.2 The Process of Health Education

For the application of the Stimulus-Organism-Response Model, the theoretical framework of the study, the health educator intervention was the stimulus concept of the model to affect the adolescents' health beliefs and attitudes (organism). The response indicated the effects of health education on the adolescents' health beliefs and attitudes as a result of the health educator intervention in the experimental groups, which was evaluated at the post-intervention data. Comparison between experimental and control groups was employed and will be presented in the next chapter.

Based on the experimental research method, the Solomon-four group design was implemented on female students in 10th grade in 4 out of 17 female public schools from Ramallah District. The study design required three stages: the pre-intervention data collection stage, the health educator intervention stage, and the post-intervention data collection stage. The study research design, the Solomn-4 group design has employed different conditions for the groups participated in the study, in which 10th graders in two schools were the experimental group and received the health educator intervention, and one of them received the pre-test. The other 10th graders in the other two schools were the control group in which one of them also received a pre-test. Thus each group or 10th graders in the four schools was exposed to different condition in which it allowed for a multiple comparison between all groups for the effects of the pre-test and the health educator intervention.

Prior to the health educator intervention, a health education material was given to all students under study for additional health information to raise awareness and enforce their knowledge about physical and psychosocial development. The four groups have got the same health education material and same instruction about its use and its importance.

The health education material and the Teaching Guide for Adolescents' Health developed by the Women's Centre for Legal Aid and Counseling/Health Section (WCLAC) in 1999 was the reference guide for the educators' instructional process. The health education material and teaching guide were developed by local experts in health, social sciences, education and nursing, that was based on the health assessment of Palestinian female adolescence in Kan'an and Halabi (1997) study. The health education material and teaching guide was pilot tested in the 1999 academic year in twelve schools in the West Bank. The same group of experts have modified the required changes, and made sure that it was clear, well understood and attracts the youth to read it, and the educator to use efficiently and clearly (Abu - Dayya, 2000).

The health education material provided a package of information that started with simple basic information about physiological changes that occur at adolescence, information about menstrual cycle, the early marriage issue and its negative consequences on the physical as well as psychological health, and adolescents' communications and social relationships. The health education material was congruent with the adolescents' health needs and concerns as been indicated by the results of the pre-intervention data. It was also related to the issues discussed in the planned class sessions by the health educator for the experimental groups

To evaluate the effectiveness of the role of the health educator in affecting changes in the health beliefs and attitudes of Palestinian female adolescents, a direct instruction and health teaching was provided for the experimental students by a health educator and trainer in women's health and gender issues with the presence of the investigator of the study. The health educator was informed about the study design, objectives and the results of the pre-intervention analyses, in which the educational package was based and developed accordingly. Thomson (1998) indicated that "the methods and materials used

must be appropriate to achieving the selected aim and objectives for intervention" (p 407).

To guarantee similarity in the programme implementation in the two experimental schools, the health education intervention programme was prepared with a written description of its activities in terms of its goals, content and plan of implementation by the investigator and the health educator. Beside the use of the WCLAC teaching guide, the "Youth to Youth Teaching Guide for Social Skills and Family Education" (1995) of the United Nation Population Fund (UNFPA) was another resource for the contents described in the class sessions for the experimental groups. (Youth to Youth: Teaching Guide for Social Skills and Family Education, 1995)

(Please refer to appendix L for the health education material in Arabic language provided for instruction by the educator in the class sessions).

The educational and the enabling (community development) model from Kiger (1995) were the terms of reference for the application of the health education intervention programme. The educational approach emphasizes that health education is concerned with affective (emotional) as well as cognitive (intellectual) aspects of learning, and the community development model emphasizes that people have strength and abilities which they will be willing to contribute on their terms to the process of learning about achieving health (Kiger, 1995).

The strategy for the health education model was based on health values, beliefs and attitudes directed at building up the individuals' potentials and capacities in decision-making to have a healthy living. While the community development model strategy offers a "lets' get together and talk about this" approach. Kiger (1995) claims that this approach "offers the opportunity to improve human relationships, develop problem-solving skills and increase self-esteem in a way that will make health education relevant to deprived groups in the society" (P41). Therefore, the health education intervention was applied with experimental students as a group, in which it allowed for organization of discussion and facilitated communication among this wide range of students on the given

health issues, allowing them to arrive at consensus to develop healthy beliefs and attitudes toward a better healthy lifestyle.

The educational tactics or methods used for the health education activities were based on the respondents' needs and concerns and the objectives set for the planned sessions. Thus, the health educators approaches as enablers and teachers, lead individuals to learn, discover, and set up opportunities to discuss feelings and challenges 'facts', and serve as change agents who function in institutional or community setting; they also seek to alter the social environment as it affects peoples' health (Kiger, 1995). Thus, providing quality and effective education, including health educators' instructions and dissemination of health messages and awareness on priority issues are considered to be key factors in promoting the well being of female adolescents.

5.3. The Implementation tactics

The health educator has delivered the health education programme in 4 sessions, 90 minutes each, weekly over four weeks for the 10th graders in each experimental school. These sessions were arranged between the school directors, the classroom teachers and the investigator; the sessions replaced the last two classes in each day assigned in the two schools. For Betunia, the sessions were held each Monday from 11.30am-1 pm, and for Al-Bireh school, the sessions were held each Thursday from 11.30am – 1 pm for four weeks. Accordingly the health educator was informed. The outline for educational sessions conducted in the two experimental schools contained the objectives, content of the material to be administered, and the teaching learning methodologies. The health education activities were designed to fit within the structure of the school programme and according to the time allowed from the MOE which may have posed some limitation on the quantity and, thus quality of information needed. (Please refer to Appendix H for the educational sessions outline).

Spence and Robinson (1995) emphasized that teaching methods affect a change in the beliefs and attitude and ultimately to behaviour change. Thus, the use of innovative teaching methods, strategies, techniques and suitable teaching aids was necessary for facilitation of the educational programme prepared to promote commitment towards a

healthy living among female adolescents under study. The WCLAC Teaching Guide for Adolescents' Health was the term of reference for instruction, and training exercises were utilized in the educational classes.

Therefore, the health educator has considered the following steps for implementation of the programme, and for the teaching/learning approaches utilized during the educational sessions to give the best chance for learning, and to ensure an appropriate setting for discussion and students' participation:

1. The intervention was delivered by the health educator with the presence of the investigator to ensure consistency of the educational message needed, and that the information given was culturally appropriate and designed to be understood by the participants.
2. Different teaching aids and methods were used including audiovisual aids, as transparencies, posters and leaflets to facilitate learning and to clarify information given. For example, the intervention group students have seen the overhead projector for the first time in which it attracted their attention to the discussion.
3. The information discussed was given as printed handouts supported with the related health education materials for each session.
4. Empathy, respect and understanding to the adolescents' needs, allowed for exploring their feeling, needs and concerns openly and clearly. Few students have asked for individual consultation on some issues that they believed to be private and confidential and would not like to explore in front of others.
5. Seating students in a circle meant to promote a partnership spirit between students and the educator, thus allowing them to question and discuss topics presented at each session.
6. Brainstorming through question and answers and having students in groups exercising their knowledge and encouraging their participation has been utilized at each session to adjust some of the programme content to the students who may have different levels of information.

The health education intervention programme aimed at strengthening the female adolescents' health beliefs and attitudes, thus empowering them to promote their lifestyle, by assisting and helping them in building up their potential, capacities and development of positive attitude toward a future healthy lifestyle.

5.4 The educational sessions

Four content areas were noted and illustrate the breadth of matter required to provide a balanced health education as indicated by the results of the pre-intervention data analysis and according to the time allowed for conducting the educational programme. The health educator has planned the topics to be covered in four sessions, and at each educational session, an educational objective was set to meet a discussion of one content area, in which a systematic approach was utilized to deliver the health educational matters needed. At the first session the health educator clarified the purpose for meeting with the students, the time needed, the objectives of the educational programme, and provided an outline of the session topics prepared to be conducted.

First session

1. To raise adolescents' health knowledge through information and education about adolescence, the normal biological growth with emphasis on the reproductive system changes, and the associated psychological and social development.

   To meet this objective, by the end of the session the students will be able:

   - To define the concept of adolescence
   - To understand the physiological differences between both genders
   - To recognize the associated physical, psychological and social changes
   - To understand the process of the menstrual cycle and the importance of hygiene and care at the menstrual period

✧ The educational methods or techniques used for the discussion of the session were as follows:

- Upon commencement of the first session, and as brainstorming technique, the first 10 minutes of the meeting, the students were allowed to define adolescence and to

differentiate between the different terms used in Arabic language since there are many synonyms for the term adolescence.

- Another technique used for active participation was a form of group exercise for 20 minutes where the students were subdivided into three groups. Each group was given a large sheet of paper and was asked to write their perception of adolescence from all aspects:

  - The first group was asked to write about physical growth and physical changes, the second group to write about the psychological aspect of their development, and the third group to write about the social aspect of their development.
  - Then one student of each group presented the issues discussed to all students. This participatory approach has allowed the students to self expression and to open discussion with their mates and the educator.
  - Then another 20 minutes, was a brief discussion of the difference between the male and female physiological changes with the use of the anatomical charts for clarification of the discussion, a lot of questions and concerns were raised and discussed.

The second part of the session was a detailed discussion of the female sexual development including reproductive system; the anatomy and structure of the external and internal organs were also clarified using the overhead transparencies. The physiology of the menstrual cycle and the menstrual period and the associated physical and psychological changes that happen were presented in a way that allowed the girls to raise many questions regarding matters of concern. Issues of hygiene and care were presented to improve the adolescents' knowledge and skills of caring during adolescence and during the menstrual period.

At the end of the session, the health educator asked the students for a briefing of what has been discussed and asked them to read the leaflets "What adolescence means" "The menstrual cycle" and "How can I keep myself

clean?" to emphasize their understanding of what has been discussed during the session.

Second session

2. To promote the adolescents' psychological/emotional well-being through information about the self-concept and the factors affecting the self-image, and confidence level when dealing with their internal and external environment.

Upon the commencement of the second session, at first 40 minutes, a definition of psychological/emotional development with emphasis on the following three areas was made:

A. Parameters for psychological well-being including: the ability of the individual to function and interact positively with people around, the ability to encounter stress and tension in a positive way and how can he/she resolve problems without being hesitant or feeling helpless, and the ability to understand others and respond to their reactions and needs.
B. Definition of self-concept, or the perception of self, and its relationships to body image, to others, and to society and its influence on the developmental process.
C. Issues of stress, and kinds of stressors that the Palestinian girls encounter within their internal and external environment were highlighted.

✧ Techniques for active participation were used in the form of individual and group exercise including:

1. The individual exercise covered the ranking of likes and dislikes of body changes on a piece of paper. This meant to indicate their perception of body image.
2. The group exercise included the students ranking their responses individually under either one of the two sentences written on the board "things that I like in my self strongly" and "things that I like in myself to less extent".

This kind of participation meant to discuss their perception and concerns which allowed the educator to emphasize the importance of psychological functioning and

its influence on the individuals' physical health, and the individuals' interaction with others, taking into consideration the socio-cultural value system and expectations.

The second part of the session was employed in 45 minutes, in which issues of self confidence, achievements and the feeling of self-worth were guided by questioning the students and thus allowing them:

- To understand the importance of self-confidence when dealing with the changing environment around them
- To define the concept of achievements and self-worth
- To appreciate own selves and accept others beliefs, values and criticisms

Beside the issues of self confidence and self worth, issues of independence in making decisions and assuming roles by thinking and planning toward future achievements was emphasized. During discussion, the students showed interest and raised a lot of questions regarding their beliefs in self and their relationships with other. This required further discussion and clarification under the social development at the next session.

Third session

3. To promote the female adolescents' social relationships by providing information about effective communications within their environment at family, school and society levels.

To guide the discussion and to meet the educational objective, the educator started the session with 5 minutes revision and discussion of the psycho-social development which was highlighted in the previous sessions, and then the two following areas were emphasized in 25 minutes each:

a. A definition of human relationships and kinds of each individual relationship within internal and external environment. For example; peer, family, friendship and emotional relationship, what it means and how it affects the individual.
b. The attributes of a successful relationships such as respect, empathy, caring and being responsible toward self and others.

The techniques utilized for this session, was the discussion of the student's subjective responses which were obtained at the pre-intervention (the problems and concerns that you encounter when you deal with family, school, and society) that was clarified by the overhead projector. For reasons of time constraints:

1. The students were asked to be divided into three groups to discuss the positive and negative responses shown; one group to discuss family concerns, the second group to discuss the schools concerns, and the third group to discuss the society concerns.
2. Then the girls were set in a circle form and a representative of each group highlighted the main concerns, all students were involved in the discussion and found it a very fertile area to discuss their relationships within their environment.

This kind of participation has allowed the students to discuss and explore beliefs and attitudes openly and clearly toward their relationships at family, school and society level. This allowed the health educator to discuss the importance of communication skills in terms of its meaning, its elements and how it can help them for better social skills. Then the two following areas were presented in 40 minutes:

A. For the family issue, the discussion has allowed the students to explore their relationships toward their families and for the educator to facilitate their understanding of the family in terms its: characteristics, function and roles of its members, family dysfunction and its reflection on its members. The students were guided on negotiating rules and roles with their families while expressing feelings of affection and closeness to one another, and to promote satisfaction with the family system. The discussion has emphasized the importance of exploration and understanding of the feelings, values of self and of others to facilitate a better relationship and promote their communication skills within school and society system

B. For school and society issues, the discussion has allowed the students to explore their relationships toward peers, friends, teachers and school system and for the educator to facilitate their understanding of relationships and communication

patterns. For example, the students were guided about the importance of being respectful, honest, and having good manners when choosing a friend or dealing with a peer. The issue of being partners in sharing responsibility regarding future plans and decisions related toward psychosocial development was highly interesting which required a further discussion for the next session.

Fourth Session

4. To raise adolescents' awareness about the concept of marriage and the factors affecting it and to distinguish between the biological and social roles of the man and women (gender sensitization).

To meet the educational objective of this session, two major components were considered given 30 minutes for each, the issue of marriage and the issue of gender differences as follows:

A. The session started by exploring the definition of the marriage concept utilizing the following techniques for students' participation in dividing the class in two groups:

   1. One group was asked to write perceptions about the indicators of a successful marriage and the other group to write their perception about the indicators of a failed marriage on a large piece of paper. Then the two papers were put on the wall to be seen and discussed by all.
   2. One student representing each group has read the points raised and then discussed by all

The indicators for a successful marriage were emphasized considering the educational and social competencies, the appropriate age for both men and women, and the importance of knowing each other before marriage was stressed. Much of the discussion has raised the issue of early marriage in which the health educator has emphasized its risk consequences on the physical and social well-being of the young girls.

B. Prior to describing the gender issue the educator has asked the students to participate by having them in two groups to write their responses to the following questions in 10 minutes:

1. One group was asked to discuss the importance of a "boy" to his family and why he is preferred? The other group was asked to discuss the importance of a "girl" to her family and why she is preferred? The points raised by all groups were written on a large sheet of paper and set on the wall facing them all.
2. One student representing each group has presented the findings to allow the group for participation in all points raised.

The responses for the two groups were similar in terms of the biological differences, then the educator have marked all points that were different for each group especially those points that the students were doubtful about whether related to the male or female role. For example, the students believed that the girls are more supportive to their families than boys.

Then the information given for differences by the two groups were discussed and clarified, the gender issues and what it means in terms of the biological (sexual) and social roles of the man and women within the Arab/Palestinian context. An overhead projector was used to clarify the concepts discussed and to allow for participation. The discussion has emphasized the social roles in terms of reproductive, productive, community managing, and constituency roles, such issues needed more time for discussion, therefore the students were given a handout to read at home, and help them have more information and to clarify their concerns about this issue. To promote the information discussed, the students were given a leaflet about "the effects of early marriage" to be read at home and were encouraged to let their families read it too.

The investigator of the study assumes that a brief revision of the previous session at the beginning of each new session, and one week time between each session was sufficient enough to allow students to read the health education materials given to them. Beside the in class discussion, emphasis was placed on the fact that self-responsibility empowers students to make their informed choices toward their psychosocial development

5.5 Evaluation for intervention

One of the main objectives of the health education programme and health educator intervention was to provide the students with health information for their identified health beliefs and attitudes as indicated at the pre-intervention data (pre-test). To assess the health educator effectiveness on both the students' knowledge level and attitudinal change, an anonymous questionnaire was given to each student at the 9^{th} grade in two public schools (pre-test) 8 months prior to the health teaching sessions, and the same questionnaire was given immediately after the teaching session (post-test) for the same students when they became a 10^{th} graders.

The questionnaire at the pre-test contained five sections: first section requested socio-demographic information from each student, including age, single or engaged, residential area, work and education of father, work and education of mother, family type and size. The second section of the questionnaire asked the students to rate their responses on a Likert scale items about their physical health beliefs and attitudes. The third section of the questionnaire asked the students to rate their responses on a Likert scale items about their health beliefs and attitudes toward their psychological development. The fourth section of the questionnaire asked the students to rate their responses on a Likert scale items about their health beliefs and attitudes toward their social development. The last section was a qualitative type data in which it required the students to write their subjective responses for being female Palestinian adolescents and for the problems they encounter at family, school and society levels.

The educational programme implemented was based on the study participants' beliefs and attitudes toward their psycho-social development as been identified at the pre-intervention data (pre-test). Therefore, on the post-test, the second and third categories of the questionnaire (the psychosocial items), targeted the adolescents' reaction to the health education programme implemented, for effectiveness of the health educator intervention, and for the effects of pre-test on the post-test data. The next chapter is a discussion of the statistical analysis and study results utilized for comparison between the groups assigned under the different conditions according to the Solomon-4 group research design.

Summary

This chapter highlighted the rationale for intervention; the intervention process which was based on the pre-test findings. The educational sessions were given in a sequential manner that aimed at giving the students information regarding their biological changes and specifically the reproductive system changes and the associated psychological and social developmental changes. Awareness regarding their psychological and social health was emphasized in the second and third sessions. And developmental awareness regarding their communication skills and gender equality was explained in the fourth session. The participants were very interactive, and participated through different approaches utilized in the educational process.

Chapter Six
Post-intervention Data Analysis

Introduction

In this chapter, a summary of the statistical analysis and methodological procedures is presented first, and then a thorough analysis of the participants' socio-demographic variables at pre-test and post-test is presented and shown in tables and graphs. Analysis of the dependant variables, the psychological and social health beliefs and attitudes of the female adolescents at pre-test are discussed and presented in tables to compare for equality and resemblance prior to any manipulation of the subjects. Finally, analysis of the dependent variables at post-test is presented, and a comparison between each two groups to identify for the differences obtained as a result of pre-test, health educator intervention and pre-test intervention-interaction.

6.1 Statistical analysis and results

The profile of the participants' socio-demographic variables for pre-test and post-test are presented and compared for resemblance and equality in terms of: age, social status whether single or engaged, family type, residential area, work and education of father, work and education of mother, and number of family members. It is worth mentioning that the socio-demographic variables were not manipulated or correlated with the dependent variables. They were presented to give an idea about the participants' socio-demographic characteristics.

The psychological and social health beliefs and attitudes of the female adolescents or the dependant variables were measured by 46 items instrument that reflected three broad categories subdivided into 8 dimensions: 18 items reflect the adolescents' health beliefs and attitudes toward their psychological health as one dimension, which includes two sub dimensions; 11 items reflect the cognitive dimension, while 7 items reflect the emotional

dimension. 20 items reflect the adolescents' health beliefs and attitudes toward their social health as one dimension, which includes three sub dimensions; 8 items related to family, 7 items related to school, and 5 items related to society; the last dimension is related to participants' stance on the Palestinian societal norms and values toward young girls.

The Solomn-4 group design employed in this study assigns different conditions for the groups participating in the study. These groups were denoted as follows: (1) P+ I group is the experimental group that received pre-test, intervention (health educator sessions) and post-test, (2) I group is the experimental group that received intervention and post-test but did not receive the pre-test, (3) P group is the control group that received the pre-test and the post-test but of course not the intervention, and (4) C group is the control group that received neither intervention nor pre-test, but only the post-test.

The t test was utilized to compare differences between two group means at pre-test to assess for equality of the groups at the onset of the experiment. Also to compare for differences between each two groups on the post-test for effects of pre-test, the health educator intervention, and for the pre-test intervention-interaction for all assigned groups, and to compare the pre-test with the post-test for the same groups to test for intervention effects. The t test of significance of means is a statistical technique used to assess the difference between the means of two groups.

The scoring was obtained for each item on the individual level, which then was obtained at the group level. Kvalem, et. al. (1996) suggested a prerequisite for studying the difference between intervention and control groups at post-test, in that the groups possess the same characteristics at the time of pre-test including the socio-demographic variables. To make sure that the groups were homogenous and possessed the same characteristics comparisons of the socio-demographic variables will be presented first.

6.2 A comparison of the participants' socio-demographic Variables at pre-test and post-test

The information about the socio-demographic variables for pre-test (pre-intervention data) was collected from 65 ninth grade participants aged 14-17 years from two schools;

Betunia the first experimental school (P+I), and BirZeit the first control school with pre-test (P). The same information about the socio-demographic variables for post-test was collected from 132 tenth grade participants; 61 participants from the same two pre-tested schools, and 61 from Al-Bireh the second experimental school (I) and Silwad the second control school at post-test. The dropout rate at post-test for the two pre-tested schools was 6.2%. It is worth mentioning that the field study was conducted in April 1999 and April 2000 before September 2000, the initiation of the current Intifada.

The mean age for the two groups at pre-test was 14.8 years while at post-test was 15.6 years for the four groups under study. The female adolescents under study falls under the mid adolescent stage (14-16 years), this stage is characterized by a need to establish sexual identity in a comfortable manner that is consistent with internalized values and high level of self-consciousness (Whaley and Wong, 1999). At this critical stage of life, young women and adolescents face vital decisions regarding education, work, and marriage and having children. Their decisions are tempered by their social and economic circumstances and influenced by family members as well as their society.

6.6% of participants were engaged and 93.4% were single at pre-test compared to 6.3% and 93.7% at post-test. The school system in Palestine requires the students to stay single or engaged in order to continue her education otherwise there will be no place for her.

There are two points worth mentioning concerning the two pre-tested schools; firstly that the two pre-tested schools were not significantly different, thus any socio-demographic differences in the two schools did not seem to lead to different scores, and secondly that the numbers involved in these two schools would be insufficient to undertake further splitting of groups. Therefore, the data presented for the socio-demographic variables were for the two schools together.

Place of residence

Table 6.2.1 indicates the distribution of the students by their residential area where 46% of participants live in cities at pre-test compared to 58% at post-test, 54% live in villages at pre-test compared to 40% at post-test, and only 3.2% lives in camps. It is noteworthy

that the two pre-tested schools were located in BirZeit and Betunia, small towns that recruits a large number of the surrounding villages. At post-test beside the two pre-tested schools, there are two other schools, one in Al-Bireh city that recruits the largest number of students in the study sample, and the other one is Silwad which is considered a small town too and recruit students from surrounding villages. These details were explained in the methodology chapter.

Table 6.2.1 the participants' residential areas in frequencies and percentages at pre-test and post-test

Pre-test	N	%	Post test	N	%
City	28	46%	City	73	58%
Village	33	54%	Village	49	40%
Camp	-	-	Camp	4	3.2%

Family type

Table 6.2.2 indicates the participants' family type, where 91.8% of participants at pre-test and 90.5% at post-test live within a nuclear family, 6.6% and 6.3% live within extended family form. These figures support Abu Dayya (2000) who highlighted the gradual change of the Palestinian families from the extended family form to a nuclear family form. The Palestinian Central Bureau of Statistics (1999) indicates that 7.7% of households are headed by a female; this sample represents 1.6% and 3.1% of participants who live within female-headed family.

Table 6.2.2 the participants' family type in frequencies and percentages at pre-test and post-test

Pretest	N	%	Posttest	N	%
Nuclear	56	91.8%	Nuclear	114	90.5%
Extended	6	6.6%	Extended	8	6.3%
Single	1	1.6%	Single	4	3.1%

The participants' fathers' jobs

Table 6.2.3 indicates occupation of the participants' fathers. The distribution of jobs for being businessmen and employees has ranged similarly for both groups at pre-test and post test. 3.3% of the fathers were professionals at pre-test compared with 17.3% at post-

test, 37.7% worked as labourers at pre-test compared to 22% at post-test. 9.8% at pre-test and 16.5% at post-test indicated others category such as drivers, work in agriculture or factories or have small shops. The differences in job distribution may reflect the residential areas where the range of participants who lived in villages at pre-test was more than those who lived in urban areas as indicated earlier in table 6.2.1.

Table 6.2.3 the participant fathers' jobs in frequencies and percentages at pre-test and post-test

Job	Pre-test (61 participants)		Post-test (116 participants)	
	No	%	No	%
Professional	2	3.3	22	17.3
Businessman	17	27.9	26	20.5
Office/employee	13	21.3	30	23.6
Laborer	23	37.7	28	22
others	6	9.8	10	16.5

The participants' mothers' jobs

Table 6.2.4 indicates occupation of the participants' mothers' jobs. 80.8% of mothers at pre-test and 80.2% at post-test were housewives. Around 20% in both samples has worked outside their homes, of these 3.3% and 8.7% were office workers (secretaries), 1.6% at pre-test and 3.2% at post-test were professionals such as school teachers, nurses or work with women groups committees. 14.8% indicated others at pre-test compared with 7.9% at post-test. Those mothers worked in child care facilities, house keepers or domestic service, and in small factories.

Table 6.2.4 the participant mothers' jobs in frequencies and percentages at pre-test and post-test

Job	Pre-test (61 participants)		Post-test (126 participants)	
	No	%	No	%
Office/employee	2	3.3	11	8.7
Housewife	49	80.8	101	80.2
Others	9	14.8	10	7.9

The educational level of the participants' parents

Table 6.2.5 indicates the educational level of the participants' parents' at pre-test compared with post-test. For fathers; 29.5% had finished 12 years of schooling (Tawjihi) at pre-test compared to 25.8% at post-test. 21.6% completed 7-9 years compared to 17.8% at pot-test. 23% hold a diploma or bachelor degree compared to 19.4 % at post-test, and 3.2% compared to 4% holds a master degree. 17.9% compared to 20.1% spent less than 6 years at elementary school. Thus, the figures obtained for the education of the participants' fathers at pre-test and post-test were almost similar.

Table 6.2.5 Comparison between the educational levels of the participants' parents at pre-test and post-test

Number of years in school	Participants' fathers at Pre-test %	Participants' fathers at Post-test %	Participants' mothers at pre-test %	Participants' mothers at Post-test %
0-4	13	4	19.8	10.4
5-6	4.9	16.1	11.5	14.4
7-9	21.6	17.8	21.3	20.6
10-11	4.8	13.9	3.2	20
12	29.5	25.8	36	25.6
14-16	23	19.4	8.2	5
18	3.2	4	--	4

The same table indicates the differences in the educational level at pre-test compared with post-test for the participants' mothers. 36% of the mothers had finished 12 years of schooling (Tawjihi) at pre-test compared to 25.6% at post-test. 21.3% completed 7-9 years compared to 20.6% at post-test. 8.2% at pre-test compared to 5 % at post-test hold a diploma or bachelor degree, and 4% hold a master degree at post-test only. 11.5% compared to 14.4% who spent less than 5- 6 years at elementary school. 19.8% at pre-test compared to 10.4% were illiterate, in the sense that they spent 4 years and less at elementary school. The large figures given for those who finished less than 11 years of schooling is higher than the PCBS (1997) and MOH/Annual Report (2000) figures, who indicated that the girls school dropout was 8.5% for the year of schooling. This also supports the phenomenon of early marriage that occurs at an age of less than 18 years in the Palestinian society (UNRWA 1993, Sansour 1995, & NSHP 2000). The given figures indicate that education of the participants' mothers' at pre-test and post-test were similar.

A comparison between the participants' parents' education at higher educational level indicates a large difference. 26.2% of fathers vs. 8.2% of the mothers at pre-test, and 23.4% of the fathers vs. 9% of the mothers at post-test held diplomas, bachelor or masters degrees. Similarly, comparison at lower educational level indicates a large difference in favor of the fathers too, where 13% of fathers versus 19.8% of mothers at pre-test, and 4% of fathers versus 10.4% of mothers at pos-test were illiterate. This supports the PCBS (1997) and MOH Report (2000) that the educational achievement for Palestinian females is lower than for males.

The family size of the participants at pre-test

Figure 6.1 presents the family size of Betunia and BirZeit participants; the family members ranged from 2-14 members. These families are divided as: 21.3% are composed of 7 members, 19.7% are composed of 8 members, 16.4% are composed of 10 members and 13.1% are composed of 9 members. The findings obtained indicated that 70% of the Participants' families of the two pre-tested schools are composed of 7 members and more and 30% are composed of less than 7 members.

Figure 6.1: The family size of participants at pre-test

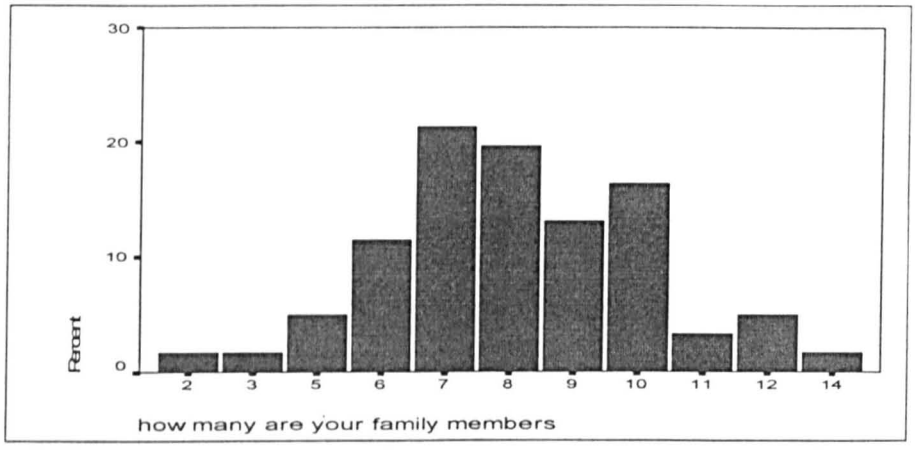
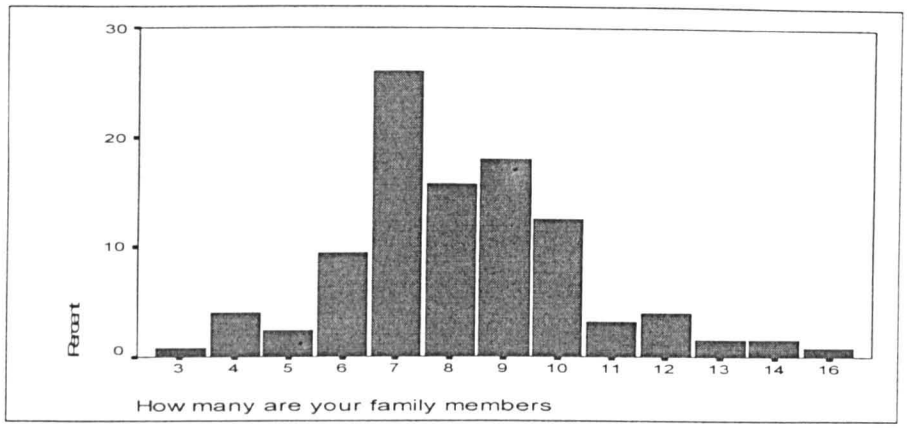


Figure 6.2 presents the family size of all participants at post-test; the family members ranged from 3-16 members. 26% of the participants' families are composed of 7 members, 18.1% are composed of 9 members, 15.7% are composed of 8 members and 12.6% are composed of 10 members. The findings obtained indicated that 72% of the

Participants' families of the four groups at post-test are composed of 7 members and more and 28% are composed of less than 7 members.

Figure 6.2: The family size of participants at post-test



It is very clear that the majority of the Palestinian families are large; 70% at pre-test and 72% at post-test are composed of more than 7 members. Children in the Palestinian society are considered the grace of life, and to wish someone happiness is to wish them children, especially sons. In a society like Palestine where struggle for survival, and where an insecure future prevails, children are considered so important and essential for the survival of their land and identity, and most importantly they are the source of security for the future of their parents.

Summary of the socio-demographic findings

To summarize the findings of the participants' socio-demographic variables, the following general characteristics of the study sample were recognized and compared to Palestinian statistics and studies from different reports.

» Over 90% of the participants were single when they were at age of 15.6 years; it is a sign for having the girls to get married later. The report of ICPD (Jan, 2004) indicated that early marriage still a phenomenon in the Palestinian society despite the increased median age at first marriage.

» The majority of the households were made up of more than 7 members as indicated earlier; it was around 70% for all groups. 90% of these families were made up of nuclear families, and 3.5% of the participants lived within female headed families. This number of female headed families has reached 12.3% in the Palestinian households as been indicated by the PCBS (2002). This rise of the single female families appears as a result of widowhood or migration-immigration of the husbands, as well as husband's imprisonment, martyrdom, or deportation for primarily political reasons as reported by the ICPD (2004).

» The participants' families were distributed almost equally in the villages and cities in Ramallah district. Two third of Betunia and Al-Bireh participants lived in the cities vs. two third of BirZeit and Silwad participants lived in villages. The mothers' participation in the labour force was 18% as an average for the four groups vs. 82% of being housewives. The level of women participation in the labour force is higher than that of the ICPD report which indicated that only 10.4% of Palestinian women are working. This is also an indicator for the drop in the unemployment rate for both males and females since the beginning of current Intifada in Sept. 2000.

» As noted from the data given, the highest range of parents ended 12 years of education or the General Secondary Certificate Examination (GSCE or "Tawjihi"), this explains the meaning to have a "Tawjihi" in Palestine. Tawjihi is considered a turning point in the individuals' life and a serious decision related to their future plans. In Palestine, admission to university is conditioned by the Tawjihi grades. For families with financial problems, the priority for university education is for boys. For many Palestinian families it is an appropriate time for their girls to get married (Mansour, 1999).

The educational level of the parents of four groups indicated a major gap between the fathers and mothers attainment of higher studies; it was average of 20% for fathers vs. 5.5% for mothers. The other gap was evident for parents who studied 6 years and less; it was an average of 16% of the mothers compared to 9.2% of the fathers. These figures support Gaicaman and Johnson (2002) survey which indicated that men have lower level of illiteracy and higher level of post secondary education than women.

Thus the findings of the socio-demographic data presented shows that the four groups were similar and homogenous in their characteristics, and thus meet the requirement for equality.

6.3 Analysis of the psychological and social variables

The comparisons of the psychological and social health beliefs and attitudes of the assigned groups before and after intervention and between post-tests of experimental and control groups were obtained by the use of the t test of significance. The independent samples t-test was used to compare the means of two groups for the same variables either at pre-test or at post-test, and the paired sample t-test analysis was used to compare the means of the same group for the same variables at pre and post-test. The t-test for equality of means has identified the t. value, the degree of freedom (DF), the 2 tailed significant-tests (P value), the mean difference, standard error difference and the 95% confidence interval of the difference.

The results are presented for all comparisons of assigned conditions in two parts: ① at pre-test to assess for the groups equality prior to health educator intervention effect, and ② at post-test to assess for the effect of the health educator intervention, and for the effect of pre-test, and for the effect of pre-test-intervention interaction. The results are presented in tables to clarify the number of students in each group, means, the t test and P value of significance, and mean difference for each dimension analyzed. (See Appendix J for all details of the tables of t test).

6.4 Comparisons of the psychological and social health Beliefs and attitudes at pre-test

Since the individual students were not randomly assigned to different conditions, but the groups as a whole were randomly assigned to different conditions, comparisons of pre-tested groups was made to make sure that at least the two groups under study are equal in their psychological and social beliefs and attitudes. Another comparison was made between the two pre-tested schools and the post-test of Silwad, (the control group which received only post-test) to make sure that the three schools were not significantly different and thus meet the criteria for equality prior to any manipulation required by the

research design. Therefore comparisons were made: ① between the two pre-tested groups in Betunia, the first experimental group (P+I) and BirZeit the first control group (P) as indicated in table 6.4.1, ② comparison between Betunia group (P+I) and Silwad (C), and ③ comparison between BirZeit (P) group and Silwad (C) group for the same purpose.

1. ***Comparison of subject responses in Betunia School (P+I group) and BirZeit (P group) the at pre-test***

Table 6.4.1 presents a comparison of the results obtained at pre-test between subjects in Betunia group (P+I) and subjects in BirZeit group (P) for the 8 dimensions of their psychological and social health beliefs and attitudes. The results of the two groups did not show any significant difference for any of the dimension of the variables, which means that the student's in both schools were similar in their responses on the items that measure the psychological and social beliefs and attitudes before they were introduced to the intervention of the health educator.

Table 6.4.1: A comparison of subjects' responses in Betunia School (P+I Group) With subjects in BirZeit School (P Group) at pre-test

Dimensions	Schools	No.	Mean	t. Value	Sig.(2-tailed)
Psychological items- pre test	Betunia BirZeit	31 29	45.10 43.21	1.129	.263
Cognitive items-pre test	Betunia BirZeit	31 30	32.13 30.97	1.003	.320
Emotional items-pre test	Betunia BirZeit	31 30	18.94 17.40	1.250	.216
Social items- pre test	Betunia BirZeit	29 29	48.72 48.10	.358	.722
Family items-pre test	Betunia BirZeit	31 28	19.90 20.61	-.805	.424
School items-pre test	Betunia BirZeit	31 30	16.94 16.10	1.049	.298
Society items- pre test	Betunia BirZeit	31 30	12.06 11.20	1.130	.263
Perception items-pre test	Betunia BirZeit	31 30	19.42 19.50	-.181	.857

2. ***Comparison of subjects' responses in Betunia School (P+I group) and Silwad (C group) the at post-test***

Comparison was made between Betunia group (P+I) and Silwad (C) group at post-test, the group that received neither pre-test nor intervention, to identify for any

differences between variables prior to intervention. The mean score of each variable obtained for Silwad lies within the range mean +/- two standard errors of the mean of each corresponding variable for Betunia, showing evidence that they are not meaningfully different. (Please refer to Appendix J for t test analysis, table 6.4.2).

3. ***Comparison of subjects' responses in BirZeit School (P group) and Silwad (C group) the at post-test***

   Comparison was made between BirZeit group (P) and Silwad (C) group at post-test, the group that received neither pre-test nor intervention, to identify for any differences between variables for both schools which did not receive any intervention. The mean score of each variable obtained for Silwad lies within the range mean +/- two standard errors of the mean of each corresponding variable for BirZeit, showing evidence that they are not meaningfully different. (Please refer to Appendix J for t test analysis, table 6.4.3). It was not possible to assess Al-Bireh (I) the second experimental group which did not receive the pre-test. However, the assumption made is that this group is similar to the other three groups.

These statistical measures allowed for comparisons between the three groups which indicated similarity and resemblance in their psychological and social health beliefs and attitudes. This similarity have allowed for interpretation of the results obtained at post-test between the different groups for the health educator intervention effect, the pre-test effect or the pre-test-intervention interaction effect.

6.5 Comparisons of the psychological and social health beliefs and attitudes at post-test

Comparisons between the groups at post-test were made to assess the results for the effectiveness of the health educator intervention, for the effects of the pre-test, and for the effects of the pre-test intervention-interaction on the psychological and social health beliefs and attitudes at post-test. Two statistical measures were made for the same variables in the same group at pre and post-test for the two pre tested schools; to compare for the effects of intervention and pre-test on subjects in Betunia school, the first

experimental group (P + I) and to compare for the effects of pre-test on the subjects in BirZeit School, the first control group (P).

Also other 6 statistical comparisons were made at post-test between each two groups assigned under the different conditions mentioned earlier and lastly, comparison for the mean differences for the four groups is presented. The post-test measures for the adolescents' psychological and social health beliefs and attitudes at post-test were obtained by repeating the same questionnaire given at the pre-test.

1. ***Comparison between the scores at pre-test and the scores at post-test for subjects in Betunia School the first experimental group (P+I)***

   Table 6.5.1 indicates a comparison between the scores obtained for subjects in Betunia School (P+I Group) at pre test and at post-test, in which these subjects have received the pre-test and health educator intervention. The analysis show a significant difference for all psychological items together at t test = -8.6 and P value <0.001, and for both the emotional and cognitive dimensions at T = -3.7, P= .001, T= -2.4, P= .02 respectively. This indicates that the subjects were either responsive to the health educator intervention, or the pre-test, or both, the pre-test and intervention both interacting together which may have an effect on their cognitive and emotional beliefs and attitudes. Also there was a significant difference between pre-test and post-test for the subjects' perception of their society as the results indicate a t test = -3.5 and P value = .002. Yet there was no significant difference between the pre-test and post-test for all social items including the family, school, and society dimensions. To modify or change a social beliefs and attitudes is not an easy task because of their relatedness and more likely their connectedness with other's beliefs and attitudes (Lehman, 1991). Since these students do not live in a vacuum, the influence of health education in school can be quite significant, if its effects ultimately spread to family and to society in general.

Table 6.5.1: A comparison of the subjects' responses in Betunia School (P+I Group) at pre test and at post-test

Dimensions Betunia (P+I)	No	Mean	T. test	Sig. (2 tailed) P= value
Psychological items: pre-test-post-test	31	45.10 57.06	-8.595	<0.001
Cognitive items: pre-test-post-test	31	32.13 35.81	-3.664	.001
Emotional items: pre-test-post-test	31	18.94 21.26	-2.428	.021
Social items: pre test-post-test	29	48.72 50.62	1.553	.132
Family items: pre test-post-test	31	19.90 21.00	-1.460	.155
School items: pre test-post-test	31	16.94 17.32	.516	.610
Society items: pre test-post-test	31	12.06 12.23	-.306	.762
Perception items: pre test-post-test	31	19.42 21.35	-3.479	.002

2. ***Comparison between the scores at pre-test and the scores at post-test for subjects in BirZeit School, the first control group (P)***

Table 6.5.2 indicates a comparison between BirZeit School subjects (P Group) at pre-test and at post-test, in which these subjects received pre-test only. The analysis shows a significant difference between the pre and post-tests for the psychological items all together at t-test of -7.137 and P value <0.001, as well as for both the cognitive and emotional dimensions at t test =-2, P= .05, T= -3 & P= .006 respectively. This means that the pre-test may have an effect on their cognition and emotional beliefs and attitudes. Also, there was a significant difference between the pre and post-tests for the subjects' perception of their society as the results indicated a t-test -3.124 and P value= .004. Yet there was no significant difference between the pre-test and post-test for all social items including the family, school, and society dimensions.

The results for this control group are similar to the results of the experimental group P+I, suggesting that the change in the post-test may be resulting from the pre-test and not the intervention or the interaction between pre-test and intervention.

Table 6.5.2: A comparison of the subjects' responses in BirZeit School (P Group) At pre test and at post-test

Dimensions BirZeit (P)	No.	Mean	t test	Sig. (2 tailed) P= value
Psychological items: pre-test-post-test	29	43.1 53.24	-7.137	<0.001
Cognitive items: pre-test-post-test	30	30.97 33.20	-2.030	.052
Emotional items: pre-test-post-test	30	17.40 20.61	-2.977	.006
Social items: pre test-post-test	29	49.66 48.10	1.088	.286
Family items: pre test-post-test	28	20.61 21.57	-1.175	.250
School items: pre test-post-test	30	16.47 16.10	.524	.604
Society items: pre test-post-test	30	11.20 11.50	-.424	.675
Perception items: pre test-post-test	30	19.50 21.23	-3.124	.004

In order to figure out what is making the change in both of these group's post-tests, a further comparison for the mean differences has to be made

3. ***Comparison between the post-test scores for subjects in Betunia School, the first experimental group (P+I), and the post-test scores for subjects in BirZeit School, the first control group (P).***

   Comparisons of the subjects' responses of Betunia (P+I), the first experimental group, with the subjects' responses of BirZeit (P) the first control group, in which the health educator intervention was the only difference between the two groups at post-test would point to the intervention effect and/or to pre-test intervention interaction effect. The interaction relate to the subjects in Betunia group only, because it received pre-test and intervention and both could have lead the participants to be affected more than other groups as the results indicate. The results indicated a significant difference for the psychological items at T-test =2.8 and P. value =.006, and for the cognitive dimension only at T-test =3.08 and P. value = .003. No significant difference was found for the emotional dimension, or any of the social and perception dimensions as indicated in table 5.5.3. The difference for the intervention group could be related to

the health educator's approach as enablers and teacher. The direct instruction and participation of the students in the content discussed during the educational sessions may have allowed the students to learn, discover, and set up opportunities to discuss feelings and challenges, and thus, have an effect on their cognition. Also, the possibility of the effect of the pre-test-intervention interaction for the experimental group has added more information and made this difference on the subject's psychological and cognitive dimensions.

However, in order to distinguish between these two effects, further comparisons between the two experimental groups would be performed.

Table 6.5.3: A comparison of subjects in Betunia School (P+I Group) With subjects in BirZeit School (P Group) at post-test

Dimensions	Schools	No.	Mean	t. Value	Sig. (2-tailed)	Mean Difference
Psychological items-post-test	Betunia BirZeit	31 30	57.06 53.43	2.824	.006	3.63
Cognitive items--post-test	Betunia BirZeit	31 30	35.81 33.20	3.081	.003	2.61
Emotional items--post-test	Betunia BirZeit	31 30	21.26 20.23	1.295	.200	1.02
Social items- -post-test	Betunia BirZeit	31 30	50.47 49.50	1.233	.222	1.24
Family items--post-test	Betunia BirZeit	31 30	21.00 21.43	-.629	.532	-.42
School items--post-test	Betunia BirZeit	31 30	17.52 16.57	1.503	.138	.95
Society items--post-test	Betunia BirZeit	31 30	12.23 11.50	1.528	.132	.73
Perception items--post-test	Betunia BirZeit	31 30	21.35 21.23	.194	.847	.12

4. ***Comparison between the post-test scores for subjects in Betunia School, the first experimental group (P+I), and the post-test scores for subjects in Al-Bireh School, the second experimental group (I).***

Table 6.5.4 indicates a comparison between subjects in Betunia (P+I), the first experimental group with subjects in AL-Bireh (I), the second experimental group which did not receive a pre-test, but both groups have received the health educator intervention. The analysis shows no significant difference between the two groups

except for a little bit of difference in psychological items all together, but not each dimension alone although they are close to significance, which points to the added effect of the interaction over and above that of the intervention. It also indicates methodological consistency in terms of the health educator intervention.

Table 6.5.4: A comparison of subjects in Betunia School (P+I Group) With subjects in Al-Bireh School (I Group) at post-test

Dimensions	Schools	No.	Mean	t. Value	Sig. (2-tailed)	Mean Difference
Psychological items- post-test	Betunia Al-Bireh	31 39	57.06 54.23	2.406	.019	2.83
Cognitive items- post-test	Betunia Al-Bireh	31 40	35.81 34.60	1.861	.067	1.21
Emotional items- post-test	Betunia Al-Bireh	31 41	21.26 19.61	1.870	.066	1.65
Social items- post-test	Betunia Al-Bireh	31 37	50.74 51.19	-.422	.675	-.45
Family items- post-test	Betunia Al-Bireh	31 39	21.00 19.69	1.917	.059	1.31
School items- post-test	Betunia Al-Bireh	31 42	17.32 17.74	-.649	.518	-.42
Society items- post-test	Betunia Al-Bireh	31 40	12.23 13.13	-1.922	.059	-.90
Perception items- post-test	Betunia Al-Bireh	31 42	21.35 20.98	.603	.549	.38

5. ***Comparison between the post-test scores for subjects in Betunia School, the first experimental group (P+I), and the post-test scores for subjects in Silwad School, the second control group (C).***

Table 6.5.5 indicates a comparison between subjects in Betunia School (P+I group) with subjects in Silwad School (C group), the subjects that did not receive the pre-test or the intervention. It is important to remember the pre-test of Betunia was not significantly different than the post-test of Silwad, thus any difference between the post-tests of these two groups would indicate the presence of the three effects; pre-test, intervention and pre-test-intervention-interaction. The analysis shows a significant difference for the psychological items all together at t test= 9.5 and P value <0.001, for the emotional dimension at t test= 5.2, P <0.001, and for cognitive dimensions at t test= 7.8, and P <0.001. Also there was a significant difference for the subjects' responses on the social items all together at T-test =2.8 and P value=.007

including the family and society dimensions at t test= 2.2, P= .027, and t test= 2.2, P= .031 respectively, but there was no difference for the school items. Also a significant difference for the subject's perception of their society at a T-test 3.4 and P value= .001. The analysis shows a significant difference between the two groups on seven dimensions of their psychological and social beliefs and attitudes, which means that the effects of pre-test, intervention-interaction, was strong for Betunia group when compared with Silwad the second control group. Note the effect of pre-test, intervention and interaction is about 9.73 points for the mean difference which is greater than any other two group's comparison.

Table 6.5.5: A comparison of subjects in Betunia School (P+I group) With subjects in Silwad School (C group) at post-test

Dimensions	Schools	No.	Mean	t. Value	Sig.(2-tailed)	Mean Difference
Psychological items- post-test	Betunia Silwad	31 27	57.06 47.33	9.512	<0.001	9.73
Cognitive items- post-test	Betunia Silwad	31 27	35.81 30.11	7.886	<0.001	5.70
Emotional items- post-test	Betunia Silwad	31 27	21.26 17.22	5.255	<0.001	4.04
Social items- post-test	Betunia Silwad	31 27	50.74 47.52	2.803	.007	3.22
Family items- post-test	Betunia Silwad	31 27	21.00 19.44	2.267	.027	1.56
School items- post-test	Betunia Silwad	31 27	17.32 16.89	.589	.558	.43
Society items- post-test	Betunia Silwad	31 27	12.23 11.19	2.208	.031	1.04
Perception items- post-test	Betunia Silwad	31 27	21.35 18.93	3.398	.001	2.43

6. ***Comparison between the post-test scores for subjects in Al-Bireh School, the second experimental group (I), and the post-test scores for subjects in BirZeit School, the first control group (P).***

Table 6.5.6 indicates a comparison between of subjects in Al-Bireh School (I group), the group that received the health educator intervention only, with subjects in BirZeit School (P group), and the group that received the pre-test only. The analysis shows a significant difference for the family dimension at t test= -.47 and P value=.016 in favour of the group in BirZeit school. A significant difference was found for the

school dimension at t test= 2.05 and P value= .044, and for society dimensions at t test= 3.12 and P value= .003 for the intervention group in Al-Bireh in favour of the experimental group. The analysis also shows no significant difference between the two groups on all items related to their psychological beliefs and attitudes, also there was any difference for the perception items too. The scores obtained at post-test for the psychological items for subjects in BirZeit the pre-tested group (P), are similar for the scores obtained for the intervention in Al-Bireh, assuming that Al- Bireh subjects are similar to the other three group's subjects. Note that the intervention effect for the psychological items score is about .80 points, and for cognitive items = 1.40 points.

Table 6.5.6: A comparison of subjects in Al-Bireh School (I group) With subjects in BirZeit School (P Group) at post-test

Dimensions	Schools	No.	Mean	t. Value	Sig.(2-tailed)	Mean Difference
Psychological items- post-test	Al-Bireh BirZeit	39 30	54.23 53.43	.602	.549	.80
Cognitive items- post-test	Al-Bireh BirZeit	40 30	34.60 33.20	1.766	.082	1.40
Emotional items- post-test	Al-Bireh BirZeit	41 30	19.61 20.23	-.702	.485	-.62
Social items- post-test	Al-Bireh BirZeit	37 30	51.19 49.50	1.591	.116	1.69
Family items- post-test	Al-Bireh BirZeit	39 30	19.69 21.43	-2.476	.016	-1.74
School items- post-test	Al-Bireh BirZeit	42 30	17.74 16.47	2.049	.044	1.27
Society items- post-test	Al-Bireh BirZeit	40 30	13.13 11.50	3.122	.003	1.63
Perception items- post-test	Al-Bireh BirZeit	42 30	20.98 21.23	-.405	.687	-.26

7. ***Comparison between the post-test scores for subjects in Al-Bireh School, the second experimental group (I), and the post-test scores for subjects in Silwad School, the second control group (C).***

Table 6.5.7 indicates a comparison between of subjects in Al-Bireh School (I group), the group that received the health educator intervention only, with subjects in Silwad School (C group), and the group that did not receive pre-test or intervention. The analysis shows a significant difference between the two groups for all items related to their psychological beliefs and attitudes at t test =6 and P value <0.001, for cognitive

dimension at t test= 6.4 and P <0.001, for the emotional dimension at t test= 2.7 and P=.009. For the perception items at t test= 2.9 and P value=.005, and at the social items at t test=3 and P= .003 including the societal dimension at t test=3.6 and P <0.001 and no difference in school and family dimensions. But all in all the results shows a significant difference between Al-Bireh, the first experimental group, and Silwad, the second control group. The difference in the scores obtained at post-test could be related to the health educator intervention in Al-Bireh, the second experimental group when compared with the second control group, and that the intervention really made a difference on the subject's psychosocial beliefs and attitudes. Note that this intervention effect for the psychological scores is about 6.90 points for all psychological items and 4.49 points for the cognitive items.

Table 6.5.7: A comparison among Al-Bireh School (I Group) at post-test With Silwad School (C Group) at post-test

Dimensions	Schools	No.	Mean	t. Value	Sig.(2-tailed)	Mean Difference
Psychological items- post-test	Al-Bireh Silwad	39 27	54.23 47.33	5.997	<0.001	6.90
Cognitive items- post-test	Al-Bireh Silwad	40 27	34.60 30.11	6.432	<0.001	4.49
Emotional items- post-test	Al-Bireh Silwad	41 27	19.61 17.22	2.674	.009	2.39
Social items- post-test	Al-Bireh Silwad	37 27	51.19 47.52	3.087	.003	3.67
Family items- post-test	Al-Bireh Silwad	39 27	19.69 19.44	.349	.728	.25
School items- post-test	Al-Bireh Silwad	42 27	17.74 16.89	1.205	.232	.85
Society items- post-test	Al-Bireh Silwad	40 27	13.13 11.19	3.672	<0.001	1.94
Perception items- post-test	Al-Bireh Silwad	42 27	20.98 18.93	2.888	.005	2.05

8. ***Comparison between the post-test scores for subjects in BirZeit School, the first control group (P) and the post-test scores for subjects in Silwad School, the second control group (C).***

Table 6.5.8 indicates a comparison between of subjects in BirZeit (P group), the group that received the pre-test only, with subjects in Silwad School (C group), the group that did not receive pre-test or intervention. The analysis shows a significant

difference between the two groups for all items related to their psychological beliefs and attitudes including both the cognitive and emotional dimensions at t test =4.904 and P value <0.001, and for the perception items at t test= 3.197 and P value=.002, but no significant difference for the social items including the societal and school dimension except for a little bit of difference in the family dimension. But all in all the results shows a significant difference between BirZeit, the first control group, and Silwad, the second control group. This difference in the scores obtained at post-test could be related to the pre-test since it was the only difference between the two control groups, and that the pre-test really made a difference on the subject's psychosocial beliefs and attitudes. Note that the pre-test effect is about 6.10 points for all psychological items and 3.09 for the cognitive items.

Table 6.5.8: A comparison among BirZeit School (P Group) at post-test With Silwad School (C Group) at post-test

Dimensions	Schools	No.	Mean	t. Value	Sig.(2-tailed)	Mean Difference
Psychological items- post-test	BirZeit Silwad	30 27	53.43 47.33	4.904	<0.001	6.10
Cognitive items- post-test	BirZeit Silwad	30 27	33.20 30.11	3.394	.001	3.09
Emotional items- post-test	BirZeit Silwad	30 27	20.23 17.22	3.925	<0.001	3.01
Social items- post-test	BirZeit Silwad	30 27	49.50 47.52	1.726	.090	1.98
Family items- post-test	BirZeit Silwad	30 27	21.43 19.44	2.794	.007	1.99
School items- post-test	BirZeit Silwad	30 27	16.47 16.89	-.598	.553	-.42
Society items- post-test	BirZeit Silwad	30 27	11.50 11.19	.578	.565	.31
Perception items- post-test	BirZeit Silwad	30 27	21.23 18.93	3.197	.002	2.31

9. *Comparison of the mean differences for all subjects under the different assigned conditions*

Table 6.5.9 presents four comparisons between the mean differences for all subjects under the different assigned conditions; it also allows the reader to observe the differences in the scores obtained for all groups at post-test at one time:

1. Comparison between subjects in Al-Bireh School (I group), the group that received the health educator intervention only, with subjects in BirZeit School (P group), the group that received the pre-test only. The mean difference obtained between the two groups for the intervention effect = .80 points on the psychological dimension, and 1.40 points for cognitive dimension. This means that the intervention was more effective than the pre-test by .80 points and 1.40 points respectively, on the adolescents' health beliefs and attitudes toward their psychological development.

   Comparison of the subjects in the pre-test, the intervention, and the pre-test-intervention groups with the subjects in Silwad School (C group), the group that did not receive pre-test or intervention, indicates and signifies the amount of differences that each of the other three groups has made on their health beliefs and attitudes. Therefore, the coming three comparisons are the best indicators for the size of the difference obtained by each condition, assuming that the four groups were similar prior to any manipulation.

2. Comparison between subjects in BirZeit (P group), the group that received the pre-test only, with subjects in Silwad School (C group). The mean difference obtained between the two groups for the pre-test effect is 6.10 points for the psychological dimension, and 3.09 for the cognitive dimension. This indicates that the pre-test made a difference on the psychological and cognitive dimensions of the subjects in P group when compared with subjects in the C group who received nothing.

3. Comparison between subjects in Al-Bireh School (I group), the group that received the health educator intervention only, with subjects in Silwad School (C group). The mean difference obtained between these two groups for the intervention effect is 6.90 points for the psychological dimension, and 4.49 points for the cognitive dimension. This indicates that the intervention made a difference on the psychological and cognitive dimensions of the subjects in I group when compared with subjects the C group. The intervention in difference for psychological dimensions also was greater than the pre-test difference on the same dimension by .80 points. Note 6.90 points for the intervention group effect, Al-Bireh - Silwad when compared to 6.10 points for the

pre-test group effect BirZeit - Silwad. The same applies to the cognitive dimensions difference by 1.40 points; note 4.49 points for intervention effect compared with 3.09 points for the pre-test effect. This consistent difference in the scores obtained indicates that the subjects are influenced by intervention more than by the pre-test.

The pre-test influence is valued because it allowed the subjects to gain more information through the testing measurement, and thus it affected their psychological health beliefs and attitudes more positively.

4. Comparison between subjects in Betunia School (P + I group), the group that received pre-test and intervention with subjects in Silwad School (C group). The mean difference obtained between these two groups was greater than any previous comparison, for the psychological items 9.73 points, for the cognitive and emotional dimensions 5.70, and 4.04 points respectively, and for their perception of their society dimension = 2.43 points. These greater scores could be related to the presence of the three effects; pre-test, intervention and pre-test-intervention-interaction. This indicates the importance of exposing the girls to pre-test, and to health educator intervention, in which both interacting together presents a stronger influence on their health beliefs and attitudes.

Table 6.5.9: A comparison between the mean differences for the three groups with Silwad (C Group), and for Al-Bireh/BirZeit at post-test

Dimensions	Mean Difference for Al-Bireh & BirZeit (I & P)	Mean Difference for BirZeit-Silwad (P& C)	Mean Difference for Al-Bireh-Silwad (I & C)	Mean Difference for Betunia-Silwad (P+I & C)
Psychological items	.80	6.10	6.90	9.73
Cognitive items	1.40	3.09	4.49	5.70
Emotional items	-.62	3.01	2.39	4.04
Social items	1.69	1.98	3.67	3.22
Family items	-1.74	1.92	.25	1.56
School items	1.27	-.42	.85	.43
Society items	1.63	.31	1.85	1.04
Perception items	-.26	2.31	2.05	2.43

Summary

This chapter presented analysis of the participants' socio-demographic variables at pre-test and at post test. The general characteristics of the study sample were recognized to be similar and homogenous in their characteristics, and thus meet the requirement for equality prior to intervention. Then comparison of the 8 dimensions of the adolescents' psychological and social health beliefs and attitudes was made for the two pre-tested schools Betunia (P+I) and BirZeit (P), for Betunia (P+I) at pre-test and Silwad (C) at post-test, and BirZeit (P) at pre-test and Silwad (C) at post-test prior to intervention. It was found that the three groups were similar and meet the criteria for equality. Equality of the groups was important to control for the assessment of the effectiveness of the health educator intervention or the pre-test or the pre-test-intervention interaction.

Analysis of the post intervention data was made by comparison of the 8 dimensions of the adolescents' psychological and social health beliefs and attitudes of the assigned groups at pre and post intervention, and between post-tests of experimental and control groups was obtained by the use of the t test of significance. The analysis was obtained for each variable at group level and for each dimension which included items on reproductive and sexual health, gender issues, psychological and social concerns.

The findings on the adolescents' psychological items at post-test indicated a significant difference or change in their health beliefs and attitudes. This difference was consistent and varied according to the condition where the subjects assigned to; the pre-test, the intervention and/or both pre-test and intervention.

The findings were also consistent in indicating no change or difference for the adolescents' social heath beliefs and attitudes items including the family, school, and society dimensions, under what ever the condition they were assigned to. The social health beliefs and attitudes do not develop in a vacuum, however the immediate environment whether at family, school or society level exert a profound determining influence on the adolescents' social development. Moreover, to have influence or change with adolescents, a comprehensive approach of health education intervention programme including the adolescents' societal environment is needed.

Chapter Seven
Discussion

Introduction

This chapter includes interpretation and discussion of the study findings and their relation with other studies. First, the chapter includes a revision of the purpose and objectives of the study, methodology and the statistical analysis utilized, the instrument employed for the data, data collection and analysis procedures, and limitation incorporated in the study. Second, analysis of the socio-demographic variables is presented to give an overview of social living of the participants and their influence on the adolescents' psychological and social health beliefs and attitudes are discussed. The last part includes a through discussion of the findings and the health educator role in effecting change on the adolescents' health beliefs and attitudes.

7.1 Revisiting the purpose and objectives of the study

The purpose of the study was to evaluate the effectiveness of the health educator intervention on the Palestinian female adolescents' health beliefs and attitudes toward healthy living in 4 public schools. In order to achieve this purpose, three objectives were set, and three experimental steps were followed: first, pre-intervention assessment or the pre-test; second, the health education intervention provided by the health educator; and third, the post intervention assessment or the post-test. Thus, an experimental research design was the choice for this study. Burn and Grove (1993) stated "experimental research is an objective, systematic, controlled investigation, for the purpose of predicting, controlling phenomena and examining its causality" (p.218). The t test of significance of means is the statistical technique utilized to compare for difference between the means of two groups.

7.2 Methodological consideration

A quantitative experimental research methodology; the Solomon-Four group design was chosen for this study, because it has the potential to provide the most evidence for the strength of the association between variables, and characterized by manipulation, control and randomization (Talbot 1995, and Salkind, 1997). The Solomon-four group design has two experimental groups and two control groups, and the subjects are randomly assigned to one of these groups. With randomization of the subjects, the groups can be considered equivalent, and the impact of the experimental intervention can be easily determined (Talbot, 1995). For this study, the effects of history and maturation were controlled for by comparison of the dependant variables of the subjects in three groups under study at pre-test, and prior to intervention, in which similarity and equivalency of their psychosocial health beliefs and attitudes was indicated. Also the groups without the pre-test controlled for the effect of testing. Analysis of the post-test scores indicated the level of influence the health educator intervention has made on the dependant variables, the health beliefs and attitudes of the experimental groups under study.

The results of such study can only be generalized to similar settings and populations and this limits the external validity of the findings (Talbot, 1995). Therefore, to gain external validity, many research studies must be conducted with different populations and under different conditions.

The advantage of using an experimental research method involves the systematic collection of numerical information often under conditions of considerable control, and the analysis of that information by using statistical procedures. A quantitative data analysis was used for the population under study.

7.3. The Instrument employed for the post intervention data collection

The instrument employed for the data collection was developed by the investigator; it was guided by the study objectives and based on revision and modification of local and international tools. The elements of the Stimulus-Response-Organism model, the

theoretical framework of the study were the reference of terms for constructing the items of the instrument. The instrument utilized was self-administered questionnaire which contained socio-demographic variables, and 46 items reflecting the psychological and social health beliefs and attitudes of Palestinian female adolescents' toward their development. For analysis purposes, and based on each item dimension, the 46 items were subdivided into 8 dimensions.

Content validity was established through giving the questionnaire to three local experts; one in research, and one in mental health who have examined the instrument for content, clarity and relevance and the last one in Arabic Language for readability. The comments made by the experts were incorporated into its final format (Appendix A).

Consistency or homogeneity of the instrument was measured by Cronbach's Coefficient Alpha test at around .70. Pereira-Maxwell (1998) indicated this alpha represents a respectable alpha for a newly developed scale. The items of the questionnaire were arranged either in 4 or 3 point Likert scale; to obtain an ordinal measure of frequency of reported beliefs and attitudes.

7.4. Adequacy of the sample size

Cluster sampling was used. The variables taken into consideration were the type of the school (female public or governmental), the location of the school (City, town and village), and the size of subjects within the school. Random sampling was used to select 4 schools from 17 schools; female government schools in Ramallah District. The researcher intended to increase the level of internal validity by having similar age groups, same sex, similar socio-economic background, and similar educational setting. Another important point is that the public schools are more representative of the general Palestinian female adolescent population when compared with subjects from other school populations (private or UNRWA schools) in Palestine.

Talbot (1995) and Kvalem (1996) argue that the only practical way to sample subjects when the intervention is implemented in the classroom is to use classes as sampling units. Thus the unit of sampling was the school.

The Solomon-four group design requires large number of subjects who are available at the same time (Talbot, 1995). The sample size must be large enough to observe for differences in responses of the subjects of each group that was assigned to different conditions under the experimental and control groups. Also it has to meet the requirements for the statistical procedures techniques to be used for the data analysis. Munro (1993) pointed that the larger the sample size is, the less error is shown. The sample size was 132 students from the four randomized schools and the number of students in each school has ranged from 30-42 students. The response rate was controlled by having the students fill the questionnaire in their classes. The questionnaire that was not completely filled was omitted from the analysis and thus the response rate was 96.2%. The investigator believes that the sample size was eventually adequate considering the lack of financial and human resources that is usually required for the Solomon 4 group design.

7.5 Statistical analysis and the use of t tests

There are several points to be taken into consideration when choosing the appropriate statistical measure of the data to be analyzed; the research design, the research questions and type of the data (Munro, 1993). The statistical measure for testing the difference between two groups was chosen to meet the purpose and design of this study. The groups under study were assigned to different conditions of manipulation (pre-test, intervention, no pre-test, and no intervention), thus comparisons between each two group means by the use of t test was the most appropriate statistical measure to assess for differences as a result of this manipulation. The analysis of variance (ANOVA) was suggested and used first for analyzing this data. This method reflected the P value for the four groups all together, thus the differences obtained could not identify which type of manipulation had an effect on the variables under study. The dependant variables of this study were an

ordinal level data. The T-test requires the dependent variables to be interval or ratio level data, although ordinal level data can be treated as interval level data and used in t test analysis (Munro, 1993, p. 101).

To compare between two groups on a particular characteristic, it means whether the groups are different or not and the larger the difference between two means the more likely is that the t test will be significant (Munro, 1993, p. 101).

The typical t test table has the advantage of clearly presenting the means being compared in the analysis (Appendix I). The assumption required for a valid t test interpretation is that the groups compared are similar in their variances, and are drawn from a single population as the case for this study population.

7.6 Limitation of the study

There are several limitations worth mentioning:

1. The fact that the Solomon-4 group design is a strong design, yet it does have some disadvantages and limitations. The main disadvantage of this design is the amount of time and resources required to conduct the study correctly. With the limited resources and time required to conduct this study by the researcher, there was a delay and modification on some of the experimental steps required for the study to be completed. For example, for the first experimental step, the data were collected from 4 classes in each school of the two pre-tested schools. At the second experimental step (the intervention step), only one class of the experimental schools was subjected to health educator intervention. This change has resulted in a smaller size sample. Therefore, larger scale research is needed that incorporates larger size sample. Yet the results obtained have yielded information worth considering the study as successful. Although the study has controlled for the impact of the experimental intervention, the study results can only be generalized to similar setting and population (Talbot, 1995).
2. Data collection was completed through a self- administered questionnaire. This method is very effective when the purpose of the study is to obtain information about

attitudes, knowledge, feelings and other information that cannot be easily observed or measured physiologically (Talbot, 1995, p.292). In this method however, the information obtained is what is asked, so there is always the possibility that important unknown dimensions can be overlooked

3. The self-administered instrument used was developed by the researcher of this study after a thorough revision of the literature related to the research topic and study purpose. Most of the Palestinian studies and surveys were related to knowledge, attitudes and practices, and the international literature was related mostly to lifestyle profiles. This instrument is the only and the first one that was designed only for the health beliefs and attitudes and based on the SOR model, the theoretical framework of the study. The instrument was designed to help adolescents to respond to sensitive questions and to allow confidentiality. Prior to administration of the instrument, pilot-testing was conducted on 46 students, and modification of items was made accordingly. Moreover, the researcher maintained reliability and validity of the instrument as been described in the methodology chapter. Lehmann, (1991) stated that "beliefs and attitudes scales are easy to administer and score, on the other hand, they are highly susceptible to faking, and therefore any interpretation of this type of self-report behaviour should be made accordingly" "(p.427). Moreover, attitudes scales like any affective instrument are beset with a multitude of methodological problems that make their interpretation dubious
4. The statistical analysis was by no means an easy task to be performed. In consultation with many academics and statisticians, and after many trials in analyzing the data; the t test for significance of means was the last choice to be used for the present data. This part of the study has delayed the investigator's work for a while, but by the end, the results obtained were precise and accurate allowing the presentation of the effects of manipulation on each group under study.
5. The SOR Model, the theoretical framework of the study does not specify which type of intervention most likely will improve an individual's likelihood of taking preventive health actions (Greene & Simon-Morton, 1990). Therefore, the educational and community models from Kiger, (1995) were chosen to be the theoretical

frameworks for the development and application of the health education programme implemented with the experimental groups under study.

6. Health education requires time, resources, and consistency in education to affect the learners (Kiger, 1995). The health education programme implemented in this study was designed to fit the structure of the school programme and according to the time allowed from the Ministry of Education. This may have posed some limitation on the quantity and, thus quality of information given. Therefore, the researcher believes that the health education sessions may have increased the student's health information about the topics discussed, but was insufficient to have a change in their beliefs and attitudes. This assumption was evident by a difference of .80 points score on the psychological items between the results obtained for the health education intervention on the experimental groups, and scores obtained for the effect of the pre-test on the control group for the same variables. Therefore, health education programme with longer duration is needed to incorporate a wider range of information to meet the needs of the adolescents and to affect their beliefs and attitudes toward healthy living.
7. With the large number of students in the experimental classes (30-42), participation of students in the class discussion has allowed for positive interaction in exploration of their feelings and opinions. For some students, this discussion may have posed some limitation since they know each other and do not want to discuss their personal matters and concerns openly. For example, some students have raised personal concerns and asked for guidance and help privately after the class sessions ended.
8. The unsettled political and economic situation especially the school teacher's strike, which took place at the time of the planned educational activities, may have affected the consistency of the programme and the retention of information of the topics discussed earlier.
9. One of the most important limitations of this study worth mentioning was the lack of studies found in the local and international literature related to the health educator intervention effectiveness. Therefore, some difficulties have encountered the researcher in conducting this study, which is considered a pioneer study for evaluating the effectiveness of the health educator intervention in Palestine.

7.7 The social and demographic characteristics of the respondents and their families

Socio-demographic variables, altogether, present an interesting and largely realistic overview of the cultural characteristics of the Palestinian society including prevalent phenomena and gender relations reflected in the differential access of men and women to available community resources including those of education, work and capital connoting power and status.

In a sample equal to 130 girls with a mean age of 15.6 years, around 7% reported being engaged at the time of data collection, which means that these girls would marry at young ages each registering a new case of early marriage-a social phenomenon that was frequently documented in a number of Palestinian studies.

Notably, the post-test phase brought about a significant change in the respondents' place of residence for it introduced "camps" as a new place of residence category and shifted the sample weight more towards "cities" bringing it up to about two thirds of the total sample. Similarly, it allowed the entry of 3.1% female-headed families on top of the 1.6% already involved from the pre-test phase.

The noticeable growth of the "professional" fathers' jobs category is fully congruent with the considerable increase in the percentage of those from cities, as mentioned earlier. More than 80% of mothers are housewives and about 8% work in domestic house keeping or child minding, which are considered informal low-paid jobs that are unrecognized before law. As such, women's work rights in these cases are not guaranteed.

The evident gap in the fathers' jobs compared to those of mothers presents distinct evidence on the power disparity between the two sexes. In addition, it reflects lack of Palestinian women's involvement in the labour force and formal economy, which in turn indicates their limited access and control of capital as a vital resource and decision-making and power asset. In addition to their exclusion from the Palestinian development agendas, this furthers their marginalization in society and perpetuates their low status.

As to the investigation sought in this study, altogether this signifies a narrow vision of life and poor social awareness and experience of mothers hampering their ability to serve as resource and empowering figures for their daughters.

The same is reflected as in work data, educational attainment of fathers was higher than that of mothers in all cases. However, relative to their total, within each sex category, the highest percentages lay within the 12-years schooling category, which is observed to be phenomenal in the Palestinian society having its roots back in the loss of land and other properties as major security source lost as a result of the Israeli occupation of the Palestinian Territories. Palestinians' alternative security sources manifested itself most evidently in the form of an utter interest in pursuing education and an exceptionally high fertility rate reaching to 6.4 child/woman (PCBS 1997).

This later issue on fertility explains the finding registered in this study about the family size being less than 7 in only 30% of participants of whom 91% reported living in a nuclear family, with no significant difference between the pre-test and post-test groups. This indicates that the talk here is about social values that make large families the norm rather than an individual decision in the Palestinian society.

7.8 The health educator role and the intervention approaches

The intervention by the health educator aimed at strengthening the Palestinian female adolescents' health beliefs and attitudes toward healthy living, thus empowering them to promote a healthy life style. The health educational components developed by the investigator of the study has targeted the identified needs of the population under study obtained from the pre-intervention data, and were presented in a culturally and linguistically appropriate manner as been discussed in Chapter 4.

Those components were sequentially presented in the class sessions to help the learners to build up their knowledge and understanding of the content being given; it started with a revision of the physical growth in adolescence, especially the reproductive system changes as a first step to promote the students' understanding of the female role and

sexual identity from psychological and social perspectives. Morton et.al (1994) indicated that, offering accurate information regarding issues of sexual identity will enhance the girls' commitment toward their own solutions, and thus will lead to positive psychological and social development. The educational and enabling community approaches were the term of reference for implementing the educational sessions in classes for the experimental groups. These approaches allowed the health educator to have a greater range of choices and different ways to influence the students' health beliefs and attitudes in achieving the health education messages intended to be delivered at individual and group level.

The direct instructional approach by the health educator along with the different educational strategies implemented; the health education material given at each class session (Appendix K), the student's participation through the use of different exercising techniques in particular were necessary for facilitation of a sound health educational programme. This approach allowed the participants to feel cared for, and that such an educational opportunity is of value and could be beneficial as the results of the findings reflected the impact of these strategies for the experimental groups on their psychological health beliefs and attitudes. Visser et. al. (1998) argued that the health educator should maintain a close relationship with the learners to fully understand what they have learned, and how can they benefit from their learning to fit within their lives. Yarham (1994) believes that teaching young people to make decisions, how to make those decisions and encouraging them to do so in a valid way will build self-esteem and will equip them to creatively find an acceptable role for themselves in a future full of opportunities.

The fact that the intervention was performed in 4 weeks for 90 minutes each session where several more sessions were needed for the information required to cover the adolescents' health needs and concerns. This may have not provided sufficient opportunity for discussing all the needed information as indicated in the pre-intervention data, and during the class discussion where the students required more information and showed interest to have more information regarding their concerns and needs than was offered. Yet, this intervention may lead these learners to the first step in obtaining commitment toward their health and healthy living.

Although similarity of implementing the educational sessions was ensured for all sessions and for the two experimental groups, the intervention methods and approaches have influenced the students' psychological beliefs and attitudes including the emotional and the cognitive dimensions but not their social health beliefs and attitudes. These results are supported by Kiger's (1995) explanation of the educational model approach, where education is considered as "a means toward discovery rather toward instilling facts" (p. 34), and it emphasizes the emotional as well as the cognitive aspects of learner. The community model approach offers the opportunity to improve human relationships and develop problem solving skills to different groups in the society (Kiger, 1995). Accordingly, topics of communication, enhancement of social relationships and gender roles were discussed and presented to the learners aiming at affecting their social health beliefs and attitudes including the family, school and societal dimensions. Yet, the results obtained indicated no effectiveness or change for this aspect.

7.9 The effectiveness of intervention and pre-test on the adolescents' psychological and social health beliefs and attitudes.

The school was the unit of analysis, the estimates for the programme effect differences was obtained on all subjects in one school compared with all subjects in another school, noting that the four schools under study were assigned to different conditions as the Solomon-four group design, the research method of the study required. Also, the results obtained from the health beliefs and attitude scales implemented in this study at the pre-intervention data were useful in the health education intervention evaluation.

The research findings showed that at pre-test the psychological and social health beliefs and attitudes or the dependent variable were similar within the 3 pair of schools: Betunia and BirZeit, Betunia and Silwad, and thirdly BirZeit and Silwad. This similarity and equality of the groups have allowed for interpretation of the results obtained at post-test between the different groups and for assessment of the effectiveness of the health educator intervention, the pre-test effect or the pre-test-intervention interaction effect. According to Talbot (1995) with randomization of subjects to control or experimental groups, the groups can be considered equivalent at the onset of the study. Kvalem et al. (1996) added, a prerequisite for studying the differences between intervention and control

groups at post-test directly was that the groups possessed the same characteristics at the time of the pre-test. This equivalency was obtained for the control and experimental groups in this study at pre-test, thus any difference obtained at post-test was related to the manipulation strategies implemented for the four groups.

The major finding in this study was the effect of interaction between pre-test and intervention on the adolescents' health beliefs and attitudes toward their psychological development. There may be several explanations for the appearance of this interaction effect. One explanation may be that the interaction effect was due to repetition. The pre-test questionnaire was filled out by the students 6 months before the intervention took place. This may have made these students more prepared for the intervention than students who started the intervention unprepared. Another possible explanation is that answering all the questions in the pre-test made the students reflect more upon their own perception of their psychological and social development. It is possible that this made them more aware of the needs and concerns they encounter, and more receptive to the solutions discussed during the intervention, thus making the topics of the intervention more relevant to them personally. The interaction between pre-test and intervention was documented in Kvalem, et.al (1996) who studied the effects of sex education on adolescents' use of condoms applying the Solomon-four group design. On the other hand, prior work by Gilchrist and Schinke (1983) contradicted the findings of this study and Kvalem's study, using the same research design to evaluate the effects of sex education programme on adolescents, where no effect of pre-test or of interaction between pre-test and intervention was found in their findings.

For subjects at Betunia School, the first experimental group (P+I) where the pre-test and intervention were done, significant differences in all psychological, emotional, cognitive and perception dimensions were registered when compared for differences between the same group at pre-test and post-test. This explains that the pre-test and intervention made these students more aware of the needs and concerns they encounter, and more receptive to the solutions discussed during the intervention, thus making the topics of the intervention more relevant to them, noting this group is the only group that was exposed to this kind of manipulation. Conversely, no significant difference between the pre-test

and post-test was noted for all social items including those relevant to family, school, and society dimensions as indicated in table 6.5.1.

For subjects at BirZeit School, the first control group (P) where the pre-test done, significant differences in all psychological, emotional, cognitive and perception dimensions were registered when compared for differences between the same group at pre-test and post-test. These results indicated a fact that the pre-test alone made an influence on Birziet subjects, especially on the psychological dimension. Here questions are raised: Was it due to repetition of answering all the questions in the pre-test made the students reflect more upon their own perception of their psychological development? Was it possible that repetition of answering the questions at post-test made them more aware of the needs and concerns they encounter? Again, no significant difference between the pre-test and post-test was noted for all social items including those relevant to family, school, and society dimensions as indicated in table 6.5.2.

This in fact, concords well with the reality of the social structure and prevalent value system that govern each and every member in this society including, and perhaps most importantly these girls who are obliged to act and interact in conformity with the rules and principles approved by society safeguarding its formal and informal institutions such like family and school.

In the meantime, when subjects in Betunia (P+I) were compared with subjects in Silwad, the control group (C) that did not receive neither pre-test nor intervention, differences in the mean scores were markedly high especially in the psychological dimension with a substantial score gap between the two sites where the highest points ever obtained for any other comparisons made in this analysis. Interestingly, the analysis shows a significant difference between the two groups on seven dimensions of their psychological and social beliefs and attitudes, which means that the effects of pre-test, intervention-interaction, has made this greater influence on subjects in Betunia group as indicated in table 6.5.5. This presents evidence on the strong influence pre-test and intervention made on participants demonstrating the need and good prospects for relevant health education initiatives in future.

Comparison between Betunia (P+I) and BirZeit (P) revealed changes that were largely similar in spite of a major difference between the two sites wherein the first one had the advantage of the health educator intervention. Significant differences were confined to the psychological and cognitive dimensions only where the mean scores showed the highest difference that was more in Betunia than in BirZeit. Again when the subjects were only pre-tested as the case for BirZeit group, there was an influence on their psychological dimension. This can be understood within the framework of the silence and endurance imposed on females throughout their lives by means of the cultural definition of femininity and gender role expectations. Within that context, self worth and being valued by others is largely missed among girls who are trained to be timid and passive beings of which opinions and needs are least valued and welcomed, which is against the human nature of course. Therefore, once an opportunity was made available to them to express their views, needs and concerns they grabbed it making best use of it, which manifested itself in the measurement instrument used in the study.

With the health educator intervention, comparing Betunia with Al-Bireh showed but very little difference in the psychological dimension items, a difference that proved to be statistically significant together with another minor one on cognitive dimensions. Considering that the pre-test was executed at Betunia, the findings are indicative of methodological consistency of the study. In other words, the pre-test effect along with the intervention interacting together brought this little difference for Betunia group as indicated in table 6.5.4. Moreover, when the two experimental groups were compared with the two control groups, an evidence of effectiveness of the health educator intervention was indicated on one dimension (the psychological dimension). These results concords with Elkinson and Bell (1990) study results where experimenters in the health educator group about drug prevention programme in a Junior high school were influenced on one variable, and indicated a moderate increase in quitting smoking, where they suggested that booster sessions are important for maintaining and strengthening early programme results.

Comparisons between subjects in Al-Bireh School, the intervention group (I), and subjects in Silwad School, the control group (C) as indicated in table 6.5.7 ; and subjects

in Birziet, school, the pre-test group (P), and subjects in Silwad school, the control group (C) as indicated in table 6.5.8, showed the most evident differences, which were highly significant in their majority. Here the intervention alone and the pre-test alone indicated almost the same difference when compared with Silwad, which means both groups were affected by the intervention and the pre-test.

At the same time, comparison between Al-Bireh (I) and BirZeit (P) showed minimal differences between the two communities, as indicated in table 6.5.6. For the first is a city of which schools admit mostly city girls and the second is a town of which the school admits girls from surrounding villages with the later being more conservative and passive and the former being more open and proactive. The fact that this comparison in specific registered the least significant difference which may indicates the effect of an undetected confounding variable. Or the pre-test was that much effective for BirZeit group as indicated for the same group when compared at post-test. This means that a more thorough methodology needs to be employed for further investigation.

A comparison between mean difference between BirZeit- Silwad for pre-test and Al-Bireh-Silwad for intervention clearly shows a difference of .80 points for the Psychological items presenting evidence on the intervention influence as introduced at Al-Bireh. Considering the health educator intervention influence on the psychological aspect of the learners, one has to consider a more through intervention to have a longer term effect that can be an element in an overall social change that is inevitably incremental, gradual and slow.

In summery, the purpose of the study was to evaluate the effectiveness of the health educator intervention on the adolescents psychological and social health beliefs and attitudes. The results obtained in this study indicated a change in the adolescents' psychological health beliefs and attitudes for whatever these subjects were exposed to.

The effect of interaction between the pre-test and the intervention was the most striking findings obtained on the adolescents' psychological health beliefs and attitudes for the experimental group in Betunia School (P+I group). The effect for the health educator

intervention only, was also remarkable on the adolescents' psychological health beliefs and attitudes for the experimental group without pre-test in Al- Bireh School (I group). The other interesting finding is the influence of pre-test found in the first control group, where the pre-test alone made a difference in the scores obtained at post-test for these subjects. Also this was emphasized when compared with Silwad group. Silwad, (C) group, the control group without pre-test or intervention mean scores were the least registered when compared with the other three groups. These findings emphasize the importance of exposing the Palestinian adolescents' girls to different manipulation strategies to affect their psychological status and well-being.

For the little difference between the pre-test and intervention as the results of the study findings indicated, and because the pre-test made a significant change on the adolescents' psychological health beliefs and attitudes, and for cost-effective purposes the researcher suggest a pre-test-post-test to be made first to make sure for the influence of the pre-test prior to intervention programmes. In this way, a large number of students in many other schools and classes can be influenced and their psychological well-being can be promoted.

It is noteworthy that after the Intifada started September 2000, and within the current Palestinian political and economical situation, most of the health services and programmes offered by the governmental and non-governmental organization, are geared toward emergency and first aid services as a priority for the Palestinian people where survival is a prime objective for any individual. The other important priority is the development and promotion of community heath professionals toward taking the role of providing heath services in their communities. This change has its implications; the continuous closures and curfews by the Israeli army on each Palestinian village, town and city, and the denial by the Israeli army for individuals to have an access to heath institutions found in the cities. Therefore, health education/promotion programmes are important, and training of health educators/facilitators is listed on the Palestinian heath professional's agenda for the time being.

Another suggestion by the researcher, to have a real change and to maintain the influence of the information given by the health educator intervention, a further detailed and of long duration sessions of information is required to strengthen the early programme effects. In this case, a lot of resources and allocation of funding is required.

The adolescents' social health beliefs and attitudes items which included family, school and society dimensions were not influenced by any of the manipulation strategies implemented in the study. The difficulty of influencing the social aspect of the Palestinian female adolescents has its implications; one has to take into consideration the constraints imposed on women in this society, where "traditions and customs" imposes so many restrictions in the female's life. Women in Arab societies including Palestine are classified in less valued position in the family hierarchy, and considered a property of the man as a father, brother, husband or son, they cannot make their own decisions about basic issues in life such as selection of mates, marriage, education and career selection (Al-Saadawi, 1990). To be that much controlled and to accept men's choices is part of the traditional values and norms leading the women to dependence and submission (Sansour, 1995). Moreover this control by the family and the society is more exerted when the women are at younger age and not married as the case of this study sample.

For the family dimension for example, where parents prepare their children for a society they have in mind. Within the context of a changing society, the parents have difficulties to figure out what will be the needs of their kids in the future (Mansour, 1999 and Abu Dayya, 1999). For example, the issue of the early marriage is one of the major practices of the Palestinian society toward young women that is deeply rooted in the traditions. This issue is also one of the most favourite themes of intervention of governmental and NGO sectors in Palestine, where it is now presented in the society as detrimental to the girls' physical and psychological health and to the well being of the family to be (Mansour, 1999, Rifa'e, 1999). Moreover, the practice of early marriage still exists and the problem for adolescents' girls to have a healthy living at present and at future is predictable.

Other issues that lead these girls not to be influenced at the social level is that their social interaction outside the family and the school are closely controlled as been indicated at the pre-intervention data. This fact is also presented by Mansour, (1999) study who argued that the situation may vary from one family to another, depending upon the variables like the place of residence or the parent's level of education. School is in fact for many girls the only place where they can socialize with their peers, and probably it's the only place for them where they could feel that they are given the chance to develop their potential. For most Palestinian adolescent girls when they are not in school, most of their activities take place at home and are solitary or involve the members of the families but not often peers. Yet many of the students indicated that they have many concerns and felt not satisfied with the school environment as been found in the results of the pre-intervention data. Also to be involved in extra curricular activities in clubs is minimal, whether because they are not available or because it is not considered appropriate for a girl to enrol in such activities. Therefore, opportunities to be confronted to different ideas, behaviours, and values remain rather limited in the Palestinian girls' everyday life.

The problems for the Palestinian adolescent girls are two levels: on one hand, they have fewer opportunities than their counterparts to have other sources of information (Sansour, 1995 and Mansour, 1999). On the other hand, if they have information, it may be distorted and may impact the girls with fear and stress (Sansour, 1995), and discussion of topics such as sexuality and gender roles for example as presented by the heath educator in the educational sessions is considered as a taboo in most families. Mansour (1999) stated "if we want to develop appropriate programmes to foster an optimal development of youth, actions should not only focus on youth, but should aim at improving the relationships between parents and their adolescents" (140).

Therefore, any change or influences on the social health beliefs and attitudes as a result of the intervention in this study is questionable, and any efforts made to have a change in the social beliefs and attitudes, have to be implied at different levels including the students, the family, the school and the society at large, where this change can progress slow and gradual to involve all.

A key element in the success of influencing the students' psychological health beliefs and attitudes was the health educator's systematic approach in the educational strategies implemented. The cultural and traditional factors were taken into consideration by the educator when approached the learners, especially when issues of sexual education or early marriage, parental and social relationships, were presented. The empathy and support exerted by health educator during the class discussion may have affected the two-way communications of the educator and the learner, and thus promoted a trusting relationship by the learners, and ultimately influenced their psychological health beliefs and attitudes. Kiger (1995) wrote "the acquisition of knowledge and understanding of the factors that affect mental health help to promote emotional well-being, and development of self-awareness, stress-coping skills and healthy attitudes further support mental health" (p. 230), and will contribute to their psychological and social well being for a better future development.

Summary

This chapter incorporated interpretation of the study findings in relation to previously conducted studies. An overview of the study research design, the instrument used for the study, data collection and data analysis procedures are also included. Limitations encountered the study are presented too. An overview of the health educator intervention strategies implemented and discussion of the participants' socio-demographic variables were presented. At last, the research findings of the study with elaboration on experimental strategies implemented to influence the adolescents' psychological and social health beliefs and attitudes were discussed. The findings of the study indicated that the experimental strategies implied on the Palestinian female adolescents have influenced their psychological health beliefs and attitudes but not their social aspect of their development.

Chapter Eight
Implications and Conclusions

Introduction

In this study, the researcher has evaluated the role of the health educator in affecting change in the health beliefs and attitudes among Palestinian female adolescents aged 14-17 years in a sample of 4 governmental schools in Ramallah district. An experimental research method, the Solomon-group design was used to evaluate for the intervention strategies implemented in this study. This experimental research study is considered as a pioneer, where most of the studies conducted in Palestine related to adolescents' health were knowledge, attitudes and practices assessment or surveys. The Solomon- four group design utilized have allowed the investigator to go through a sequence of steps where another interesting findings were noted such as the influence of the pre-test and the pre-test intervention-interaction along with the health educator intervention influence on the adolescents' health beliefs and attitudes.

Building on the findings of this study which have been analyzed by reference to local and international literature, the researcher identified four main themes that incorporate the major contributions in this study. The first theme discusses the contribution of the study to developing a body of knowledge. The second theme deals with the implication of the research globally. The third theme is implication to the primary health care system in Palestine and last, recommendations related to future research and for the improvement of health education/promotion activities.

8.1 Contribution of the study to the body of knowledge

Before addressing any conclusions, it is worthwhile to mention that this study is the first study that was conducted with the purpose of evaluating the role of health educator in

affecting change in the Palestinian female adolescents' psychological and social health beliefs and attitudes.

It is hoped therefore, that assessment of the pre-intervention data and the intervention outcomes would have a practical implications toward the use of the health educator and health education strategies implemented at both the policy-making and the academic professional levels. However, the lack of other research on the role of health educator effectiveness in the Palestinian context makes comparison of these study outcomes difficult at this stage.

High levels of psychological and social health needs and concerns were found among female adolescents in the study population at first stage of the study or the pre-intervention data; the feeling of low self-esteem, and low self confidence coupled with the lack of knowledge about their sexuality and gender roles, the feeling of gender discrimination and the control exerted by their families, school and society. It was inspiring to find a health belief and attitudinal change in the adolescents' psychological development as a result of heath educator intervention strategies implemented during the class sessions.

One of the critical executive functions attributed to heath educators is to promote the psychological or intrapersonal variables (self-esteem, self-awareness, and trust), and the social or interpersonal ones (respect, gender awareness, communication and friendship) of the learners (Kiger, 1995 & Elkinson and Bell, 1990, and Shechtman, 1997). These issues were of concern to the learners in this study, beside issues of reproductive system changes and sexual development. These topics were discussed with the learners (the experimental groups) through the educational sessions and were given as an educational package for them to be read.

At the post-intervention data or the last stage of the study, the main achievement was the effectiveness of the health educator intervention on the female adolescents' psychological health beliefs and attitudes and not the social ones. Thus, this study contributes to the use of the health educator as an influencing factor on changing the female adolescents'

psychological health beliefs and attitudes positively toward a healthy living. The study also confirms previous studies of Shechtman, (1997), Neumark-Sztainer et. al. (1997) and Kim, (1998) that altering or influencing social health beliefs and attitudes in female adolescents requires stronger affective elements in the intervention. Moreover, to have an impact on the female adolescents' psychological and social health beliefs and attitudes, it requires intervention approaches at different levels including the students, school teachers and administration, and the community where parents should be closely associated to such a process (Kim, 1998). These approaches impose heavy demands on the training of teachers, and on school, which will have to allocate time, both for their learning and for the intervention itself. A major problem, however, would be to find skilled health educators to train the teachers (Kim, 1998, and Mansour, 1999) if such programme to be implemented in a wider scale in the school curriculum.

The study findings also suggest that promoting adolescents' health can be achieved through different strategies in the educational process; the structured programme according to the existing needs of the adolescents, the educational approaches should be congruent with the values of the Palestinian society. Moreover, the instructional time should be devoted to helping the learners in identifying their concerns and needs and in exploration of their feelings, beliefs and attitudes as implied by the health educator in the process of intervention strategies for the learners in this study.

Because adolescents can be influenced by audiovisual aids (Kim, 1998), the choice of using overhead projector and posters along with the open discussion and student's participation during the class sessions proved to be developmentally appropriate, where they felt respect, support and empathy by the heath educator. These approaches have encouraged the students to be part of the programme implemented and to feel responsible toward their well-being as indicated by the findings at the post-test measures of their psychological health beliefs and attitudes.

Through the implementation of an educational intervention, the educator may affect not only relationships between students but also the educator-student relationships (Schechtman, 1997). During the educational sessions, health educators also develop self-

awareness and perspective taking skills, which enhance their attitudes toward and relationships with their students (Petosa & Wessinger, 1990). These new skills help the educator to become the caring and supportive figure so often missing in the learner's lives. Thus, a health educator intervention can be effective in promoting positive feelings, beliefs and attitudes toward healthy living and can help the adolescents towards sound and healthy concepts of their gender roles and well-being.

Although the health educator intervention made an effect on the adolescents' psychological health beliefs and attitudes, the influence observed as a result of the pre-test intervention- interaction at post-test data provides some interesting clues for future intervention. It may be fruitful to start the intervention with a questionnaire in order to give the students an opportunity for greater reflection on their psychological and social well-being.

The other interesting finding was the influence observed as a result of the pre-test only on the control group; also it provides some interesting clues for future intervention. The researcher suggest a pre-test to be given supported by health education material related to its contents to enhance the knowledge they achieved by the questionnaire, then a post-test to be made to make sure for the influence of both the pre-test and the health education material given. This could be beneficial in the absence of human and material resources to implement proper health education programmes. At least in this way a large number of adolescents can be influenced and their psychological well-being can be promoted with the least cost if the pre-test effectiveness is only considered.

Finally the results of the study highlight the importance of the use of the Solomon-four group design in research on heath education and health educator role in the future. This methodology has allowed measuring the outcome of each condition assigned under experimental or control groups. Kvalem et. al (1996) underscored the importance of continuing to use the Solomon-four group design in research on health education in the future. Moreover they suggested when the outcome is not controlled for possible effect of interaction between pre-test and intervention; there is a risk of falsely interpreting the outcome as an effect of the intervention alone.

The findings suggest a need for expansion of the health education components given by the health educator for this programme to fully address the issues presented, and to allow for more discussion and elaboration on the adolescents' concerns and needs, or to have booster sessions for maintaining and strengthening the early programme effects as Kim, (1990) suggested. Kvalem et. al. (1996) suggested a need for repetition, not only within the educational programme itself, but for the programme as a whole in order to have a greater influence on the students where they can be more receptive to the health educational massage intended to be delivered.

This evaluation small scale study in one class of four public schools in Ramallah district has provided evidence on the capacity of health educator effectiveness in the school setting to achieve outcomes associated with a specific health education programme (psychological health beliefs and attitudes) based on the needs and concerns of the population under study.

Therefore, a comprehensive school health education curriculum would be the best way to insure that students have a reasonably complete knowledge base necessary for comprehending the complex nature of their psychological and social development within the framework of the Palestinian cultural demands imposed on women in general and on adolescent girls specifically. The influence of health education in school can be quite significant, if its effects ultimately spread to family and to society in general. According to Kim (1998), in western societies such as Canada, programmes target information about adolescents' psychosocial health concerns and need to adolescents as well as to adults. At this time of the Palestinian society, adolescents' girls should come high on the agenda of researchers and professionals

8.2 Implication of the research globally

This study evaluated the role of the health educator intervention in affecting change in the female adolescents' psychological and social health beliefs and attitudes. This study is considered innovative in the Palestinian and global context. However, the lack of research about the health educators and their roles to influence the beliefs and attitudes of female

adolescents in the local and international literature make comparisons of the study outcomes difficult. The international research studies reviewed were mostly evaluation of health education prevention programmes that reflected the health problems of adolescence in the developed world. For example, Ellkinson and Bell (1990) study was a health education programme to prevent or reduce the drug use among adolescents, Kvalem et. al (1996) study have evaluated the effect of sex education on adolescents' use of condoms, and Morton et. al (1996) have evaluated HIV/AIDS education programme for adolescents, and many examples of this sort are available in the literature.

This study reflected the health needs and concerns of female adolescents in developing countries, the health education programme implemented aimed at promoting their psychological and social well being, and enhancing their beliefs and attitudes toward a healthy lifestyle. Therefore, this study is considered promotional in nature. Yarham (1994) suggested that adolescents' health problems in developing and developed countries can be minimized when efforts are made to pass on knowledge, confront attitudes and develop skills to improve the quality of life of the individual.

Another important point to highlight is that the studies reviewed have evaluated for effectiveness of health education programmes in general and not for the heath educator effectiveness in specific. In conclusion, the international studies gave elements of guidance and helped in developing this study. However, it was not an easy task to compare this study with the international studies because the precise elements of the study and their organizations have greatly varied.

The study highlights the health educator effectiveness on the adolescents' health beliefs and attitudes of the learners. Lehmann (1991) argued that attitudes are learned, because they are learned they can be changed if deemed necessary. Lehmann further added that health educators should try to identify the learners who have positive and negative attitudes and implement appropriate strategies so as to accentuate the positive and eliminate the negative ones. Of course positive attitude might imply performance of healthy practices. Moreover, with effective attitude measurement and effective instructional/learning objectives, attitudes can be modified effectively by the health

educator to obtain a better understanding of the learners as the case of this study where effectiveness was indicated on one of the instructional objectives (the psychological health beliefs and attitudes of the learners).

The notion of education itself assumes that the learner gains something from the learning, and autonomy can be seen as a direct goal of education (Kiger, 1995). The most important task for educators is geared toward empowering the learners to make decisions and to exercise autonomy toward their health status and toward their future to have healthy living. The findings of this study agree with this notion, the health educator intervention has affected the intrapersonal or the psychological dimension where the learners gained knowledge and modified their beliefs and attitudes as one goal of this study. When the goal of this study was beyond the learner's ability to control or to have autonomy about it, the health educator intervention could not modify or affect the interpersonal or the social dimension of the learner's health beliefs and attitudes. The goals for intervention in such a case may encompass elements such as interpersonal skills for the use within the family, skills for dealing with government or other agencies where involvement of community groups and community people may be more effective than the individual approach. Kiger (1995) argued that the notional possession of autonomy is of little use if the person is or feels unable to exercise that autonomy.

Yarham (1994) wrote disadvantaged youth groups and individuals in developing and developed countries have fewer skills and resources to cope with changing demands of society. Thus an all-out effort is needed to communicate with and amongst the young regarding the health and lifestyle augmentation. One of these efforts is the health educator's approach where they need to be responsive, flexible and able to communicate self-esteem, energy and enthusiasm. Moreover, the health educators can be effective when he/she shows real concern and exercise empathy toward the learners. Another important effort of education is to increase the learner's autonomy regarding health is empathy training, where value clarification exercises and direct contact with the learners encourage them to communicate effectively and allow them to express their values and concerns freely. The substantial evidence of these efforts and approaches was manifested

in this study's participants, once they were given the opportunity to do so, they were receptive and were influenced to promote their beliefs and attitudes from new perspective as manifested in the measurement instrument used in the study at post test.

This study has focused primarily on research that was set to evaluate the effectiveness of the health educator activities. Health teaching activities must be informed by research findings related to health problems and issues (Kiger, 1995). The results obtained at the pre-intervention data provided basis for the health teaching needs, the goals were set and the health educational activities were planned taking into consideration the cultural values. This "action research" approach as been called by Kiger (1995) may be an appropriate research design to evaluate the health teaching initiative where the health educator influence on the learners was identified. Moreover, heath educators have the responsibility to be alert for research findings that are relevant to their area of practice, where it is considered to be critical to the quality of the content of her teaching. The health educator/promoter role is almost limitless (Yarham, 1994) and the use of the health educator can vary according to the setting and issues of concerns presented. Therefore, this study could be useful in other studies and in other countries and on different population too.

8.3 Implication to primary health care in Palestine

This study provided information about the physiological, psychological and social health beliefs and attitudes of student female adolescents, the physiological concerns and needs were the least to be considered by the participants of the study as indicated by the results of their assessment at the pre-intervention data. Therefore, the researcher of the study has focused on influencing the psychological and social health beliefs and attitudes through planned educational activities which aimed at empowering them at the psychological and social levels. The findings indicated that the health educator intervention can influence the psychological health beliefs and attitudes of the subjects but could not influence the social ones.

This research finding is very important to take into consideration in order to develop appropriate programmes aiming at fostering an optimum development of female adolescents. The local studies and surveys presented in the literature review chapter were mostly the work of women's groups or the NGOs. They all insist on the need to empower Palestinian girls and women and to improve their status. They demonstrate how "men and women live in different worlds- worlds that differ in access to education and work opportunities, and in health, personal security and leisure time" (Mansour, 1997). The fact that the socio-demographic variables and the health beliefs and attitudes variables findings of this study at the pre-intervention data complemented the previous studies in describing that the Palestinian adolescent girls constitute a disadvantaged group. Therefore, there is a need to understand further how they cope with this reality. There is a need also to understand if the concerns and needs presented in pre-intervention data are equal to all female adolescents, or if it depends upon factors such as socio-cultural background, religion, place of residence... which needs to be correlated with their health beliefs and attitudes in future studies. Moreover, there is definitely a need to gather much more information and to clarify a lot of issues that have been only touched upon in this study.

To foster an optimal development of adolescent girls, actions should not only focus on youth, but should aim at improving the relationships between parents and their adolescents. The girls for example, indicated that their parents do not support them or concerned with their feelings or needs, their communication patterns seems to be defective, and the level of conflict and level of control are high. This means that efforts should be made to educate parents about their daughter's needs and to improve their parenting skills. It is easy to say that, but it is not easy to implement, because the patterns of parenting are deeply rooted in the tradition and in the religious system that underline the culture. Lehmann, (1991) argued, without understanding an individual's feelings, family support and motivation, information needs, and range of coping strategies, interventions are likely to be insensitive and irrelevant. Therefore, each health professional in the field of education should be able to understand these basic rules where they can be truly facilitative and can provide a positive element in the learners. Clearly

health education is becoming less "information" led and more sensitive to individual or group preferences (Elkinson and Bell, 1990).

At the school level with a large number of the girls who manifested a lot of problems and negative attitude toward the school as indicated at the subjective and objective data at the pre-intervention stage, the girls seldom mentioned that the teachers could be of help. Promoting a better mental and physical health in the schools cannot go without improving the school conditions and providing school services such as school counsellors and school nurses. In the Palestinian context, health education in the Governmental public schools is implemented by adopting the traditional medical preventive approach through vocational training and science lessons. There are no special hours devoted to health education and no special teachers teaching it, since no sectoral planning was available so far, and any teacher who has empty working hours in the school schedule can teach health education (Daoud et. al. 1996). According to Mansour (1998) the Ministry of Education started to introduce counsellors in schools, which is important step to answer the adolescents' needs, but unfortunately each counsellor has to work with several schools; also these counsellors needed training at post-graduate level to have a strong theoretical as well as practical experience to be professional counsellor. Again, this means that social workers, counsellors, and all field workers involved in schools and community development programmes should be carefully selected, trained and supervised.

At this stage of national development, there is definitely a need to use more interdisciplinary strategies to enhance the female adolescents' well-being. An integrated efforts should include not only NGOs working in the field of education, social work and mental health, the Palestinian Authority through its Ministries of Education and of Health as well has a lot to do for adolescents' health in the context of primary health care.

Doctors, nurses and community health workers in the Palestinian primary health care system have definitely an important part to play in this accompaniment of adolescents and adolescents' parents that was described above. Moreover they should be more aware of the specific needs of the adolescents. Being close to the community, they are in a position to play an active role in helping the families and their adolescents to pass this transitional

stage of the life cycle. The assessment or the pre-intervention data gives justification to increase attention to empower these girls. There is definitely a need to have a developmental input in the community through these health professionals providing that they have training in adolescents' health and counselling skills and educational approaches.

Many health institutions working in the field of primary health care are involved in community development programmes and in training of community field workers (village or community health workers, nurses and social workers) to implement these programmes. Many of these community programmes were awareness campaigns (Mansour, 1998). Even if it meant only to be awareness campaigns, the training of field workers who also act as educators should include not only the acquisition of knowledge related to the topics and of skills to convey the message intended to be delivered. The training programmes should aim at providing the trainees with a certain amount of personal development work. Moreover, training programmes should aim at giving them an opportunity for understanding themselves, and at clarifying their values. It is important also for finding where they stand as values are concerned, this really what makes their strength to be effective, or otherwise they may induce a lot of confusion for themselves and for the learners.

These training programmes are sporadic and implemented when funding is available. Therefore, a need for ongoing development of professional field workers with ongoing supervision of their performances through an evaluative research is one of prime importance to have an effective work of the educators and of effective outcomes for the learners.

The study results which cannot be diverged from previous known themes in addressing the features for health and young people, provided evidence on the importance of health education by the use of professional health educator and the use of a balanced range of teaching approaches mentioned earlier which proved to be successful. Also the study results provided evidence on the need for health education progression and continuity in learning. Therefore, this requires a larger and more integrated manner to incorporate the

perceptions of the key players who can make a difference in shaping the status of the Palestinian youth and adolescents. The study results emphasize the importance of joint planning at the Ministry of Health and Ministry of Education acting together to have health education in school curriculum based on health needs of adolescents taking the socio-cultural context into account. Daoud (1996) suggested that involvement of parents and community leaders on curriculum development committees emerge as a priority as well.

Moreover, the professionals' educational institutions need to consider the concept of health education and the roles that the health educators can be effective in changing beliefs, clarifying values and shaping attitudes. Therefore, formal and continuing education programmes for nurses, community health workers and physicians should address health education promotion training and emphasize their roles in contributing to the health of the people.

This experimental research study contributes to providing useful information about the Palestinian female adolescents' health beliefs and attitudes. Also it contributes to identify the effectiveness of the health educator intervention to facilitate change in the adolescents' health beliefs and attitudes. In addition, it gives information of how much these adolescents are desperate to learn and to be affected positively when they are given the opportunity to do so as indicated by the post test findings.

The study results emphasize that health teaching activities must be informed by research findings related to health problems and issues. Also the health professionals involved in health teaching needs to operate from well-informed base, and needs to be secure in the knowledge, skills and attitudes that needs to be passed on to the learners. To achieve this, it is essential for the health educator to keep up to date with the relevant professional literature.

8.4 Recommendations

The following points are recommendations for future research. This study has focused primarily on experimental research that sets out to evaluate the effectiveness of heath

educator intervention on Palestinian female adolescents' health beliefs and attitudes. Clearly this is a topic that needs further exploration and identification to fully understand the health educator effectiveness on the learners concerns and needs. The generlizability and significance of any findings never comes from one single study. Considering the limitation of the study mentioned earlier, the following points are worth looking at to be studied.

- The sample size is small and included female adolescents in public schools only. Therefore, a larger sample from public and private school in different areas of the West Bank and Gaza strip and from adolescents outside the school will lead to concrete conclusions about the Palestinian female adolescents' health needs and concerns.
- Evaluation of the role of the health educator effectiveness was conducted through a quantitative method only. Therefore, it is recommended to use a combination of both qualitative and quantitative methods in order to cast light on different aspects of the intended learning.
- To have effective interventions for adolescents and to be able to evaluate for this effectiveness, academic research studies are recommended. Zaslow and Takanishi (1993) described very clearly the necessary articulation between research and action and stressed the fact that the following stages should be integrated: "(a) collection of descriptive data regarding adolescents' experience of a problem, or normative behaviour or a distribution of a behaviour across the population of adolescents, (b) development of theory and specific hypotheses based on such descriptive data, (c) design and implementation of theory-guided intervention strategies, (d) documentation of the integrity of the programme implementation, (e) evaluation of short term impacts through the use of comparative designs, (f) differentiation of short term effects in terms of population subgroups and particular aspect of behaviour, (g) attempts to describe processes underlying programme effect, and (h) longitudinal studies to determine the extent to which programme effects are sustained" (p. 185-192).

- With all the limitations mentioned earlier, this small scale study with the use of the experimental research method (the Solomon-four group design) has almost followed this academic type of research. Of course with this study different elements and purpose, some of these stages were tackled, and the other stages are recommended for further studies. For example, this study has tackled stage (a) where health beliefs and attitudes of female adolescent in two public schools in Ramallah district were assessed by the use of objective and subjective data. Based on this assessment, stage (b) was followed by setting the operational objectives and plan of action for intervention. Stages (c) and (d) the health educator intervention was guided by the educational and community development models adopted from Kiger (1995) and the health educational strategies were set based on those approaches. Also the educational programme topics were implemented in four sessions for the experimental groups in two schools. Furthermore, these topics were documented in the form of educational material that was given to the learners. Of course, there is a need to have more sessions to cover all the needs and concerns expressed by the adolescents at the assessment phase. Stage (e), the post intervention data or post test conducted immediately after the intervention for the experimental and the control groups has allowed for comparison between the groups and for identification of the health educator effectiveness. Also the results indicated that Palestinian female adolescents were influenced by the pre-test only, by the health educator intervention, and strongly influenced by the interaction between the pre-test and the health educator intervention.
- These indicators of effectiveness put the Palestinian health professional to be sensitive to the needs of adolescents in order to have autonomy toward their health and to be empowered toward their future life. Moreover health education/promotion strategies for female adolescents should be on the forefront of the agenda of the Palestinian Ministry of Education and Ministry of Health.
- Following Zaslow and Takanishi recommendation for academic research to be translated into interventions, there is still a long way to go. Therefore, steps (f), (g) and (h) mentioned above are recommended to be followed for a future studies to have an effective intervention programme. Furthermore, step (f) requires such study to be

implemented on other subgroups to be compared for differences of the short term effects obtained on particular aspects of the health beliefs and attitudes as a result of intervention. This will also be helpful for the health educator to look at the intervention strategies planned and to modify it accordingly if needed. Step (g) requires description of the effects obtained on the learners as a result of the intervention. At last, step (h) requires longitudinal studies to determine the extent to which programme effects are sustained. It is hoped that this study will provide solid bases for follow up in the future studies to be in a larger scale and with more resources.

Further recommendations for improvement of health education/promotion activities toward the Palestinian adolescents can be addressed as follows:

- There is definitely a need to carry out a study to understand what adolescence is like for boys. Also, it is recommended to develop and introduce health education programmes to both genders in an attempt to introduce information and education about the physical as well as the psychological and social roles of each gender to have a better understanding and acceptance of each other.
- Community and parents' involvement in any activities aimed at promoting the girls is felt to be very important since it help them to maintain healthy attitudes and thus healthy practices.
- There is a need for the Palestinian universities to emphasize the concept of health education/promotion through the different health teaching faculties available for graduating nurses, physicians and public health professionals. It is worthwhile to open new paths to graduate professional health educators for the different roles that they can play; as a key person for planning and designing health education programmes, and as a resource person for other health field workers to promote their roles toward raising awareness, changing beliefs, clarifying values and shaping attitudes of the learners. Moreover, it is recommended also that the educational institutions to develop a continuing education programmes for nurses, community health workers and physicians working in the primary health care and community facilities to address

health education/promotion training and to emphasize their roles in contributing to the health of the people.

- ✧ There is a need also for ongoing development of professional field workers with ongoing supervision of their performances through the decision making bodies and joint coordination of the MOH and the NGOs , this is important to have a control on such programmes and to have an effective work of the educators and of effective outcomes for the learners.

Conclusions

This study provided information about the effectiveness of the health educator intervention on Palestinian female adolescents in public schools. The study results have important implications for the promotion of female adolescents' health through many strategies and joint cooperation between many sectors in the field working with this population. The findings of the study were instructive in several aspects and made the following contribution:

- The study design was helpful in identifying the adolescents' health beliefs and attitudes through the objective data and their needs, problems and concerns through the subjective data at the assessment phase prior to the health educator intervention. It was important for the investigator of the study to use this approach in order to develop culturally appropriate interventions. Therefore, emphasis on the needs and concerns of the learners to be assessed prior to any intervention is of high importance to have an effective educational programme.
- The results of the data at pre-test and post test were examined on group level, in order to understand the individual female adolescents' perception of health, it is recommended to have an individual analysis and to correlate with their socio-demographic variables to examine carefully the effects of these factors on their health beliefs and attitudes.
- The nature and purpose of the study was helpful in refining the investigator perceptions and definitions of health, perceived health needs and problems and what

health programmes are needed to improve the health of adolescents' in the Palestinian community.

- The study design has allowed the investigator to examine exactly what kind of manipulation can affect the participants under study. For example, the pre-test effectiveness can be taken into consideration, and for cost-effective purposes the researcher suggest a pre-test-post-test to be made first to make sure for the influence of the pre-test prior to intervention programmes. In this way, a large number of students in many other schools and classes can be influenced and their psychological well-being can be promoted.
- Educational and promotional programmes on adolescents' health should be in the context of the family, school and community level, also it is recommended to involve men to become supportive and understanding of the girl's and women's concerns and problems.
- The findings of the study can be very helpful in shaping policies and programmes related to adolescents' health as well as for academic training programmes for those who work with the adolescents in order to enhance the health and well being of the community at large.
- Considerable conceptual work remains to be done if the rights of children in general and girls in specific are to be achieved

Summery

This chapter integrates implications and recommendations based on the study findings. The researcher acknowledged four main themes that incorporated the major contributions of this study. The first theme discusses the contribution of the study to developing body of knowledge. The second theme deals with the implication of the research globally. The third theme is implication to the primary health system in Palestine and last theme incorporated recommendations related to future research and recommendations for improvement of health education/promotion activities.

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Appendices

Appendix A

Map of the Palestine: The West Bank and Gaza Strip (OPT)

Appendix B

The study Instrument (questionnaire)

About the Beliefs and Attitudes of Female Palestinian Adolescents toward their physical and psychosocial health needs and concerns.

Date of data : _____	Date of Birth: _____
Name of school: _____	Class/years of study:_____

I) ***Personal and Demographic Data:***

Please Put (✔) under what is appropriate for you

1- Are you:

☐ Single ☐ Engaged

2- Where do you live?

☐ City ☐ Village ☐ Camp

3. Do you live with?

☐ Extended family ☐. Nuclear family ☐ Single family (Father / Mother) ☐ Step-parent family

4- Does your father work as:

☐ Professional ☐ Businessman ☐ Office worker

☐ Laborer ☐Others/ specify.

5- Does your mother work or worked before marriage as:

☐ Professional ☐ Office worker

☐ Housemother ☐ Other/ specify

6- Number of scholastic years your father achieved _____

7- Number of scholastic years your mother achieved _____

8- Number of your family members _____

II Beliefs and attitude toward your physical growth.

A. Being an adolescent female, do you?

	Yes	No	Need more information
1. know about the physical changes that occur to females when they reach the age puberty	☐	☐	☐
2. know about the function of body systems	☐	☐	☐

3. know about the reproductive system changes ☐ ☐ ☐
4. Have enough information about the health needs and concerns. ☐ ☐ ☐
5. Have enough information about sexual issues ☐ ☐ ☐

If your answer is yes, please circle the appropriate source(s) for you.

☐ Family ☐. School
☐. Friends ☐. Youth clubs
☐. Media ☐. Others/specify

6. Discuss your health concerns in relation to your menstrual cycle with others. ☐ ☐ ☐

If your answer is yes, with whom?

☐ Family ☐. School
☐ Friends ☐. Others/ specify

7. Get health information from health professionals

If your answer is yes, from whom?

☐ A doctor ☐ A Nurse
☐ Social worker ☐ Psychologist
☐ School health team

B. Do you agree or disagree with these statements about physical health, and pubertal changes, please put (✓) under what is appropriate for you	☐ Agree	☐ Disagree	☐ Not Sure
1. I think about my health a lot	☐	☐	☐
2. What I eat makes a difference to my health.	☐	☐	☐
3. Regular exercise is good for my health.	☐	☐	☐
4. If I take care of myself, I am more likely to stay healthy	☐	☐	☐
5. What I eat and drink makes a difference to my teeth.	☐	☐	☐
6. Personal hygiene is important to keep healthy	☐	☐	☐
7. Enough sleep makes a difference to my alertness and activity	☐	☐	☐
8. Grooming raises the morals and self-esteem and the respect of others.	☐	☐	☐
9. Some adolescent girls get acne on their faces	☐	☐	☐
10. Most young girls feels embarrassed to talk about their body changes	☐	☐	☐

C. Do you agree or disagree with the following practices when you get your menstrual cycle? Please put (✓) under what is appropriate for you	Agree	Disagree	Not sure
1. Daily bath	☐	☐	☐
2. Daily exercise	☐	☐	☐
3. Eat special diet	☐	☐	☐
4. Sleep more than usual	☐	☐	☐
5. Take medicine for cramps	☐	☐	☐
6. Drinks boiled herbs.	☐	☐	☐

D. As an adolescent girl, do you agree or disagree with the following statement concerning general health issues	Agree	Disagree	Not sure
1. Adolescents have a headache sometimes	☐	☐	☐
2. Adolescents feel tired and exhausted sometimes	☐	☐	☐
3. Adolescents have loss of appetite sometimes	☐	☐	☐
4. Adolescents have sleep disturbances sometimes	☐	☐	☐
5. Adolescents knows enough about the dangers of smoking.	☐	☐	☐
6. Adolescents know enough about the dangers of drinking alcohol	☐	☐	☐
7. More young people die from accidents than die from anything else.	☐	☐	☐
8. Adolescents know enough about AIDs and it consequences .	☐	☐	☐
9. Adolescent know enough about sex and sexually transmitted diseases.	☐	☐	☐

E. Do you have any handicap?

1. ☐ yes ☐ No

If your answer is **yes**. What kind of handicap?

☐ Mental / specify _____

☐ Physical / specify _____

2. If you know the causes for your handicap please circle the applicable

☐ Heredity ☐ Acquired disease ☐ Accident ☐ Congenital

3. Do you feel that you have some physical abnormalities that embarrasses you.

☐ Yes ☐ No.

If yes, what is that abnormality _____

4. Do you take or have you taken any of the following

A. Medicine such as paracetamol, over the counter drugs or prescribed by the physician or the pharmacist.

☐Yes ☐ No. ☐ Sometimes

If your answer is yes or sometimes, what kind of medicine you take and why. ----------

B. Illegal or recreational, drugs. .

☐ Yes ☐ No. ☐ Sometimes

If yes, or sometimes what kind of drugs _____and how much --------

C. Alcohol

☐ Yes ☐ No. ☐ Sometimes

If yes or sometimes how often and how much _____

D. Smoking

☐ Yes ☐ No. ☐ Sometimes

If yes or sometimes, how many cigarettes a day _____

5. Have you ever heard of the following illnesses?

	Yes	No	I have this
1. Diabetes	☐.	☐.	☐.
2. Epilepsy	☐.	☐.	☐.
3. Asthma	☐.	☐.	☐.
4. Thalassemia	☐.	☐.	☐.
5. Anemia	☐.	☐.	☐.

5. Breast cancer

□. □. □.

A Do you know about self-breast Examination?

A. □ Yes B. □ No C.□ I already do this

b. If your answer is C, have you examined your breast in the last 3 months

A. □ Yes B. □ No

7. Nutritional problems

□. □. □.

a.If yes, what kind of nutritional problem you have _____

b. Have you ever been concerned about your nutrition and its importance to have a healthy life.

□ Yes □ No

c. If yes. Do you know what the basic foodstuff is?

□ Yes □ No C. Need more information's

III Items reflecting the female adolescents health beliefs and attitudes toward their psychological/emotional development

Please check (✓) for your appropriate answer

A. Have you recently	□ More so than usual	□ Same as usual	□ Less so than usual	□ Much less than usual
1. Been able to enjoy normal day-to-day activities	□	□	□	□
2. Been feeling reasonably happy, and all things around you is considered	□	□	□	□
3. Been able to face up to your difficulties	□	□	□	□
4. Been capable of making decisions about things	□	□	□	□
5. Been understanding yourself and accepting your behaviors	□	□	□	□
6. Been accepting criticism and advice	□	□	□	□
7. Been aware of your stress	□	□	□	□
8. Been loosing confidence in yourself	□	□	□	□
9. Been thinking of yourself as a worthless person	□	□	□	□
10. Felt you could not over come your difficulties	□	□	□	□
11. Been feeling unhappy and depressed	□	□	□	□
12. Been feeling embarrassed for any reason	□	□	□	□
13. Been concerned with other's thinking of you more than what you think of yourself	□	□	□	□
14. Been depending on others to solve your problem.	□	□	□	□
15. Been knowledgeable of your strength & weaknesses	□	□	□	□
16. Been liking achievements	□	□	□	□
17. Been liking to be a member in youth clubs and communities	□	□	□	□
18. Been capable of doing useful things.	□	□	□	□

5. Breast cancer

□. □. □.

A Do you know about self-breast Examination?

A. □ Yes B. □ No C.□ I already do this

b. If your answer is C, have you examined your breast in the last 3 months

A. □ Yes B. □ No

7. Nutritional problems

□. □. □.

a.If yes, what kind of nutritional problem you have _____

b. Have you ever been concerned about your nutrition and its importance to have a healthy life.

□ Yes □ No

c. If yes. Do you know what the basic foodstuff is?

□ Yes □ No C. Need more information's

III Items reflecting the female adolescents health beliefs and attitudes toward their psychological/emotional development

Please check (✓) for your appropriate answer

A. Have you recently	□ More so than usual	□ Same as usual	□ Less so than usual	□ Much less than usual
1. Been able to enjoy normal day-to-day activities	□	□	□	□
2. Been feeling reasonably happy, and all things around you is considered	□	□	□	□
3. Been able to face up to your difficulties	□	□	□	□
4. Been capable of making decisions about things	□	□	□	□
5. Been understanding yourself and accepting your behaviors	□	□	□	□
6. Been accepting criticism and advice	□	□	□	□
7. Been aware of your stress	□	□	□	□
8. Been loosing confidence in yourself	□	□	□	□
9. Been thinking of yourself as a worthless person	□	□	□	□
10. Felt you could not over come your difficulties	□	□	□	□
11. Been feeling unhappy and depressed	□	□	□	□
12. Been feeling embarrassed for any reason	□	□	□	□
13. Been concerned with other's thinking of you more than what you think of yourself	□	□	□	□
14. Been depending on others to solve your problem.	□	□	□	□
15. Been knowledgeable of your strength & weaknesses	□	□	□	□
16. Been liking achievements	□	□	□	□
17. Been liking to be a member in youth clubs and communities	□	□	□	□
18. Been capable of doing useful things.	□	□	□	□

IV.A Items' reflecting the female adolescents' health beliefs and attitudes toward their social developmental concerns and needs.

A. Have you recently	☐ More so than usual	☐ Same as usual	☐ Less so than usual	☐ much less than usual
1. Been reading books and other sources about health issues	☐	☐	☐	☐
2. Felt that school subjects answers your question about life matters.	☐	☐	☐	☐
3. Been liking the school environment and felt it's encouraging to build friendship with others.	☐	☐	☐	☐
4. Preferred teachers from the other sex.	☐	☐	☐	☐
5. Felt that your family supports you and is concerned with your needs and feelings	☐	☐	☐	☐
6.Preferred to deal with your teacher for personal matters	☐	☐	☐	☐
7.Felt that you parents understand you and respect you	☐	☐	☐	☐
8. Been opposed and criticized by your family	☐	☐	☐	☐
9. Felt embarrassed to talk with my parents about personal matters	☐	☐	☐	☐
10. Felt that your opinions and ideas are accepted by your family	☐	☐	☐	☐
11. Felt that you like to deal with your older sister more than mother.	☐	☐	☐	☐
12. Been feeling embarrassed to talk about sex with any family members	☐	☐	☐	☐
13. Preferred your friends more than family	☐	☐	☐	☐
14. Been liking to have a friend from the opposite sex.	☐	☐	☐	☐
15. Been feeling embarrassed to talk or meet with the friends of the other sex .	☐	☐	☐	☐
16. Accepting the societal norms and values in relation to your relationship with men	☐	☐	☐	☐
17. Believed in the emotional relationship between the man and woman	☐	☐	☐	☐
18. Preferred marriage to school	☐	☐	☐	☐
19. Felt a need to have sexual education	☐	☐	☐	☐
20. Preferred to be in a mixed school	☐	☐	☐	☐

V.B Items reflecting the female adolescents' perception of the societal norms and values toward young girls

B. Do you agree or disagree with these statements about the societal norms and attitudes toward the young female Palestinian	Agree	Disagree	Not Sure
1. Most young girls feel embarrassed to talk about their emotional involvement	☐	☐	☐
2. Most young girls are not allowed to go out alone	☐	☐	☐
3. Most young girls have to get married as early as possible	☐	☐	☐
4. Females are only for marriage	☐	☐	☐
5. Females are not allowed to have an emotional relationship with boys	☐	☐	☐
6. Females are not allowed to talk about sexual matters	☐	☐	☐
7. Females should be independent	☐	☐	☐
8. Young Females are not allowed to participate in youth clubs.	☐	☐	☐
9. Young girls are not allowed to participate in social activities.	☐	☐	☐

V. (A) Being a Palestinian female adolescent, would you like to write your feeling about this phase.

(B) Would you like to write about the problems that you face when you deal with family, school and even society

(1) Family:

(2) School:

(3) Society:

Appendix C

A. Consent Form

For 16 years old and above

Agreement to take part in a research study

I _____have had the study explained to me by the investigator Sumaya Sayej; I understand the study will look at the female adolescent perception of health and their beliefs and attitudes toward healthy lifestyle.

I am willing to participate in this study and I understand that all information recorded will be completely confidential and anonymous.

Signed _____

Date: _____

Appendix C

B. Parent /guardian Consent From

I agree that my daughter _____ to participates in a research study for Sumaya Sayej lecturer at the College of Health professions, Al-Quds University as part of her work for her doctoral degree in nursing. I understand that the study will look at the female's adolescent perception of health and their beliefs and attitudes toward healthy lifestyle.

After the discussion of the questionnaire by the investigator I understand that my daughter will participate willingly and freely and all information recorded will be completely confidential and anonymous.

Signed (parent / Guardian) _____

Date: _____

Appendix D
Al-Quds University Ethical Approval

بسم الله الرحمن الرحيم

Al-Quds University

Office Of Research

Jerusalem

جامعة القدس

عمادة البحث العلمي

القدس

Date: 08/07/1999

التاريخ: ١٩٩٩/٧/٨

Ms. Sumaya Y. Sayej

الأخت سمية السايح

I would like to inform you that the Committee has discussed your application About.

تحية سيادتكم عليما بأن اللجنة قد ناقشت طلبكم حول موضوع:-

Estimating the effectiveness of the Role of the health educator in effecting change in health beliefs and attitudes among female Palestinian students aged 14-18 Years in sample of 4 schools in the West Bank a Solomon 4 Group Design

توقع فاعلية دور المرشدين الصحيين لإحداث تغير فعال في معتقدات وتوجهات الإناث الفلسطينيات في عمر ١٤-١٨ من خلال عينة لأربع مدارس فلسطينية في الضفة الغربية

On its meeting on June 1999

في جلستها المنعقدة بتاريخ يونيو ١٩٩٩

And decided the following

To approve the above Mention

وقد تم الاتفاق على:

الموافقة على البحث المذكور أعلاه

Signature

التوقيع

Prof. Ziad Abdeen

Dean, Office of Research

د. زياد عابدين

عميد البحث العلمي

Conditions: -

1. Valid for 2 years from the date of approval to start.
2. It is Necessary to notify the committee in any change in the admitted study protocol.
3. The committee appreciates receiving one copy of your final report when it is completed.

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8 Nur Al- Din St. P.O.Box 51000
Jerusalem
Tel: 6274979,6274980, 6261490
Fax: 6277166
zabdeen@planet.edu

الادارة العامة
٨ شارع نور الدين. ص.ب ٥١٠٠٠ القدس
تلفون: ٦٢٧٤٩٨٠، ٦٢٧٤٩٧٩، ٦٢٦١٤٩٠
فاكس: ٦٢٧٧١٦٦

Appendix E

The investigator letters and MOE letters

التاريخ: 98/3/4

حضرة الدكتور نعيم أبو الحمص المحتـــرم
وكيل وزارة الـــتـــربـــية والـــتـــعـــلـــيـــم
رام الله

تحية طيبة وبعد،

أعلمكم إنني حاليا أقوم ببحث كمتطلب لنيل شهادة الدكتوراة من جامعة ستافوردشير في بريطانيا وموضوع البحث هو دراسة مواقف ومعتقدات الفتيات حول صحتهن، وأنا بحاجة إلى دراسة مجموعة من الفتيات اللواتي يدرسن في مدارس منطقة رام الله التابعة لوزارتكم الموقرة وذلك بأخذ عينة عشوائية من أربعة مدارس وبعدها إجراء الدراسة التي تتضمن توزيع استبيان على طالبات من صف سادس ولغاية اثنا عشر في المدارس المنتقاة والجزء الثاني يتطلب دخولي إلى المدارس الأربعة لإعطاء التثقيف الصحي بواقع 4 ساعات لكل صف.

آملة موافقتكم وأنا على أتم الاستعداد للقاء المعنيين من طرفكم للتحاور بشكل أوسع حول طبيعة البحث وأهميته.

وتفضلوا بقبول فائق الاحترام والتقدير

الباحثة
سمية صايج
جامعة القدس
كلية المهن الصحية

بسم الله الرحمن الرحيم

Palestinian National Authority

Ministry of Education

السلطة الوطنية الفلسطينية

وزارة التربية و التعليم

الرقم : و ت/ ٤/ ٤٧/ ١٤٥٥

التاريخ : 15/ 3/ 1998م

الموافق : 12/ 11/ 1418هـ

حضرة الآنسة سمية الصايج المحترمة

محاضرة في جامعة القدس

تحية طيبة وبعد ،،،

الموضوع : طلب اجراء دراسة تطبيقية في مدارس محافظة رام الله

الاشارة : كتابك المؤرخ 4/3/1998م

أوافق من حيث المبدأ على قيامك بالدراسة الميدانية الواردة في كتابك المشار اليه أعلاه في المدارس الحكومية التابعة لمديرية التربية والتعليم في رام الله ، وذلك بعد توضيح مضمون وآلية هذا البحث للوزارة من خلال لقاء أو رسالة توجه لها بهذا الشأن .

مع الاحترام ،،،

/وزير التربية والتعليم

مدير عام التعليم العام

أ . وليد الزاغة

السلطة الوطنية الفلسطينية ★ وزارة التربية والتعليم

نسخة / للملف.

خ .ل / ق .أ

saerches

هاتف Tel. (+972-2-998-3208) فاكس - Fax (+972-2-998-3222) رام الله ص.ب. Ramallah, P.O.Box (576)

بسم الله الرحمن الرحيم

Palestinian National Authority
Ministry of Education

السلطة الوطنية الفلسطينية
وزارة التربية والتعليم

الرقم : و ت / ٢٠ / ٢٨ / ١٨٥٨
التاريخ : ٢٠/ 3 / 2000 م
الموافق : ٥/ 12 /1420هـ

حضرة السيدة صفية صايغ المحترمة

مديرة دائرة التمريض /

كلية العلوم الصحية / جامعة القدس

تحية طيبة وبعد ..

الموضوع : استكمال البحث التجريبي

لا مانع لدينا من إستكمال البحث التجريبي في بعض المدارس الحكومية الثانوية في منطقة رام الله ، حسب ما ورد فـــي كتابكم بتاريخ 28 / 2 /2000 ، على ان يتم قبل ذلك مراعاة الأمور التالية :

أولاً : تزويدنا مسبقاً بالإستبانة المراد توزيعها على الطالبات .
ثانياً : تزويدنا بأسماء الأشخاص الذين سيقومون بعملية التثقيف الصحي وتعبئة الإستبانة والخانية الغضية لكل منهم .
ثالثاً : إعلامنا بعدد الساعات المطلوبة والأيام المحددة لتنفيذ البحث داخل المدرسة .
رابعاً : تزويدنا مسبقاً بنسخ عن المواد والنشرات التي سيتم توزيعها داخل المدرسة .

مع الاحترام ..

/ وزير التربية والتعليم

مدير عام التعليم العام

أ . وليد الزاغة

السلطة الوطنية الفلسطينية
وزارة التربية والتعليم

نسخة للملف
و ع / ١٢

هاتف: (+972-2-2983205) Tel. ,فاكس: (+972-2-2983222) Fax. رام الله ص.ب. (576) Ramallah, P.O.Box (576)

Appendix F

Ramallah District Schools

A. List of Female Government High Schools

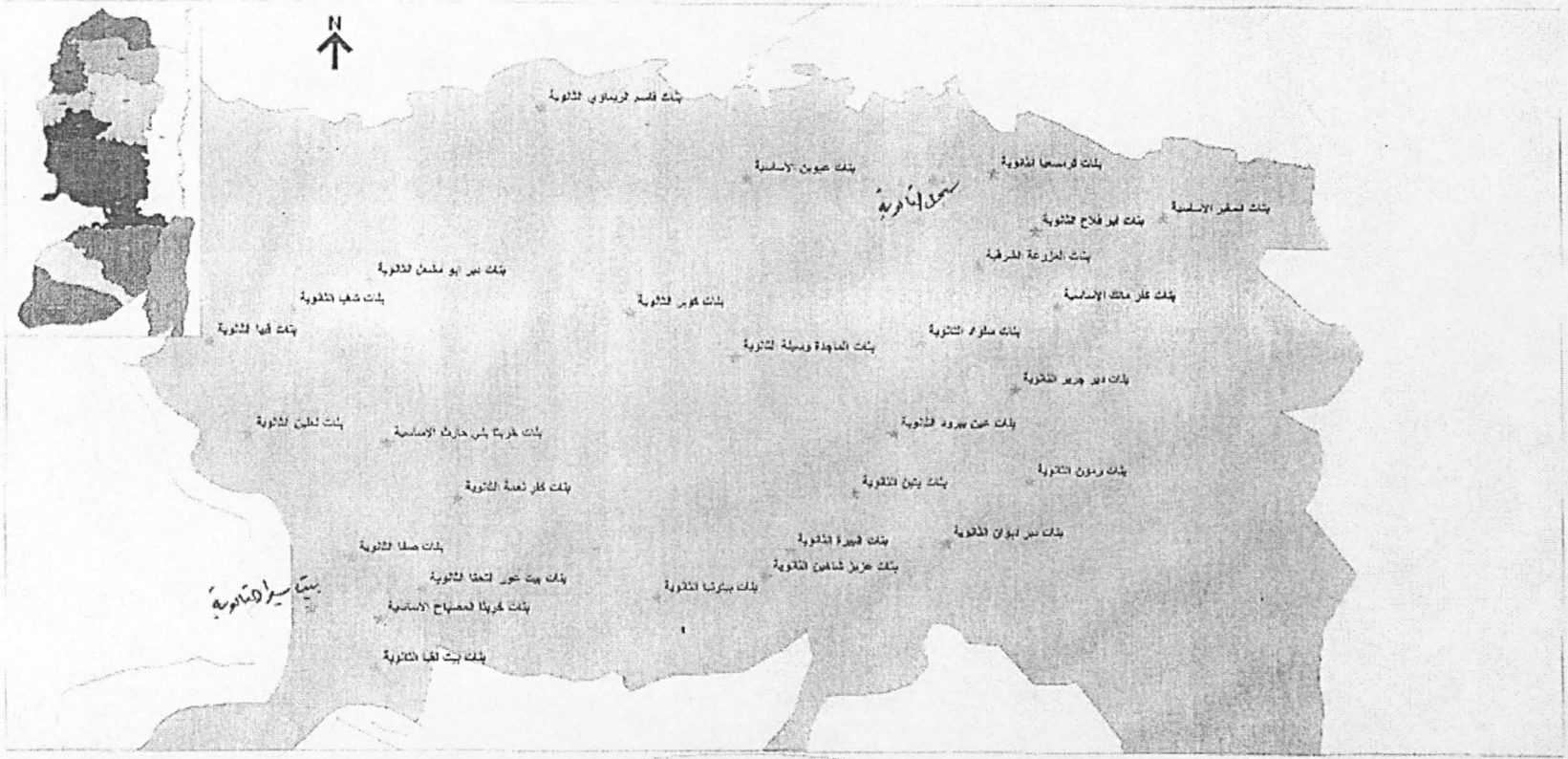
1. Aziz Shahin High School
2. Bitunia Female High School
3. Banat Qasem Al-Rimawi High School
4. Al-Israa' High School for Single Females
5. Ain Yabroud Female High School
6. Al-Majedah Waseleh Female High School
7. Betin Female High School
8. Ni'lin Female High School
9. Bait liqia Female High School
10. Bait Aur Altahta High School
11. Banat Hamideh Al-Barghouthi Female
12. Silwad Female High School
13. Kufr Nimeh High School
14. Turmus Aya Female High School
15. Dair Dibwan Female High School
16. Ramallah Female High School
17. Al-Bireh Female High School

B. The names of the four schools randomly selected for the study

- Al-Majedeh Waseeleh High School (BirZeit).
- Betunia Female High School.
- Silwad High School (Silwad).
- Al-Bireh Al-Thanawieh High School.

وزارة التربية والتعليم إلعالي

مدارس الاناث الثانوية في رام الله والبيرة



دائرة التخطيط التربوي

Appendix G

Table of Analysis for Categories III and IV

A. Category III: The Adolescents responses toward their psychological/emotional health beliefs and attitudes

Items	More so than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
1. Been able to enjoy normal day-to-day activities	162	13	35	68	10	15	10	3.9
2. Been feeling reasonably happy, all things around you considered	112	20	53	46.4	26	21.5	26	12.1
3. Been able to face up to your difficulties	58	23.86	114	46.91	41	16.87	30	12.34
4. Been capable of making decisions about things	60	24.4	113	47.6	42	17	26	11
5. Been understanding yourself and accepting your behaviors	92	37.65	108	45.70	28	11.75	12	4.9
6. Been accepting criticism and advice	99	41	96	39.50	32	13.1	15	6.3
7. Been aware of your stress	43	17.55	115	47.45	58	24.2	26	10.80
8. Been loosing confidence in yourself	74	10.5	58	29.9	89	23.2	89	36.3
9. Been thinking of yourself as a worthless person	54	13.6	59	22	97	24.3	97	40
10. Felt you could not overcome your difficulties	76	16.2	73	31.3	55	30.1	55	22.3
11. Been feeling unhappy and depressed.	79	22.2	49	32.8	61	19.8	61	25.1
12. Been feeling embarrassed for any reason	86	27.5	48	35.8	47	19.6	47	19.5
13. Been concerned with other's thinking of you more than what you think of yourself	47	19.45	69	29.2	54	22.85	67	28.59
14. Been depending on others to solve your problem	33	13.75	71	29.25	60	24.85	77	32.15
15. Been aware of your strength and weaknesses	83	35	92	38.5	34	14.8	28	11.7
16. Been liking achievements	148	61.2	63	26.70	12	4.9	12	7.2
17. Been liking to be a member in youth clubs and communities	112	45.95	57	23.4	32	13	42	17.65
18. Been capable of doing useful things	111	45	100	41.75	17	7.15	18	6.1

B. Category IV:: Adolescent's responses toward their social health beliefs and attitudes

Items	More so than usual		Same as usual		Less than Usual		Much Less than Usual	
	No.	%	No.	%	No.	%	No.	%
1. Been reading books and other sources about health issues	49	19.9	116	46.6	54	22.5	27	11
2. Felt that school subjects answers your question about life matters	38	15.5	67	27.8	92	37.25	48	19.45
3. Been liking the school environment and felt it's encouraging to build friendship with others	103	42.4	88	36.5	23	9.8	27	11.3
4. Preferred teachers from the other sex	49	20.0	65	26.5	48	19.3	81	33.7
5. Felt that your family supports you and is concerned with your needs and feelings	29	12.1	44	17.9	42	17.1	125	52.5
6. Preferred to deal with your teacher for personal matters	89	37.05	93	38.5	23	9.1	38	15.3
7. Felt that you parents understand you and respect you	101	41.6	82	33.8	29	11.9	32	12.6
8. Been opposed and criticized by your family	51	20.5	77	31.3	50	20.7	67	27.4
9. Felt embarrassed to talk with your parents about personal matters	79	32.75	93	37.9	40	16.3	32	12.5
10. Felt that your opinions and ideas are accepted by your family	58	23.95	123	51.5	39	16	21	8.5
11. Felt that you like to deal with your older sister more than mother	81	34.4	80	34.6	32	13.6	41	17.5
12. Been feeling embarrassed to talk about sex with any family members	97	39.95	58	24	45	18.8	41	17.2
13. Preferred your friends more than family	76	31	81	37.2	32	13.4	51	21.4
14. Been liking to have a friend from the opposite sex	46	18.85	74	30.75	31	13.3	88	37.1
15. Been feeling embarrassed to talk or meet with the friends of the other sex	54	22.5	87	36.9	36	15.3	50	25.3
16. Accepting the societal norms and values in relation to your relationship with men	44	18.05	79	32.75	52	21.6	66	27.6
17. Believed in the emotional relationship between the man and woman	59	24.5	71	30.05	40	16.7	68	28.7
18. Preferred marriage to school	33	13.85	25	10.6	34	14.5	144	61.05
19. Felt a need to have sex education	113	47.1	65	27.3	31	12.8	31	12.8
20. Preferred to be in a mixed school	64	26.20	51	22.7	46	19.6	76	31.5

Appendix H

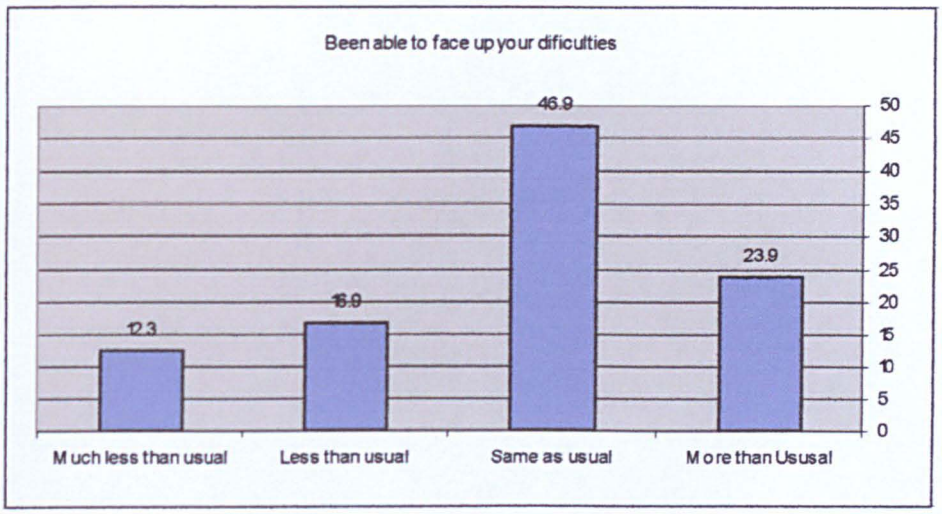
The educational sessions outline conducted in the two experimental schools (Betunia and Al-Bireh)

Day and time	Objectives	Content	Teaching/learning Methods
Day 1 Monday (Betunia) Thursday (Al-Bireh)	1.To raise adolescent's health knowledge through information and education about adolescence, the normal biological growth with emphasis on the reproductive system changes, and the associated psychological and social development	Adolescence; definition and changes included: -The physiological differences between both genders -The psychosocial changes associated with physical changes -The reproductive system and process of menstrual cycle -Importance hygiene and care during menstrual period	-Discussion included: Brain storming techniques and group exercise -Teaching aids included: over head transparencies, posters and distribution of leaflets
Day 2 Monday (Betunia) Thursday (Al-Bireh)	2. To promote the adolescent's psychological/emotional well-being through giving information about the self-concept and the factors affecting the self-image, and confidence level when dealing with their internal and external environment	Parameters for psychological well-being including: - Definition of self-concept and its relationships to body image - Issues of stress, and kinds of stressors	-Discussion guided by questioning and participation by: Individual and group exercises with the use of flip charts
Day 3 Monday (Betunia) Thursday (Al-Bireh)	3. To promote the female adolescent's social relationships by providing information about effective communications within their environment at family, school and society levels.	Definition of human relationships within: -internal and external environment and how it affects the individual including family, friendship -Emotional relationship; what it means and how it affects the individual. -The attributes of a successful relationships	Discussion of the student's subjective responses which were obtained at the pre-intervention that was clarified by the over head projector -Group work and student participations
Day 4 Monday (Betunia) Thursday (Al-Bireh)	4. To raise adolescent's awareness about the concept of marriage and the factors affecting it and to distinguish between the biological and social roles of the man and women (gender sensitization).	-Definition of the marriage concept; -Indicators for successful marriage, -Issue of early marriage and its risk consequences on physical, emotional and social well-being of the young girls. - Gender issues; the biological (sexual) and social roles of the man and women within the Arab/Palestinian context	Discussion guided by questioning and participation by: Group exercise and Teaching aids included: transparencies, posters and distribution of leaflets

Note: the sessions were planned to be given on Monday for Betunia (P+I group) and on Thursday for Al-Bireh (I group), at the same time 11.30-1pm replacing their last two classes as been arranged with the school directors.

Appendix I

Analysis of item in categories III & IV at the pre-intervention stage in figures


Been able to face up your dificulties
46.9
23.9
16.9
12.3
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30
25
20
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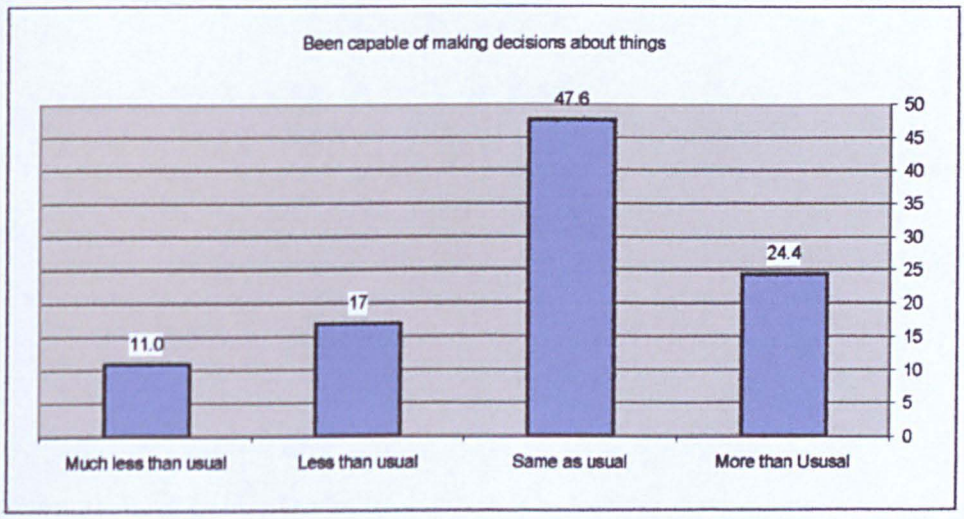
0
M uch less than usual
Less than usual
Same as usual
M ore than Ususal


Been capable of making decisions about things
47.6
24.4
17
11.0
50
45
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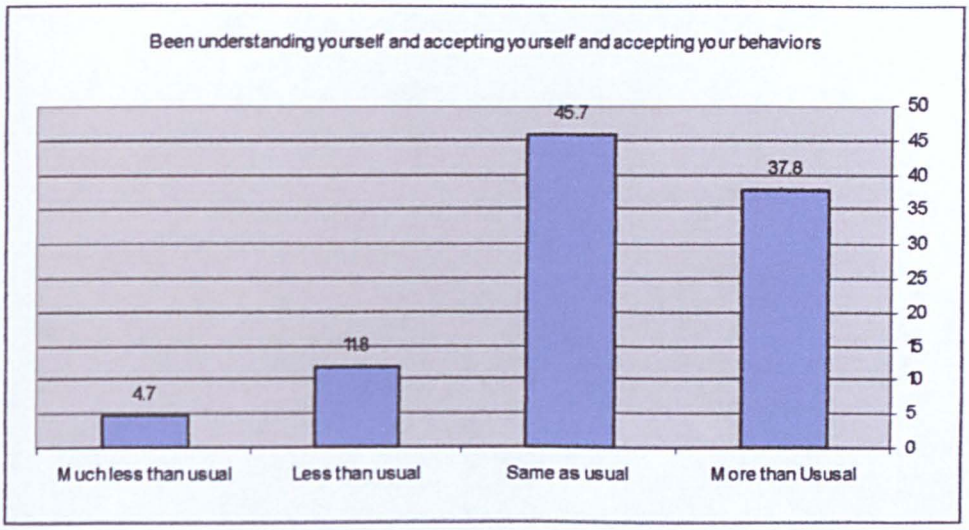
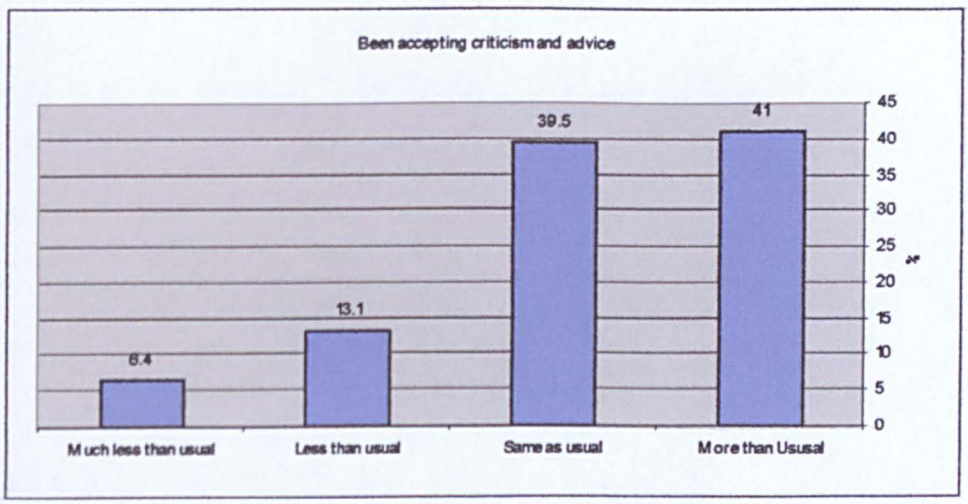
Much less than usual
Less than usual
Same as usual
More than Ususal


Been understanding yourself and accepting yourself and accepting your behaviors
4.7
11.8
45.7
37.8
0
5
10
15
20
25
30
35
40
45
50
Much less than usual
Less than usual
Same as usual
More than Ususal


Been accepting criticism and advice
6.4
13.1
39.5
41
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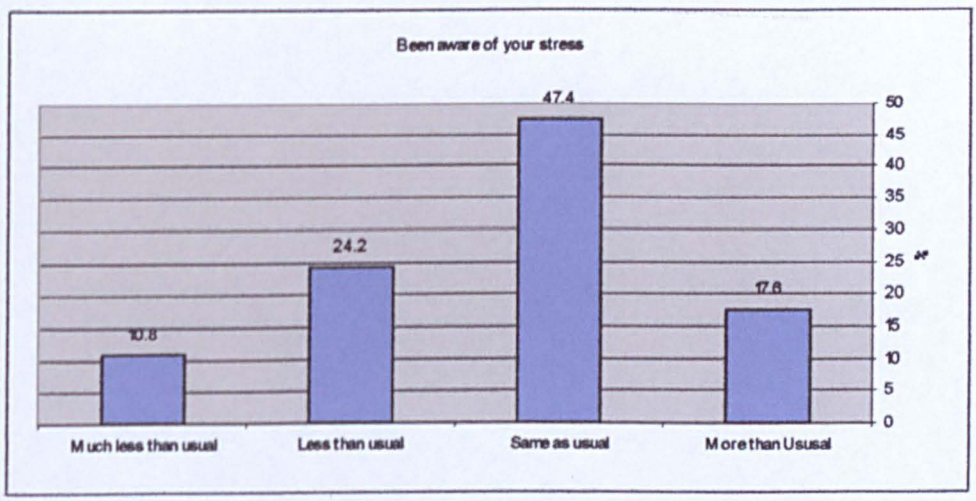
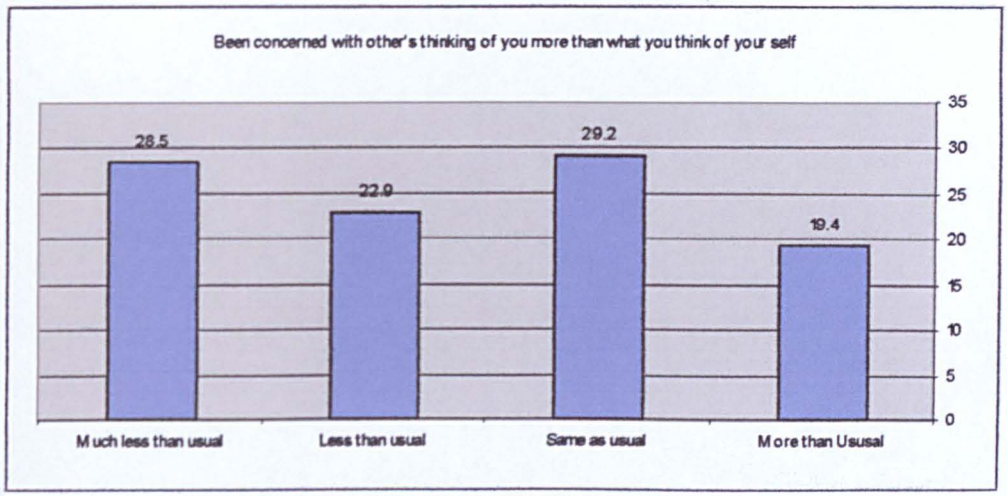
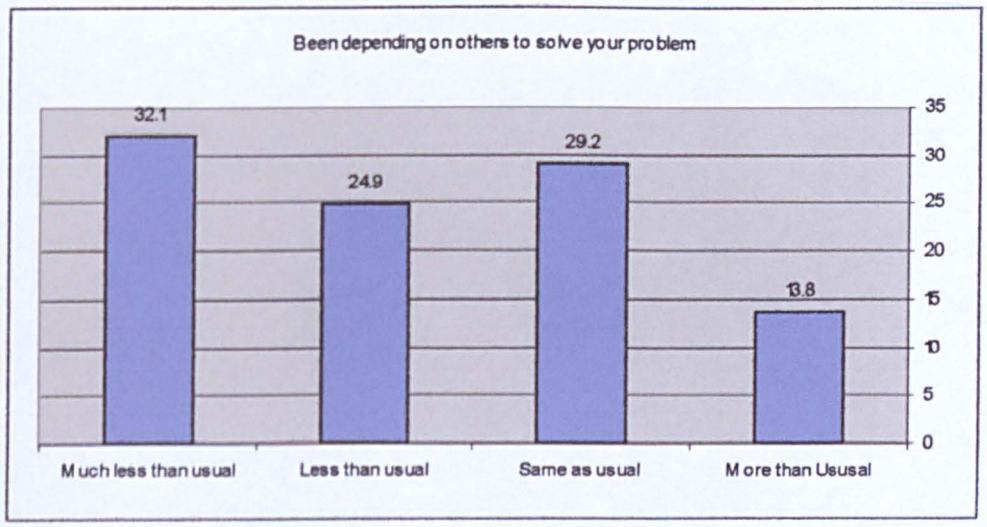
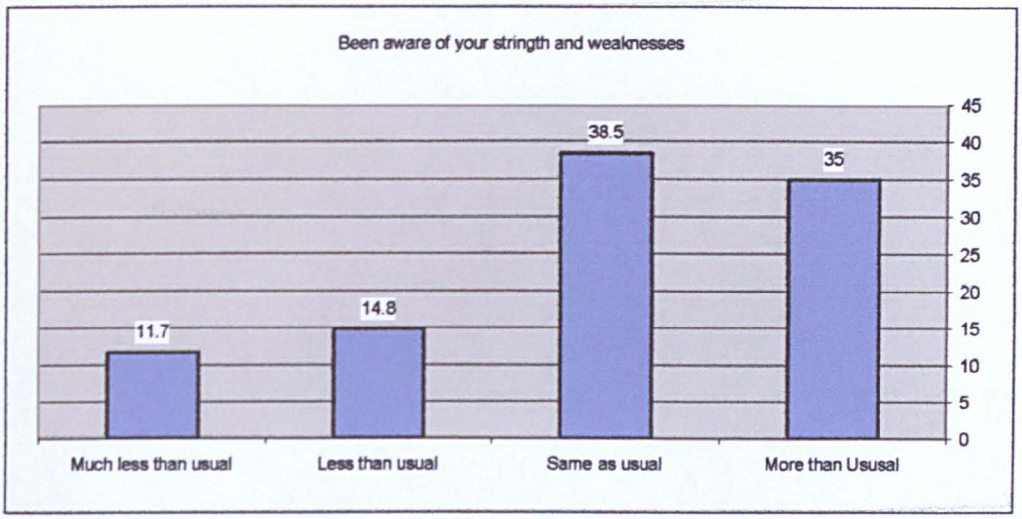
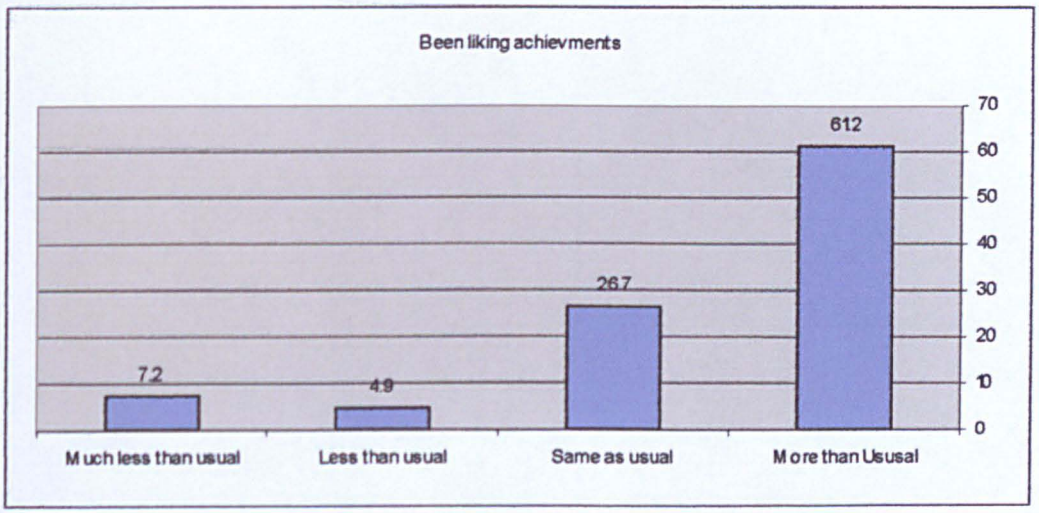
5
10
15
20
25
30
35
40
45
Much less than usual
Less than usual
Same as usual
More than Ususal

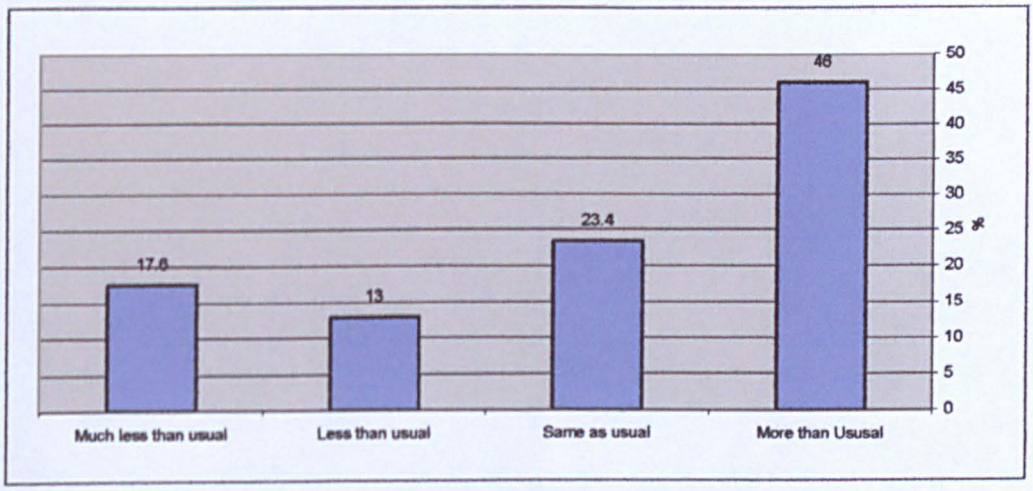

Been aware of your stress
10.8
24.2
47.4
17.6
0
5
10
15
20
25
30
35
40
45
50
Much less than usual
Less than usual
Same as usual
More than Ususal


Been concerned with other's thinking of you more than what you think of your self
28.5
22.9
29.2
19.4
35
30
25
20
15
10
5
0
M uch less than usual
Less than usual
Same as usual
M ore than Ususal


Been depending on others to solve your problem
32.1
24.9
29.2
13.8
35
30
25
20
15
10
5
0
M uch less than usual
Less than usual
Same as usual
M ore than Ususal


Been aware of your stringth and weaknesses
45
40
35
30
25
20
15
10
5
0
38.5
35
14.8
11.7
Much less than usual
Less than usual
Same as usual
More than Ususal


Been liking achievments
70
60
50
40
30
20
10
0
61.2
26.7
7.2
4.9
Much less than usual
Less than usual
Same as usual
More than Ususal


50
45
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Much less than usual
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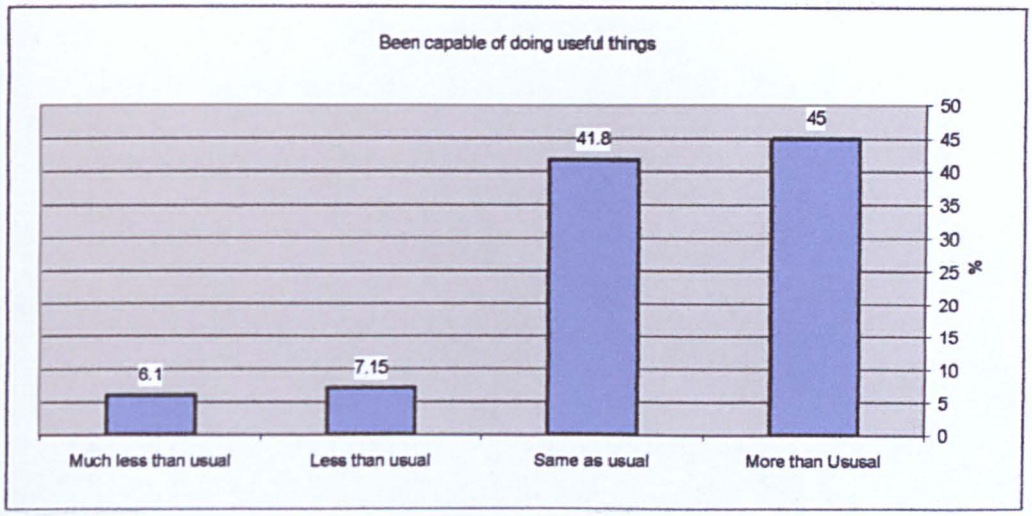
Same as usual
More than Ususal


Been capable of doing useful things
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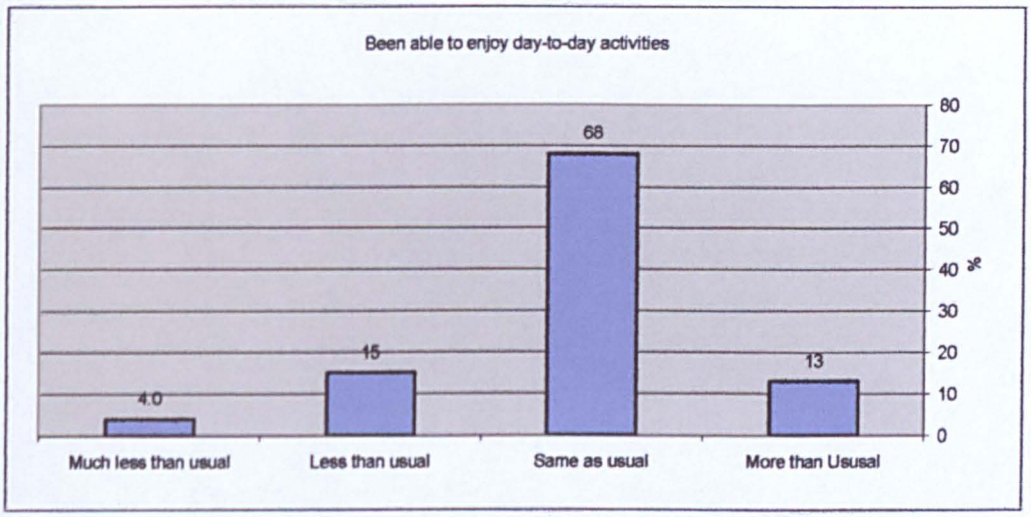
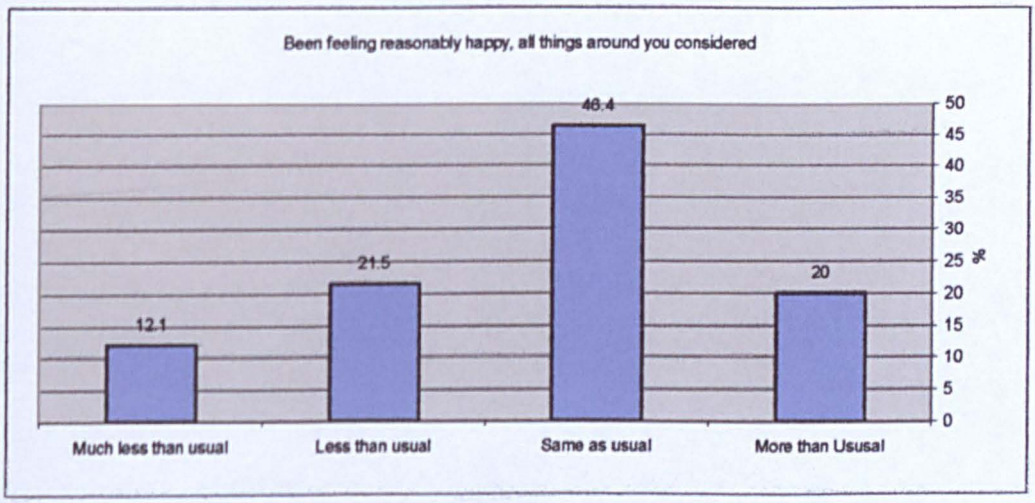
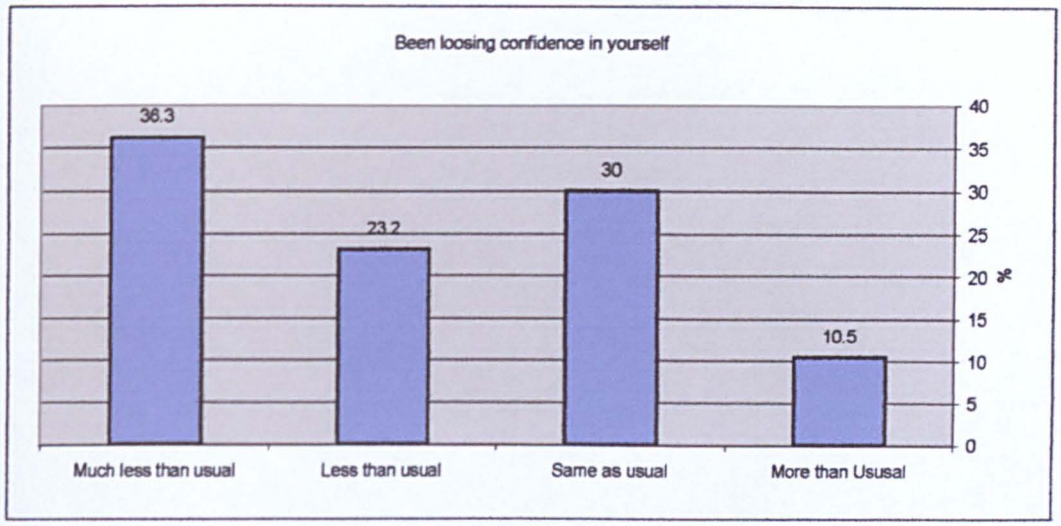
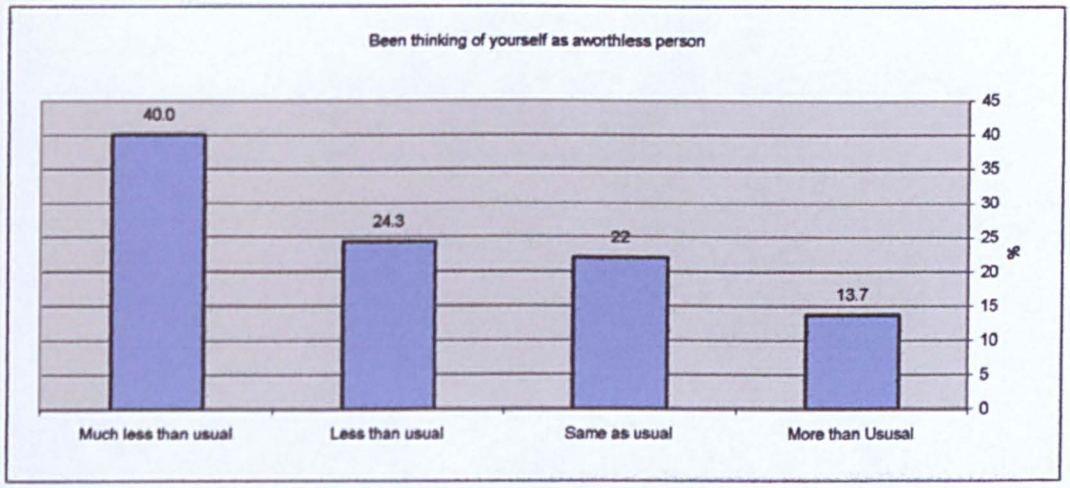
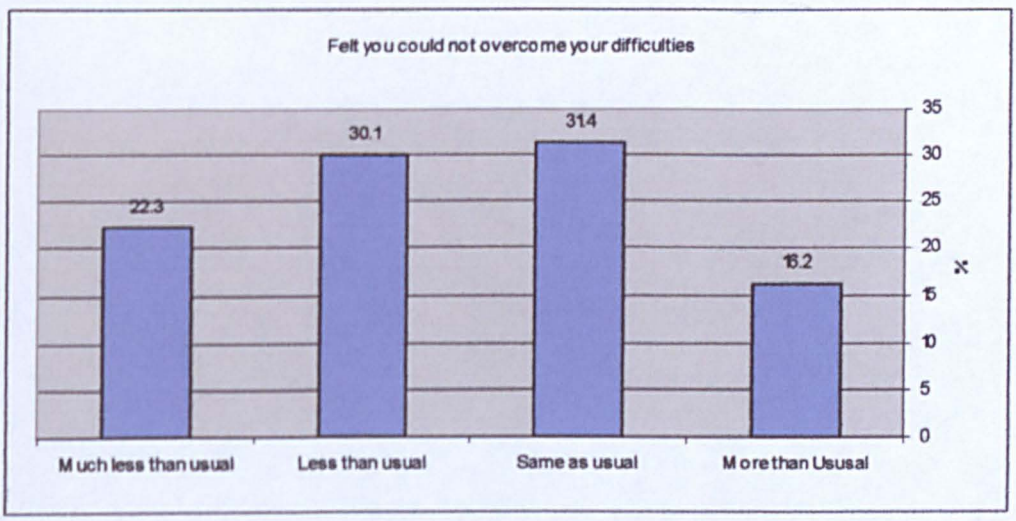
Much less than usual
Less than usual
Same as usual
More than Ususal

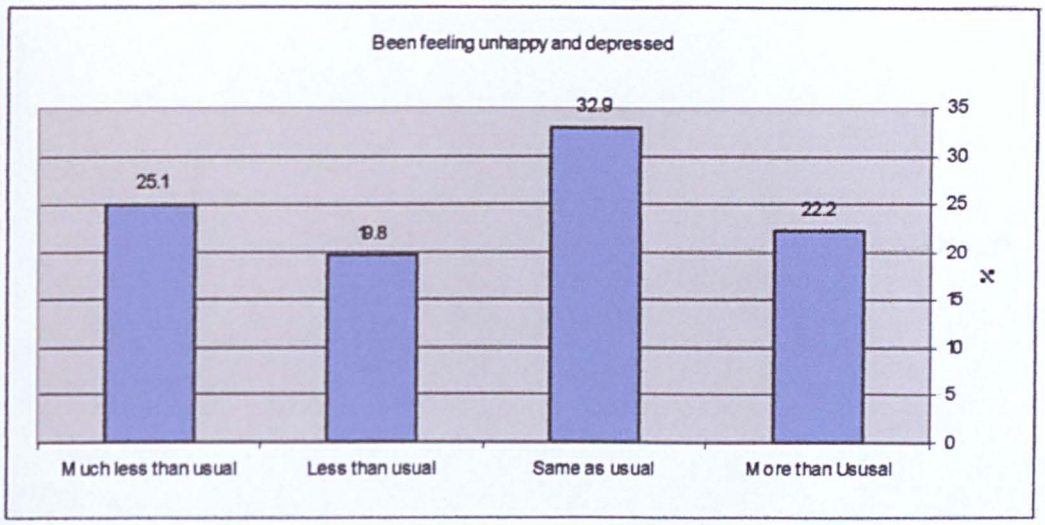

Been able to enjoy day-to-day activities
4.0
15
68
13
80
70
60
50
40
30
20
10
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

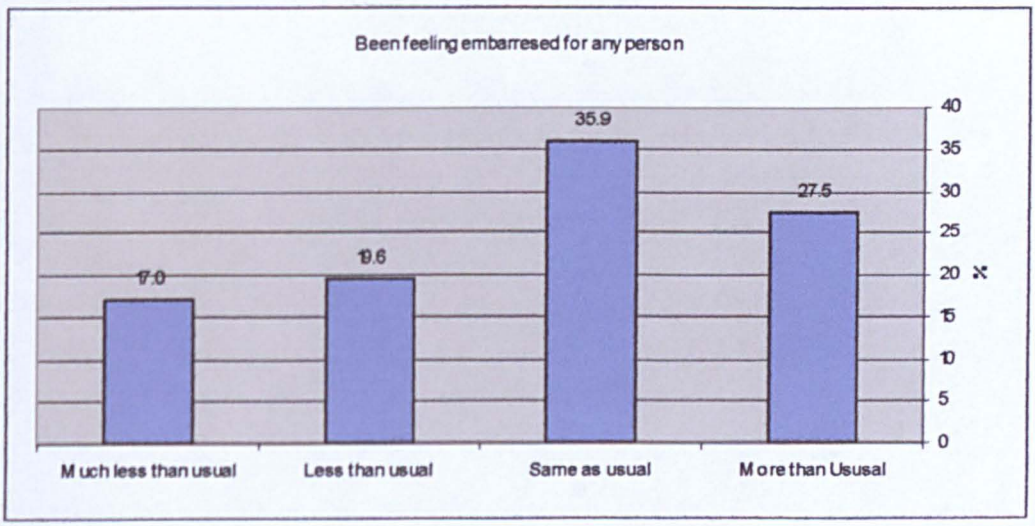

Been feeling reasonably happy, all things around you considered
12.1
21.5
46.4
20
50
45
40
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

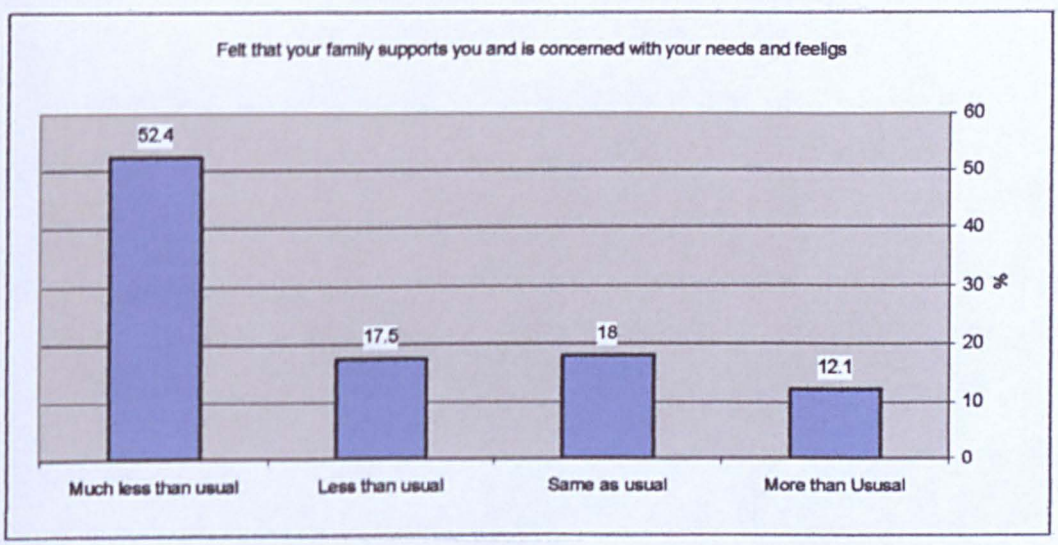

Been loosing confidence in yourself
36.3
23.2
30
10.5
40
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal


Been thinking of yourself as aworthless person
40.0
24.3
22
13.7
45
40
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

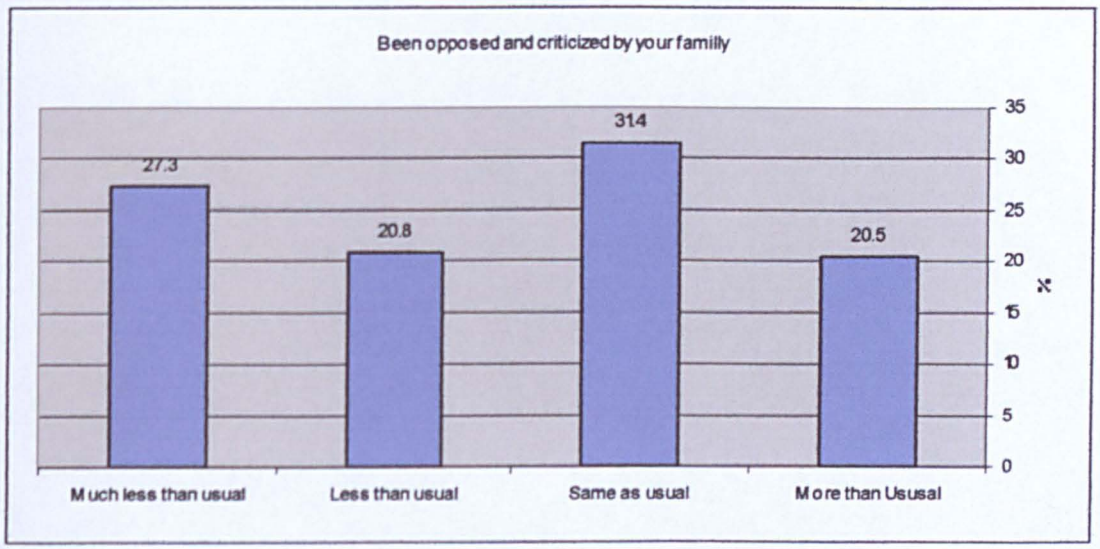

Felt you could not overcome your difficulties
22.3
30.1
31.4
16.2
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

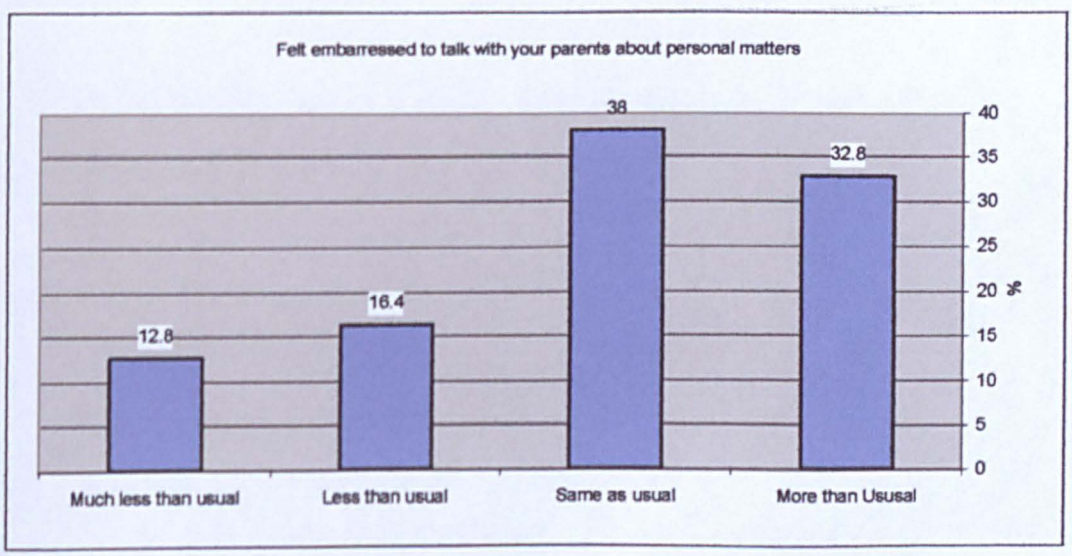

Been feeling unhappy and depressed
25.1
19.8
32.9
22.2
35
30
25
20
15
10
5
0
%
M uch less than usual
Less than usual
Same as usual
M ore than Ususal

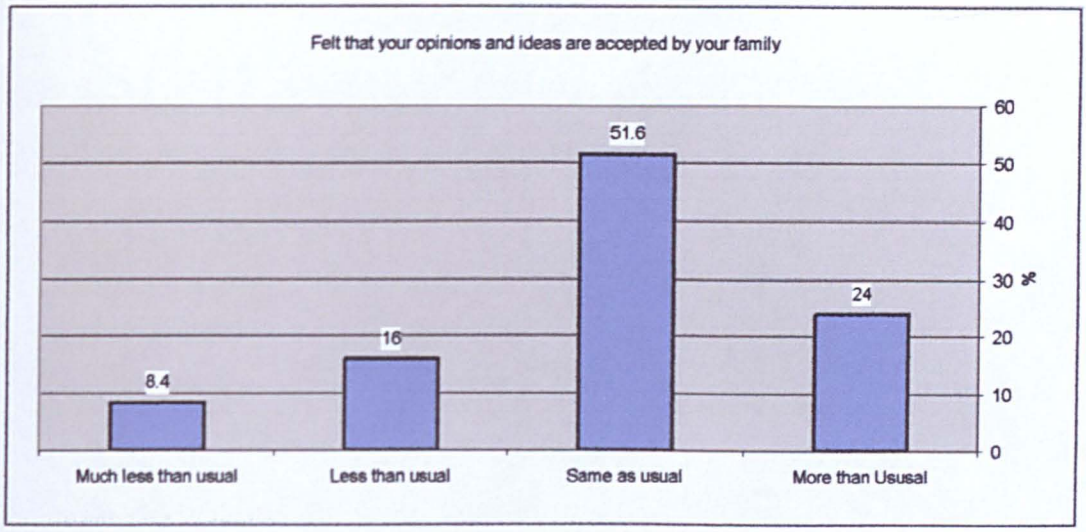

Been feeling embarresed for any person
17.0
19.6
35.9
27.5
40
35
30
25
20
15
10
5
0
%
M uch less than usual
Less than usual
Same as usual
M ore than Ususal

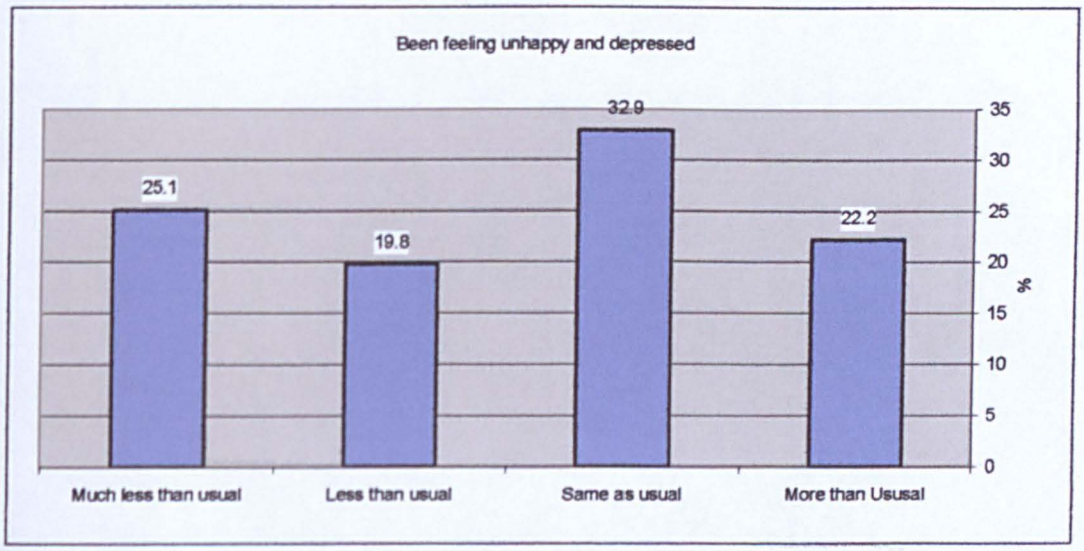

Felt that your family supports you and is concerned with your needs and feeligs
52.4
17.5
18
12.1
60
50
40
30
20
10
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

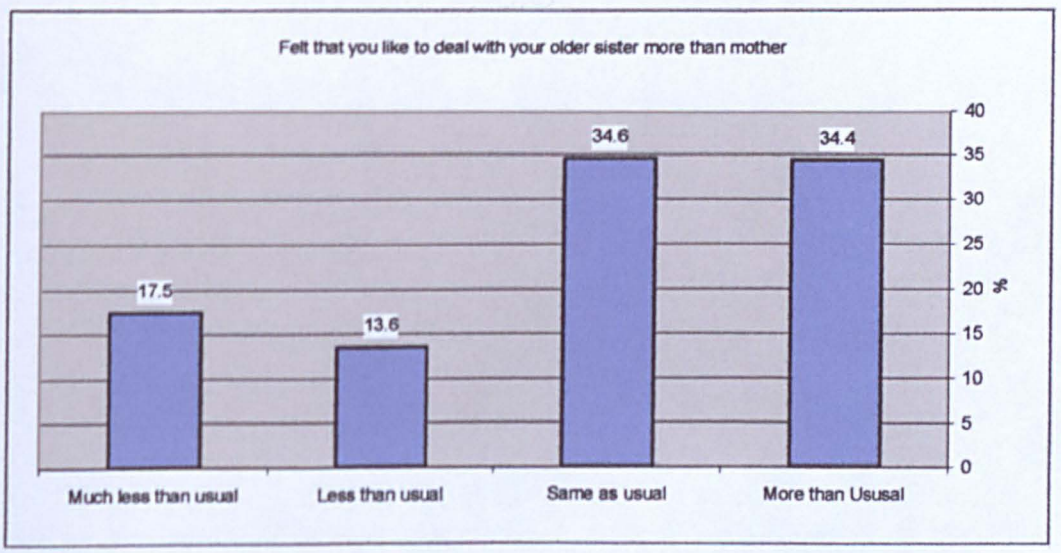

Felt that your parents understand you and respect you
41.6
33.9
12.5
12
45
40
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

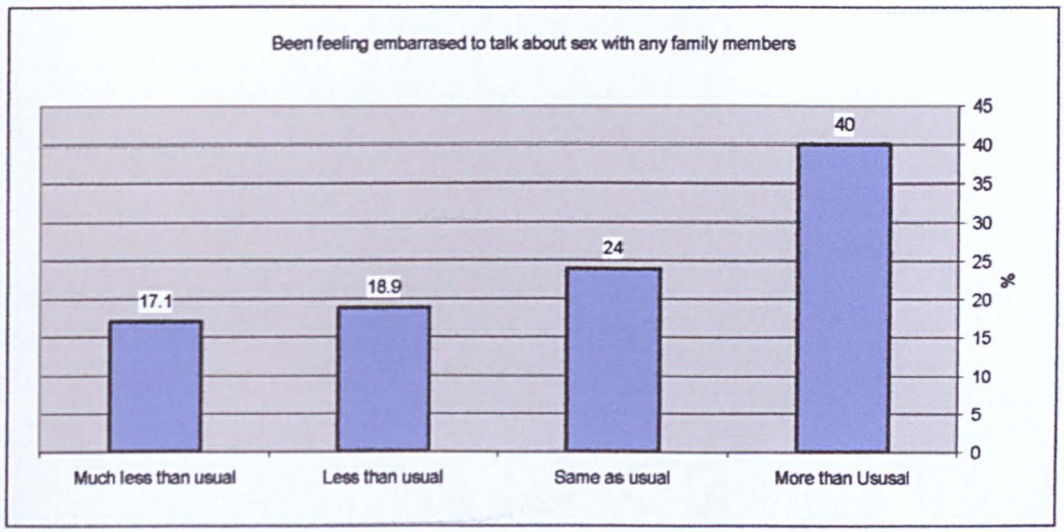

Been opposed and criticized by your familly
31.4
27.3
20.8
20.5
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal

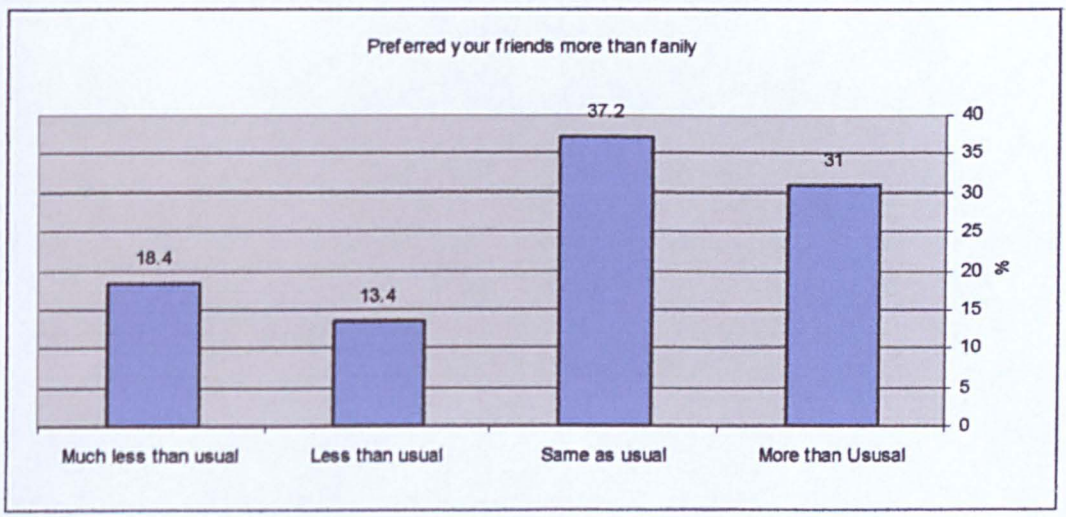

Felt embarressed to talk with your parents about personal matters
38
32.8
16.4
12.8
40
35
30
25
20
15
10
5
0
%
Much less than usual
Less than usual
Same as usual
More than Ususal


Felt that your opinions and ideas are accepted by your family
60
50
40
30
20
10
0
%
8.4
16
51.6
24
Much less than usual
Less than usual
Same as usual
More than Ususal


Been feeling unhappy and depressed
35
30
25
20
15
10
5
0
%
25.1
19.8
32.9
22.2
Much less than usual
Less than usual
Same as usual
More than Ususal


Felt that you like to deal with your older sister more than mother
40
35
30
25
20
15
10
5
0
%
17.5
13.6
34.6
34.4
Much less than usual
Less than usual
Same as usual
More than Ususal


Been feeling embarrased to talk about sex with any family members
45
40
35
30
25
20
15
10
5
0
%
17.1
18.9
24
40
Much less than usual
Less than usual
Same as usual
More than Ususal


Preferred your friends more than family
40
35
30
25
20
15
10
5
0
%
18.4
13.4
37.2
31
Much less than usual
Less than usual
Same as usual
More than Ususal

Appendix J

The T. Test Tables of Analysis

Table 6.4.1: Comparison between Betunia at Pre-test with BirZeit at Pre-test

Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Pre test	Betunia	31	45.10	6.60	1.19
	BirZeit	29	43.21	6.34	1.18
Cognitive items - Pre test	Betunia	31	32.13	4.73	.85
	BirZeit	30	30.97	4.30	.79
Emotional items - Pre test	Betunia	31	18.94	4.66	.84
	BirZeit	30	17.40	4.93	.90
Social items - Pre test	Betunia	29	48.72	5.37	1.00
	BirZeit	29	48.10	7.64	1.42
Family items - Pre test	Betunia	31	19.90	3.24	.58
	BirZeit	28	20.61	3.48	.66
School items - Pre test	Betunia	31	16.94	2.94	.53
	BirZeit	30	16.10	3.27	.60
Society items - Pre test	Betunia	31	12.06	2.59	.47
	BirZeit	30	11.20	3.35	.61
Perception items - Pre test	Betunia	31	19.42	1.82	.33
	BirZeit	30	19.50	1.66	.30

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Pre test	Equal variances assumed	0.001	0.981	1.129	58	0.263	1.89	1.67	-1.46	5.24
	Equal variances not assumed			1.131	57.954	0.263	1.89	1.67	-1.46	5.24
Cognitive items - Pre test	Equal variances assumed	0.453	0.504	1.003	59	0.32	1.16	1.16	-1.16	3.48
	Equal variances not assumed			1.004	58.779	0.319	1.16	1.16	-1.15	3.48
Emotional items - Pre test	Equal variances assumed	0	0.984	1.25	59	0.216	1.54	1.23	-0.92	3.99
	Equal variances not assumed			1.249	58.531	0.217	1.54	1.23	-0.93	4
Social items - Pre test	Equal variances assumed	2.722	0.105	0.358	56	0.722	0.62	1.73	-2.85	4.09
	Equal variances not assumed			0.358	50.258	0.722	0.62	1.73	-2.86	4.1
Family items - Pre test	Equal variances assumed	0.023	0.88	-0.805	57	0.424	-0.7	0.87	-2.46	1.05
	Equal variances not assumed			-0.802	55.316	0.426	-0.7	0.88	-2.46	1.05
School items - Pre test	Equal variances assumed	0.113	0.738	1.049	59	0.298	0.84	0.8	-0.76	2.43
	Equal variances not assumed			1.047	57.881	0.299	0.84	0.8	-0.76	2.43
Society items - Pre test	Equal variances assumed	3.084	0.084	1.13	59	0.263	0.86	0.77	-0.67	2.4
	Equal variances not assumed			1.125	54.663	0.265	0.86	0.77	-0.68	2.4
Perception items - Pre test	Equal variances assumed	0.463	0.499	-0.181	59	0.857	-8.06E-02	0.45	-0.97	0.81
	Equal variances not assumed			-0.181	58.774	0.857	-8.06E-02	0.45	-0.97	0.81

Table 6.4.2: Comparison between Betunia at Pre-test with Silwad at Post-test

Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Pre test	Betunia	31	45.10	6.60	1.19
	Silwad	0	.	.	.
Psychological items - Posttest	Betunia	31	57.06	4.33	78.
	Silwad	27	47.33	3.31	64.
Cognitive items - Pre test	Betunia	31	32.13	4.73	85.
	Silwad	0	.	.	.
Cognitive items - Post test	Betunia	31	35.81	2.64	47.
	Silwad	27	30.11	2.86	55.
Emotional items - Pre test	Betunia	31	18.94	4.66	84.
	Silwad	0	.	.	.
Emotional items - Post test	Betunia	31	21.26	3.11	56.
	Silwad	27	17.22	2.68	52.
Social items - Pre test	Betunia	29	48.72	5.37	1.00
	Silwad	0	.	.	.
Social items - Post test	Betunia	31	50.74	3.98	72.
	Silwad	27	47.52	4.77	92.
Family items - Pre test	Betunia	31	19.90	3.24	58.
	Silwad	0	.	.	.
Family items - Post test	Betunia	31	21.00	2.62	47.
	Silwad	27	19.44	2.59	50.
School items - Pre test	Betunia	31	16.94	2.94	53.
	Silwad	0	.	.	.
School items - Post test	Betunia	31	17.52	2.68	48.
	Silwad	27	16.89	2.99	58.
Society items - Pre test	Betunia	31	12.06	2.59	47.
	Silwad	0	.	.	.
Society items - Post test	Betunia	31	12.23	1.59	28.
	Silwad	27	11.19	2.00	39.
Perception items - Pre test	Betunia	31	19.42	1.82	33.
	Silwad	0	.	.	.
Perception items - Post Test	Betunia	31	21.35	2.44	44.
	Silwad	27	18.93	3.00	58.

t cannot be computed because at least one of the groups is empty.

		Levene's Test for Equality of Variances		-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Posttest	Equal variances assumed	1.435	.236	9.512	56	.000	9.73	1.02	7.68	11.78
	Equal variances not assumed			9.689	55.114	.000	9.73	1.00	7.72	11.74
Cognitive items - Post test	Equal variances assumed	.000	.984	7.886	56	.000	5.70	.72	4.25	7.14
	Equal variances not assumed			7.842	53.401	.000	5.70	.73	4.24	7.15
Emotional items - Post test	Equal variances assumed	.467	.497	5.255	56	.000	4.04	.77	2.50	5.57
	Equal variances not assumed			5.310	55.996	.000	4.04	.76	2.51	5.56
Social items - Post test	Equal variances assumed	.195	.661	2.803	56	.007	3.22	1.15	.92	5.53
	Equal variances not assumed			2.768	50.872	.008	3.22	1.16	.89	5.56
Family items - Post test	Equal variances assumed	.148	.702	2.267	56	.027	1.56	.69	.18	2.93
	Equal variances not assumed			2.268	55.072	.027	1.56	.69	.18	2.93
School items - Post test	Equal variances assumed	.657	.421	.842	56	.403	.63	.74	-.86	2.12
	Equal variances not assumed			.836	52.741	.407	.63	.75	-.88	2.13
Society items - Post test	Equal variances assumed	2.147	.148	2.208	56	.031	1.04	.47	9.65E-02	1.98
	Equal variances not assumed			2.173	49.411	.035	1.04	.48	7.84E-02	2.00
Perception items - Post Test	Equal variances assumed	1.573	.215	3.398	56	.001	2.43	.71	1.00	3.86
	Equal variances not assumed			3.350	50.208	.002	2.43	.73	.97	3.89

Table 6.4.3: Comparison between BirZiet at Pre-test with Silwad at Post-test

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Pre test	BirZeit	29	43.21	6.34	1.18
	Silwad	0	.	.	.
Psychological items - Post test	BirZeit	30	53.43	5.65	1.03
	Silwad	27	47.33	3.31	.64
Cognitive items - Pre test	BirZeit	30	30.97	4.30	.79
	Silwad	0	.	.	.
Cognitive items - Post test	BirZeit	30	33.20	3.87	.71
	Silwad	27	30.11	2.86	.55
Emotional items - Pre test	BirZeit	30	17.40	4.93	.90
	Silwad	0	.	.	.
Emotional items - Post test	BirZeit	30	20.23	3.07	.56
	Silwad	27	17.22	2.68	.52
Social items - Pre test	BirZeit	29	48.10	7.64	1.42
	Silwad	0	.	.	.
Social items - Post test	BirZeit	30	49.50	3.88	.71
	Silwad	27	47.52	4.77	.92
Family items - Pre test	BirZeit	28	20.61	3.48	.66
	Silwad	0	.	.	.
Family items - Post test	BirZeit	30	21.43	2.76	.50
	Silwad	27	19.44	2.59	.50
School items - Pre test	BirZeit	30	16.10	3.27	.60
	Silwad	0	.	.	.
School items - Post test	BirZeit	30	16.57	2.24	.41
	Silwad	27	16.89	2.99	.58
Society items - Pre test	BirZeit	30	11.20	3.35	.61
	Silwad	0	.	.	.
Society items - Post test	BirZeit	30	11.50	2.10	.38
	Silwad	27	11.19	2.00	.39
Perception items - Pre test	BirZeit	30	19.50	1.66	.30
	Silwad	0	.	.	.
Perception items - Post test	BirZeit	30	21.23	2.45	.45
	Silwad	27	18.93	3.00	.58

t cannot be computed because at least one of the groups is empty.

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	5.228	0.026	4.904	55	0	6.1	1.24	3.61	8.59
	Equal variances not assumed			5.034	47.579	0	6.1	1.21	3.66	8.54
Cognitive items - Post test	Equal variances assumed	2.564	0.115	3.394	55	0.001	3.09	0.91	1.26	4.91
	Equal variances not assumed			3.448	53.065	0.001	3.09	0.9	1.29	4.89
Emotional items - Post test	Equal variances assumed	0.386	0.537	3.925	55	0	3.01	0.77	1.47	4.55
	Equal variances not assumed			3.953	54.955	0	3.01	0.76	1.48	4.54
Social items - Post test	Equal variances assumed	0.9	0.347	1.726	55	0.09	1.98	1.15	-0.32	4.28
	Equal variances not assumed			1.707	50.221	0.094	1.98	1.16	-0.35	4.31
Family items - Post test	Equal variances assumed	0.026	0.871	2.794	55	0.007	1.99	0.71	0.56	3.42
	Equal variances not assumed			2.804	54.897	0.007	1.99	0.71	0.57	3.41
School items - Post test	Equal variances assumed	2.352	0.131	-0.463	55	0.645	-0.32	0.7	-1.72	1.07
	Equal variances not assumed			-0.456	47.907	0.65	-0.32	0.71	-1.74	1.1
Society items - Post test	Equal variances assumed	0.081	0.777	0.578	55	0.565	0.31	0.54	-0.78	1.41
	Equal variances not assumed			0.58	54.8	0.564	3.10E-01	0.54	-0.77	1.4
Perception items - Post Test	Equal variances assumed	1.806	0.185	3.197	55	0.002	2.31E+00	0.72	0.86	3.75
	Equal variances not assumed			3.162	50.279	0.003	2.31	0.73	0.84	3.77

Table 6.5.1: Comparison of the Subjects in Betunia School at Pretest and at Posttest

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Psychological items - Pre test	45.1	31	6.6	1.19
	Psychological items - Post test	57.06	31	4.33	0.78
Pair 2	Cognitive items - Pre test	32.13	31	4.73	0.85
	Cognitive items - Post test	35.81	31	2.64	0.47
Pair 3	Emotional items - Pre test	18.94	31	4.66	0.84
	Emotional items - Post test	21.26	31	3.11	0.56
Pair 4	Social items - Post test	50.62	29	3.82	0.71
	Social items - Pre test	48.72	29	5.37	1
Pair 5	Family items - Pre test	19.9	31	3.24	0.58
	Family items - Post test	21	31	2.62	0.47
Pair 6	School items - Post test	17.32	31	2.61	0.47
	School items - Pre test	16.94	31	2.94	0.53
Pair 7	Society items - Pre test	12.06	31	2.59	0.47
	Society items - Post test	12.23	31	1.59	0.28
Pair 8	Perception items - Pre test	19.42	31	1.82	0.33
	Perception items - Post Test	21.35	31	2.44	0.44

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Psychological items Pre test & psychological items - Posttest	31	.038	.838
Pair 2	Cognitive items - Pre test & Cognitive items - Post test	31	-.075	.687
Pair 3	Emotional items - Pre test & Emotional items - Post test	31	.105	.575
Pair 4	Social items - Post test & Social items - Pre test	29	.005	.979
Pair 5	Family items - Pre test & Family items - Post test	31	-.008	.967
Pair 6	School items - Post test & School items - Pre test	31	-.127	.495
Pair 7	Society items - Pre test & Society items - Post test	31	.077	.679
Pair 8	Perception items - Pre test & Perception items - Post Test	31	-.035	.854

Paired Samples Test

		Paired Differences		95% Confidence Interval of the Difference			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Psychological items - Pre test - Psychological items - Post test	-11.97	7.75	1.39	-14.81	-9.12	-8.595	30	0
Pair 2	Cognitive items - Pre test - Cognitive items - Post test	-3.68	5.59	1.00	-5.73	-1.63	-3.664	30	0.001
Pair 3	Emotional items - Pre test - Emotional items - Post test	-2.32	5.33	.96	-4.28	-0.37	-2.428	30	0.021
Pair 4	Social items - Post test - Social items - Pre test	1.90	6.58	1.22	-0.6	4.4	1.553	28	0.132
Pair 5	Family items - Pre test - Family items - Post test	-1.10	4.18	.75	-2.63	0.44	-1.46	30	0.155
Pair 6	School items - Post test - School items - Pre test	.39	4.18	.75	-1.14	1.92	0.516	30	0.61
Pair 7	Society items - Pre test - Society items - Post test	-0.16	2.93	0.53	-1.24	0.91	-0.306	30	0.762
Pair 8	Perception items - Pre test - Perception items - Post Test	-1.94	3.1	0.56	-3.07	-0.8	-3.479	30	0.002

Table 6.5.2: Comparison of the Subjects in BirZiet School at Pretest and at Posttest
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Psychological items - Pre test	43.21	29	6.34	1.18
	Psychological items - Posttest	53.24	29	5.65	1.05
Pair 2	Cognitive items - Pre test	30.97	30	4.30	0.79
	Cognitive items - Post test	33.20	30	3.87	0.71
Pair 3	Emotional items - Pre test	17.40	30	4.93	0.9
	Emotional items - Post test	20.23	30	3.07	0.56
Pair 4	Social items - Post test	49.66	29	3.86	0.72
	Social items - Pre test	48.10	29	7.64	1.42
Pair 5	Family items - Pre test	20.61	28	3.48	0.66
	Family items - Post test	21.57	28	2.81	0.53
Pair 6	School items - Post test	16.47	30	2.33	0.43
	School items - Pre test	16.1	30	3.27	0.6
Pair 7	Society items - Pre test	11.2	30	3.35	0.61
	Society items - Post test	11.5	30	2.1	0.38
Pair 8	Perception items - Pre test	19.5	30	1.66	0.3
	Perception items - Post Test	21.23	30	2.45	0.45

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Psychological items - Pre test & Psychological items - Post test	29	.207	.282
Pair 2	Cognitive items - Pre test & Cognitive items - Post test	30	-.084	.657
Pair 3	Emotional items - Pre test & Emotional items - Post test	30	.217	.250
Pair 4	Social items - Post test & Social items - Pre test	29	.240	.210
Pair 5	Family items - Pre test & Family items - Post test	28	.058	.770
Pair 6	School items - Post test & School items - Pre test	30	.098	.608
Pair 7	Society items - Pre test & Society items - Post test	30	.039	.837
Pair 8	Perception items - Pre test & Perception items - Post Test	30	-.064	.737

Paired Samples Test

		Paired Differences		95% Confidence Interval of the Difference			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Psychological items - Pre test - Psychological items - Post test	-10.03	7.57	1.41	-12.91	-7.15	-7.137	28	0
Pair 2	Cognitive items - Pre test - Cognitive items - Post test	-2.23	6.03	1.10	-4.48	1.71E-02	-2.03	29	0.052
Pair 3	Emotional items - Pre test - Emotional items - Post test	-2.83	5.21	.95	-4.78	-0.89	-2.977	29	0.006
Pair 4	Social items - Post test - Social items - Pre test	1.55	7.68	1.43	-1.37	4.47	1.088	28	0.286
Pair 5	Family items - Pre test - Family items - Post test	-.96	4.34	.82	-2.65	0.72	-1.175	27	0.25
Pair 6	School items - Post test - School items - Pre test	.37	3.83	.70	-1.06	1.8	0.525	29	0.604
Pair 7	Society items - Pre test - Society items - Post test	-0.3	3.88	0.71	-1.75	1.15	-0.424	29	0.675
Pair 8	Perception items - Pre test - Perception items - Post Test	-1.73	3.04	0.55	-2.87	-0.6	-3.124	29	0.004

Table 6.5.3: Comparison of the Subjects in Betunia School with Subjects in BirZeit School at Posttest

Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Posttest	Betunia	31	57.06	4.33	0.78
	BirZeit	30	53.43	5.65	1.03
Cognitive items - Post test	Betunia	31	35.81	2.64	0.47
	BirZeit	30	33.20	3.87	0.71
Emotional items - Post test	Betunia	31	21.26	3.11	0.56
	BirZeit	30	20.23	3.07	0.56
Social items - Post test	Betunia	31	50.74	3.98	0.72
	BirZeit	30	49.50	3.88	0.71
Family items - Post test	Betunia	31	21	2.62	0.47
	BirZeit	30	21.43	2.76	0.5
School items - Post test	Betunia	31	17.32	2.61	0.47
	BirZeit	30	16.47	2.33	0.43
Society items - Post test	Betunia	31	12.23	1.59	0.28
	BirZeit	30	11.5	2.1	0.38
Perception items - Post Test	Betunia	31	21.35	2.44	0.44
	BirZeit	30	21.23	2.45	0.45

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	1.600	.211	2.824	59	0.006	3.63	1.29	1.06	6.2
	Equal variances not assumed			2.812	54.35	7.00E-03	3.63	1.29	1.04	6.22
Cognitive items - Post test	Equal variances assumed	3.162	.081	3.081	59	0.003	2.61	0.85	0.91	4.3
	Equal variances not assumed			3.063	50.968	0.004	2.61	0.85	0.9	4.32
Emotional items - Post test	Equal variances assumed	.004	.951	1.295	59	0.2	1.02	0.79	-0.56	2.61
	Equal variances not assumed			1.295	58.974	0.2	1.02	0.79	-0.56	2.61
Social items - Post test	Equal variances assumed	0.481	0.491	1.232	59	0.223	1.24	1.01	-0.77	3.26
	Equal variances not assumed			1.233	58.996	0.222	1.24	1.01	-0.77	3.26
Family items - Post test	Equal variances assumed	0.282	0.597	-0.629	59	0.532	-0.43	0.69	-1.81	0.95
	Equal variances not assumed			-0.628	58.565	0.532	-0.43	0.69	-1.81	0.95
School items - Post test	Equal variances assumed	0.09	0.765	1.349	59	0.183	0.86	0.63	-0.41	2.13
	Equal variances not assumed			1.351	58.618	0.182	0.86	0.63	-0.41	2.12
Society items - Post test	Equal variances assumed	0.942	0.336	1.528	59	0.132	0.73	0.47	-0.22	1.68
	Equal variances not assumed			1.521	53.993	0.134	7.30E-01	0.48	-0.23	1.68
Perception items - Post Test	Equal variances assumed	0.024	0.878	0.194	59	0.847	1.20E-01	0.63	-1.13	1.37
	Equal variances not assumed			0.194	58.932	0.847	0.12	0.63	-1.13	1.37

Table 6.5.4: Comparison of the Subjects in Betunia School with Subjects in Al-Bireh School at Posttest
Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Posttest	Betunia	31	57.06	4.33	0.78
	Al-Bireh	39	54.23	5.30	0.85
Cognitive items - Post test	Betunia	31	35.81	2.64	0.47
	Al-Bireh	40	34.60	2.76	0.44
Emotional items - Post test	Betunia	31	21.26	3.11	0.56
	Al-Bireh	41	19.61	4.09	0.64
Social items - Post test	Betunia	31	50.74	3.98	0.72
	Al-Bireh	37	51.19	4.64	0.76
Family items - Post test	Betunia	31	21	2.62	0.47
	Al-Bireh	39	19.69	2.99	0.48
School items - Post test	Betunia	31	17.32	2.61	0.47
	Al-Bireh	42	17.74	2.77	0.43
Society items - Post test	Betunia	31	12.23	1.59	0.28
	Al-Bireh	40	13.13	2.2	0.35
Perception items - Post Test	Betunia	31	21.35	2.44	0.44
	Al-Bireh	42	20.98	2.8	0.43

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	1.882	.175	2.406	68	0.019	2.83	1.18	0.48	5.18
	Equal variances not assumed			2.463	67.937	1.60E-02	2.83	1.15	0.54	5.13
Cognitive items - Post test	Equal variances assumed	.225	.637	1.861	69	0.067	1.21	0.65	-8.68E-02	2.5
	Equal variances not assumed			1.872	65.989	0.066	1.21	0.64	-8.03E-02	2.49
Emotional items - Post test	Equal variances assumed	2.938	.091	1.870	70	0.066	1.65	0.88	-0.11	3.41
	Equal variances not assumed			1.942	69.995	0.056	1.65	0.85	-4.42E-02	3.34
Social items - Post test	Equal variances assumed	0.97	0.328	-0.422	66	0.675	-0.45	1.06	-2.56	1.67
	Equal variances not assumed			-0.428	65.954	0.67	-0.45	1.05	-2.54	1.64
Family items - Post test	Equal variances assumed	1.583	0.213	1.917	68	0.059	1.31	0.68	-5.33E-02	2.67
	Equal variances not assumed			1.947	67.322	0.056	1.31	0.67	-3.28E-02	2.65
School items - Post test	Equal variances assumed	0.236	0.629	-0.649	71	0.518	-0.42	0.64	-1.69	0.86
	Equal variances not assumed			-0.655	66.767	0.515	-0.42	0.63	-1.68	0.85
Society items - Post test	Equal variances assumed	1.722	0.194	-1.922	69	0.059	-0.9	0.47	-1.83	3.42E-02
	Equal variances not assumed			-2.001	68.695	0.049	-9.00E-01	0.45	-1.8	-2.84E-03
Perception items - Post Test	Equal variances assumed	0.01	0.921	0.603	71	0.549	3.80E-01	0.63	-0.87	1.63
	Equal variances not assumed			0.615	68.929	0.541	0.38	0.62	-0.85	1.61

Table 6.5.5: Comparison of the Subjects in Betunia School with Subjects in Silwad School at Posttest
Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Posttest	Betunia	31	57.06	4.33	0.78
	Silwad	27	47.33	3.31	0.64
Cognitive items - Post test	Betunia	31	35.81	2.64	0.47
	Silwad	27	30.11	2.86	0.55
Emotional items - Post test	Betunia	31	21.26	3.11	0.56
	Silwad	27	17.22	2.68	0.52
Social items - Post test	Betunia	31	50.74	3.98	0.72
	Silwad	27	47.52	4.77	0.92
Family items - Post test	Betunia	31	21	2.62	0.47
	Silwad	27	19.44	2.59	0.5
School items - Post test	Betunia	31	17.32	2.61	0.47
	Silwad	27	16.89	2.99	0.58
Society items - Post test	Betunia	31	12.23	1.59	0.28
	Silwad	27	11.19	2	0.39
Perception items - Post Test	Betunia	31	21.35	2.44	0.44
	Silwad	27	18.93	3	0.58

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	1.435	.236	9.512	56	0	9.73	1.02	7.68	11.78
	Equal variances not assumed			9.689	55.114	0.00E+00	9.73	1	7.72	11.74
Cognitive items - Post test	Equal variances assumed	.000	.984	7.886	56	0	5.7	0.72	4.25E+00	7.14
	Equal variances not assumed			7.842	53.401	0	5.7	0.73	4.24E+00	7.15
Emotional items - Post test	Equal variances assumed	.467	.497	5.255	56	0	4.04	0.77	2.5	5.57
	Equal variances not assumed			5.310	55.996	0	4.04	0.76	2.51E+00	5.56
Social items - Post test	Equal variances assumed	0.195	0.661	2.803	56	0.007	3.22	1.15	0.92	5.53
	Equal variances not assumed			2.768	50.872	0.008	3.22	1.16	0.89	5.56
Family items - Post test	Equal variances assumed	0.148	0.702	2.267	56	0.027	1.56	0.69	1.80E-01	2.93
	Equal variances not assumed			2.268	55.072	0.027	1.56	0.69	1.80E-01	2.93
School items - Post test	Equal variances assumed	0.8	0.375	0.589	56	0.558	0.43	0.74	-1.04E+00	1.91
	Equal variances not assumed			0.584	52.095	0.562	0.43	0.74	-1.06E+00	1.92
Society items - Post test	Equal variances assumed	2.147	0.148	2.208	56	0.031	1.04	0.47	9.65E-02	1.98E+00
	Equal variances not assumed			2.173	49.411	0.035	1.04E+00	0.48	7.84E-02	2.00E+00
Perception items - Post Test	Equal variances assumed	1.573	0.215	3.398	56	0.001	2.43E+00	0.71	1	3.86
	Equal variances not assumed			3.35	50.208	0.002	2.43	0.73	0.97	3.89

Table 6.5.6: Comparison of the Subjects in Al-Bireh School with Subjects in BirZiet School at Posttest
Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Posttest	Al-Bireh	39	54.23	5.30	0.85
	BirZeit	30	53.43	5.65	1.03
Cognitive items - Post test	Al-Bireh	40	34.60	2.76	0.44
	BirZeit	30	33.20	3.87	0.71
Emotional items - Post test	Al-Bireh	41	19.61	4.09	0.64
	BirZeit	30	20.23	3.07	0.56
Social items - Post test	Al-Bireh	37	51.19	4.64	0.76
	BirZeit	30	49.50	3.88	0.71
Family items - Post test	Al-Bireh	39	19.69	2.99	0.48
	BirZeit	30	21.43	2.76	0.5
School items - Post test	Al-Bireh	42	17.74	2.77	0.43
	BirZeit	30	16.47	2.33	0.43
Society items - Post test	Al-Bireh	40	13.13	2.2	0.35
	BirZeit	30	11.5	2.1	0.38
Perception items - Post Test	Al-Bireh	42	20.98	2.8	0.43
	BirZeit	30	21.23	2.45	0.45

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	.006	.938	.602	67	0.549	0.8	1.32	-1.85	3.44
	Equal variances not assumed			.597	60.419	5.53E-01	0.8	1.34	-1.87	3.47
Cognitive items - Post test	Equal variances assumed	2.473	.120	1.766	68	0.082	1.4	0.79	-1.80E-01	2.98
	Equal variances not assumed			1.685	49.953	0.098	1.4	0.83	-2.70E-01	3.07
Emotional items - Post test	Equal variances assumed	3.094	.083	-.702	69	0.485	-0.62	0.89	-2.4	1.15
	Equal variances not assumed			-.734	68.94	0.466	-0.62	0.85	-2.32E+00	1.07
Social items - Post test	Equal variances assumed	2.432	0.124	1.591	65	0.116	1.69	1.06	-0.43	3.81
	Equal variances not assumed			1.622	64.922	0.11	1.69	1.04	-0.39	3.77
Family items - Post test	Equal variances assumed	0.487	0.488	-2.476	67	0.016	-1.74	0.7	-3.14E+00	-0.34
	Equal variances not assumed			-2.502	64.729	0.015	-1.74	0.7	-3.13E+00	-0.35
School items - Post test	Equal variances assumed	0.696	0.407	2.049	70	0.044	1.27	0.62	3.40E-02	2.51
	Equal variances not assumed			2.109	68.033	0.039	1.27	0.6	6.85E-02	2.47
Society items - Post test	Equal variances assumed	0.081	0.776	3.122	68	0.003	1.63	0.52	0.59	2.66E+00
	Equal variances not assumed			3.143	64.112	0.003	1.63E+00	0.52	0.59	2.66E+00
Perception items - Post Test	Equal variances assumed	0.053	0.819	-0.405	70	0.687	-2.60E-01	0.64	-1.52	1.01
	Equal variances not assumed			-0.414	67.1	0.68	-0.26	0.62	-1.5	0.98

Table 6.5.7: Comparison of the Subjects in Al-Bireh School with Subjects in Silwad School at Posttest
Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items - Posttest	Al-Bireh	39	54.23	5.3	0.85
	Silwad	27	47.33	3.31	0.64
Cognitive items - Post test	Al-Bireh	40	34.6	2.76	0.44
	Silwad	27	3.01E+01	2.86	0.55
Emotional items - Post test	Al-Bireh	41	19.61	4.09	0.64
	Silwad	27	17.22	2.68	0.52
Social items - Post test	Al-Bireh	37	51.19	4.64	0.76
	Silwad	27	47.52	4.77	0.92
Family items - Post test	Al-Bireh	39	19.69	2.99	0.48
	Silwad	27	19.44	2.59	0.5
School items - Post test	Al-Bireh	42	17.74	2.77	0.43
	Silwad	27	16.89	2.99	0.58
Society items - Post test	Al-Bireh	40	13.13	2.2	0.35
	Silwad	27	11.19	2	0.39
Perception items - Post Test	Al-Bireh	42	20.98	2.8	0.43
	Silwad	27	18.93	3.00E+00	0.58

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	6.534	0.013	5.997	64	0	6.9	1.15	4.6	9.2
	Equal variances not assumed			6.504	63.432	0	6.9	1.06	4.78	9.02
Cognitive items - Post test	Equal variances assumed	0.191	0.664	6.432	65	0.00E+00	4.49	0.7	3.1	5.88
	Equal variances not assumed			6.389	54.617	0.00E+00	4.49	0.7	3.08	5.9
Emotional items - Post test	Equal variances assumed	5.347	0.024	2.674	66	0.009	2.39	0.89	0.61	4.17
	Equal variances not assumed			2.908	66	5.00E-03	2.39	0.82	0.75	4.03
Social items - Post test	Equal variances assumed	0.129	0.721	3.087	62	0.003	3.67	1.19	1.29	6.05
	Equal variances not assumed			3.073	55.25	0.003	3.67	1.19	1.28	6.06
Family items - Post test	Equal variances assumed	0.776	0.382	0.349	64	7.28E-01	0.25	0.71	-1.17	1.67
	Equal variances not assumed			0.358	60.739	7.21E-01	0.25	0.69	-1.14	1.63
School items - Post test	Equal variances assumed	0.245	0.622	1.205	67	2.32E-01	0.85	0.7	-0.56	2.26
	Equal variances not assumed			1.185	52.425	2.41E-01	0.85	0.72	-0.59	2.29
Society items - Post test	Equal variances assumed	0	0.993	3.672	65	0.00E+00	1.94E+00	0.53	0.88	2.99
	Equal variances not assumed			3.74E+00	59.353	0.00E+00	1.94E+00	0.52	0.9	2.98
Perception items - Post Test	Equal variances assumed	1.011	0.318	2.89E+00	67	0.005	2.05	0.71	0.63	3.47
	Equal variances not assumed			2.845	52.761	0.006	2.05	0.72	0.6	3.5

Table 6.5.8: Comparison of the Subjects in BirZiet School with Subjects in Silwad School at Posttest

Group Statistics

	schools	N	Mean	Std. Deviation	Std. Error Mean
Psychological items- Posttest	Bir-Ziet	30	53.43	5.65	1.03
	Silwad	27	47.33	3.31	0.64
Cognitive items - Post test	Bir-Ziet	30	33.2	3.87	0.71
	Silwad	27	3.01E+01	2.86	0.55
Emotional items - Post test	Bir-Ziet	30	20.23	3.07	0.56
	Silwad	27	17.22	2.68	0.52
Social items - Post test	Bir-Ziet	30	49.5	3.88	0.71
	Silwad	27	47.52	4.77	0.92
Family items - Post test	Bir-Ziet	30	21.43	2.76	0.5
	Silwad	27	19.44	2.59	0.5
School items - Post test	Bir-Ziet	30	16.47	2.33	0.43
	Silwad	27	16.89	2.99	0.58
Society items - Post test	Bir-Ziet	30	11.5	2.1	0.38
	Silwad	27	11.19	2	0.39
Perception items - Post Test	Bir-Ziet	30	21.23	2.45	0.45
	Silwad	27	18.93	3.00E+00	0.58

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Psychological items - Post test	Equal variances assumed	5.228	0.026	4.904	55	0	6.1	1.24	3.61	8.59
	Equal variances not assumed			5.034	47.579	0	6.1	1.21	3.66	8.54
Cognitive items - Post test	Equal variances assumed	2.564	0.115	3.394	55	1.00E-03	3.09	0.91	1.26	4.91
	Equal variances not assumed			3.448	53.065	1.00E-03	3.09	0.9	1.29	4.89
Emotional items - Post test	Equal variances assumed	0.386	0.537	3.925	55	0	3.01	0.77	1.47	4.55
	Equal variances not assumed			3.953	54.955	0.00E+00	3.01	0.76	1.48	4.54
Social items - Post test	Equal variances assumed	0.9	0.347	1.726	55	0.09	1.98	1.15	-0.32	4.28
	Equal variances not assumed			1.707	50.221	0.094	1.98	1.16	-0.35	4.31
Family items - Post test	Equal variances assumed	0.026	0.871	2.794	55	7.00E-03	1.99	0.71	0.56	3.42
	Equal variances not assumed			2.804	54.897	7.00E-03	1.99	0.71	0.57	3.41
School items - Post test	Equal variances assumed	1.583	0.214	-0.598	55	5.53E-01	-0.42	0.71	-1.84	0.99
	Equal variances not assumed			-0.59	49.039	5.58E-01	-0.42	0.72	-1.86	1.02
Society items - Post test	Equal variances assumed	0.081	0.777	0.578	55	5.65E-01	3.10E-01	0.54	-0.78	1.41
	Equal variances not assumed			5.80E-01	54.8	5.64E-01	3.10E-01	0.54	-0.77	1.4
Perception items - Post Test	Equal variances assumed	1.806	0.185	3.20E+00	55	0.002	2.31	0.72	0.86	3.75
	Equal variances not assumed			3.162	50.279	0.003	2.31	0.73	0.84	3.77

Appendix K

The Arabic Version of the Questionnaire

استبيان

معلومات حول المعتقدات والاتجاهات الصحية للفتيات ما بين سن14-17 سنة

I. معلومات شخصية وديمغرافية

اسم المدرسة: _____ الصف: _____

تاريخ الميلاد: _____ التاريخ: _____

ضعي إشارة (✓) المربع الذي يسبق ما يناسبك:

1. هل أنت: ☐ عز باء ☐ مخطوبة

2. أين تسكنين ☐ مدينة ☐ قرية ☐ مخيم

3. هل تسكنين مع: ☐ عائلة ممتدة (الجد/الجدة/العمة) ☐ العائلة النواة (والديك وأخوتك) ☐ احد والديك (والدك/والدتك) ☐ زوج الأم/زوجة الأب

4. هل وظيفة والدك؟ ☐ مهني ☐ تاجر ☐ موظف ☐ عامل

☐ غير ذلك

5. هل والدتك تعمل أو عملت قبل الزواج؟ ☐ مهنية ☐ سكرتيرة ☐ موظفة

☐ ربة بيت ☐ غير ذلك

6. عدد سنوات دراسة والدك ----------

7. عدد سنوات دراسة والدتك ----------

8. عدد أفراد أسرتك ----------

II. آراء ومعتقدات حول النمو والاحتياجات الجسمانية،

كونك فتاة في مرحلة المراهقة هل:

العبارة	نعم	لا	بحاجة لزيادة معلوماتي
1. تدركين التغييرات التي تحصل للفتيات عندما يصلن سن البلوغ.	☐	☐	☐
2. تعلمين عن عمل أعضاء الجسم.	☐	☐	☐
3. تعلمين عن التغييرات التي تحصل على الجهاز التناسلي.	☐	☐	☐
4. تعتقدين بأن لديك المعلومات الكافية عن الاحتياجات والاهتمامات الصحية الجسمانية والتطورية التي تهم المراهقات.	☐	☐	☐
5. لديك معلومات كافية عن أمور تتعلق بالجنس، إذا كانت الإجابة نعم، وضحي مصدرك: ☐ العائلة ☐ المدرسة ☐ الأصدقاء ☐ النادي ☐ وسائل الاعلام ☐ غيرذلك /حددي.			
6. تناقشين أموراً تتعلق بشؤونك الصحية فيما يخص الدورة الشهرية، إذا كانت الاجابة بنعم، مع من؟ ☐ العائلة ☐ المدرسة ☐ الأصدقاء ☐ غيرذلك/ حددي.	☐	☐	☐
7. تحصلين على معلومات تتعلق بالصحة من أحد العاملين بالمجال الصحي. إذا كانت الاجابة نعم، من مَن؟ ☐ طب ☐ ممرضة ☐ أخصائي نفس ☐ أخصائي اجتماعي ☐ الفريق الصحي المدرسي.			

ب) هل توافقين أو لا توافقين مع ما يلي فيما يتعلق بالصحة الجسمانية، ضعي (✓) عند الجملة المناسبة لكِ:

العبارة	أوافق	لا أوافق	غير متأكدة
1. أفكر كثيراً بصحتي	☐	☐	☐
2. ما آكله يؤثر على صحتي .	☐	☐	☐
3. التمارين الرياضية جيدة لصحتي.	☐	☐	☐
4. إذا اهتممت كثيراً بنفسي، فأنا أكثر حظاً لكي أكون بصحة جيدة.	☐	☐	☐
5. ما آكله وأشربه يؤثر على أسناني	☐	☐	☐
6. النظافة الشخصية مهمة للصحة.	☐	☐	☐
7. النوم الكافي يؤثر على الوعي والنشاط	☐	☐	☐
8. المظهر المرتب يرفع من احترام الاخرين لك ويزيد الثقة بالنفس.	☐	☐	☐
9. بعض الفتيات يظهر على وجوههن حب الشباب	☐	☐	☐
10. معظم الفتيات يشعرن بالخجل من التحدث عن التغييرات التي تحدث لأجسامهن.	☐	☐	☐

ج) هل توافقين ام لا مع الممارسات التالية عندما تأتيك الدورة الشهرية، ضعي ( ) في المكان المناسب:

العبارة	أوافق	لا أوافق	غير متأكدة
1. حمام يومي	☐	☐	☐
2. تمارين رياضية يومية	☐	☐	☐
3. أكلاً لطعام معين	☐	☐	☐
4. نوماً أكثر من المعتاد	☐	☐	☐
5. أخذ دواء للمغص	☐	☐	☐
6. شرب أعشاب طبية	☐	☐	☐

د) كونك فتاة بسن المراهقة، هل توافقين أو لا مع العبارات التالية فيما يتعلق بأمور صحية عامة.

العبارة	أوافق	لا أوافق	غير متأكدة
1. المراهقات يعانين أحياناً من الصداع	☐	☐	☐
2. المراهقات يشعرن بالتعب والإرهاق أحياناً	☐	☐	☐
3. المراهقات يفقدن الشهية للطعام أحياناً	☐	☐	☐
4. المراهقات يعرفن مخاطر التدخين.	☐	☐	☐
5. المراهقات يعلمن مخاطر شرب الكحول	☐	☐	☐
6. المراهقات يعانين من اضطراب في النوم	☐	☐	☐
7. الحوادث تسبب الموت لصغار السن أكثر من أي سبب آخر.	☐	☐	☐
8. المراهقات يعلمن كفاية عن الايدز ومضاعفاته.	☐	☐	☐
9. المراهقات يعلمن كفاية عن الجنس والأمراض التي تنتقل عن طريقه.	☐	☐	☐

هـ) هل لديك أي نوع من الاعاقة

☐ نعم ☐ لا

1) إذا كانت الاجابة نعم، ما نوع الاعاقة

أ – عقلية/ أوضحي _____

ب- جسدية/ أوضحي _____

2) اذكري سبب إعاقتك إذا كنت تعرفينه.

☐ وراثة ☐ أمراض مكتسبة.

☐ حوادث. ☐ خلقي.

3) هل تعتقدين بأن لديك إعاقة جسدية تسبب لك الإحراج؟

☐ نعم ☐ لا

اذا كانت الاجابة نعم ما هي الاعاقة الجسدية لديك ؟

_____

4) هل تأخذين أو أخذت ما يلي؟

أ. دواء مثل الأكمول، أدوية تباع بوصفة طبية أو بدون وصفة طبية.

☐ نعم ☐ لا ☐ أحياناً

إذا كانت الاجابة نعم أو أحياناً، ما اسم الدواء الذي أخذته ولماذا. _____

ب. أدوية غير قانونية أو مثيرة

☐ نعم ☐ لا ☐ أحياناً

إذا كانت الاجابة نعم أو أحياناً، ما نوع الدواء، وما هي الكمية. _____

ج. الكحول

☐ نعم ☐ لا ☐ أحياناً

إذا كانت الاجابة نعم أو أحياناً، كم مرة، وما هي الكمية._____

د. التدخين

☐ نعم ☐ لا ☐ أحياناً

إذا كانت الاجابة نعم أو أحياناً، كم سيجارة في اليوم _____

و) هل سبق وأن سمعت بأحد الأمراض التالية أو عندك إحداها ومتى كان ذلك:

اسم المرض	نعم	لا	عندي هذا المرض
1. السكري	☐	☐	☐
2. الصرع	☐	☐	☐
3. الأزمة (الربو)	☐	☐	☐
4. أنيميا البحر الأبيض المتوسط (الثلاسيميا)	☐	☐	☐
5. التهاب الكبد الفيروسي	☐	☐	☐
6. فقر الدم	☐	☐	☐
7. سرطان الثدي	☐	☐	☐

أ. هل تعرفين ما هو فحص الثدي الذاتي

أ. ☐ نعم ب. ☐ لا ج. ☐ عادة أعمله

ب. إذا كان جوابك ج، هل فحصت صدرك بآخر ثلاثة أشهر

أ. ☐ نعم ب. ☐ لا

8. مشاكل لها علاقة بالتغذية ☐ ☐ ☐

أ. إذا كانت إجابتك بنعم ما هي المشكلة الغذائية لديك؟ _____

ب. هل سبق وأن أبديت اهتماماً بتغذيتك من أجل حياة صحية.

☐ نعم ☐ لا

ج. إذا كان جوابك نعم، هل تعرفين المواد الغذائية الأساسية.

☐ نعم ☐ لا

III. معتقدات وآراء حول الاحتياجات النفسية والعاطفية. ضعي إشارة (✓) لما ترينه يناسبك.

أ. هل سبق وأن كانت لديك

العبارة	أكثر من اللازم	كالمعتاد	أقل من المعتاد	أقل بكثير من المعتاد
1. القدرة على الاستمتاع بنشاطات الحياة اليومية الطبيعية.	☐	☐	☐	☐
2. الشعور بالسعادة، وكل الأشياء حولك لها مبرر لوجودها.	☐	☐	☐	☐
3. المقدرة على مواجهة مصاعبك.	☐	☐	☐	☐
4. المقدرة على اتخاذ قرارات.	☐	☐	☐	☐
5. القدرة على تفهم نفسك وسلوكك.	☐	☐	☐	☐
6. المقدرة على تقبل النقد والنصيحة.	☐	☐	☐	☐
7. المقدرة على وعي الضغط النفسي والاجتماعي.	☐	☐	☐	☐
8. فقدان الثقة بنفسك	☐	☐	☐	☐
9. التفكير بنفسك كشخص بدون قيمة.	☐	☐	☐	☐
10 عدم القدرة على التغلب على مشاكلك.	☐	☐	☐	☐
11.الشعور بالتعاسة والإحباط.	☐	☐	☐	☐
12.الشعور بالإحراج لأي سبب	☐	☐	☐	☐
13.الاهتمام لرأي الآخرين بك، أكثر من رأيك بنفسك.	☐	☐	☐	☐
14.الاعتماد على الآخرين لحل مشاكلك.	☐	☐	☐	☐
15.معرفة نقاط الضعف والقوة لديك.	☐	☐	☐	☐
16.محبة تحقيق الإنجازات في حياتك.	☐	☐	☐	☐
17.الرغبة في أن تكوني عضواً في نادي ولجـان عاملـة بالمجتمع.	☐	☐	☐	☐
18.المقدرة على عمل أشياء مفيدة.	☐	☐	☐	☐

IV آراء ومعتقدات حول الأمور والاهتمامات الاجتماعية التطورية،

أ. *هل سبق ولا زلت تتعاملين مع العبارات التالية:*

العبارة	أكثر من اللازم	كالمعتاد	أقل من المعتاد	أقل بكثير من المعتاد
1. تقرئين كتباً ومصادر أخرى عن مواضيع تتعلق بالصحة.	☐	☐	☐	☐
2. تشعرين بأن مواضيع المدرسة تجيب عن كافة الأسئلة بخصوص الحياة الإنسانية.	☐	☐	☐	☐
3. تحبين أجواء المدرسة وتشعرين بأنها مناسبة لبناء صداقات مع الآخرين.	☐	☐	☐	☐
4. تفضلين المعلمين على المعلمات	☐	☐	☐	☐
5. تفضلين التعامل مع أساتذتك بالأمور الشخصية	☐	☐	☐	☐
6. تشعرين بأن عائلتك تدعمك وتلبي احتياجاتك وتهتم بمشاعرك.	☐	☐	☐	☐
7. تشعرين بأن والديك يحترمانك ويفهمانك.	☐	☐	☐	☐
8. تشعرين بالمعارضة وبالنقد من قبل عائلتك.	☐	☐	☐	☐
9. تشعرين بالإحراج عند محادثة والديك عن شؤونك الخاصة.	☐	☐	☐	☐
10. أفكارك وآراؤك مقبولة من أفراد أسرتك.	☐	☐	☐	☐
11. تشعرين بأنك قادرة على التعامل مع أخواتك الأكبر منك أكثر من والدتك.	☐	☐	☐	☐
12. تشعرين بالإحراج عند التحدث عن الجنس مع أحد أفراد أسرتك.	☐	☐	☐	☐
13. تفضلين التعامل مع أصدقائك أكثر من عائلتك.	☐	☐	☐	☐
14. ترغبين بأن يكون لديك صديق من الجنس الآخر	☐	☐	☐	☐
15. تشعرين بالإحراج عند التحدث أو مقابلة صديق من الجنس الآخر.	☐	☐	☐	☐
16. تقبلين قيم وعادات المجتمع بالنسبة لعلاقاتك المجتمعية وخاصة مع الشباب.	☐	☐	☐	☐
17. تؤمنين بالعلاقة العاطفية بين الرجل والمرأة قبل الزواج.	☐	☐	☐	☐
18. تفضلين الزواج عن المدرسة.	☐	☐	☐	☐
19. تشعرين بالحاجة للحصول على معلومات تثقيف لها علاقة بالبلوغ الجسدي والجنسي.	☐	☐	☐	☐
20. تفضلين المدرسة المختلطة.	☐	☐	☐	☐

ب. هل توافقين أم لا مع ما يلي من تقاليد وقيم بالمجتمع الفلسطيني اتجاه الفتاة الفلسطينية.

العبارة	أوافق	لا أوافق	غير متأكدة
1. معظم الفتيات غير مسموح لهن بالخروج من البيت وحدهن.	☐	☐	☐
2. معظم الفتيات يجب أن يتزوجن في سن مبكر.	☐	☐	☐
3. الفتيات فقط وظيفتهن هي الزواج.	☐	☐	☐
4. الفتيات غير مسموح لهن بإقامة علاقة عاطفية مع الجنس الآخر.	☐	☐	☐
5. الفتيات غير مسموحا لهن بالتحدث عن أمور تتعلق بالجنس.	☐	☐	☐
6. الفتيات لا يسمح لهن بالاستقلالية.	☐	☐	☐
7. الفتيات غير مسموح لهن بالاشتراك بالنوادي الاجتماعية والرياضية.	☐	☐	☐
8. الفتيات غير مسموح لهن بالمشاركة في النشاطات الاجتماعية.	☐	☐	☐

21) كونك فتاة فلسطينية تمر بمرحلة المراهقة، هل تودين كتابة شعورك بخصوص هذه المرحلة.

22) هل تودين أن تكتبي عن المشاكل التي تواجهك عندما تتعاملين مع أسرتك، المدرسة، والمجتمع؟

أ. اسرتك :

ب. المدرسة:

ج. المجتمع:

استبيان حول المعتقدات والمواقف
الصحية للفتيات بسن المراهقة (16سنة وأكثر)

عزيزتي الطالبة...

تحية طيبة وبعد،

نرجو منك المساهمة في إنجاح هذا البحث الذي يساعدنا في التعرف على آرائك ومعتقداتك وأنمـــاط الحيـــاة الصحية لديك.

تقوم بهذه الدراسة المحاضرة بجامعة القدس سمية صايج الطالبة في برنامج الدكتورة في جامعة ستافوردشـــير بإنجلترا.

نشكر لك مساعدتك وتعاونك معنا. ولا حاجة لكتابة اسمك وان المعلومات التي ستعطيها ستكون ســـرية، وان إجاباتك ستستعمل لأغراض البحث فقط. أرجو ان تكتبي الإجابة الأكثر ملائمة حسب رأيك.

شاكرين لكم تعاونكم ،،،

الـــــباحثة
ســـــمية صايـــج
جـــــــامعة القدس
كلية المهن الصحية

استبيان لأهل الفتيات
من عمر (12-16 سنة)

أنا الموقع أدناه والد / والدة الفتاه: _____ أوافق على مشاركة ابنتي بالبحث التي تقوم به المحاضرة لدى جامعة القدس / كلية المهن الصحية سمية صايج طالبة الدكتوراه بجامعة ستافوردشير بإنجلترا.

إنني أتفهم أن هذه الدراسة ستساعد الباحثة في التعرف على الآراء والمعتقدات والأنماط الصحية لدى الفتيات بهذا السن أتفهم أيضا ان إجابة ابنتي على الأسئلة المرفقة هي سرية ولا حاجة لكتابة اسمها وان الإجابات ستستعمل لأغراض البحث فقط.

ولذلك أوافق،،

توقيع الأب / الأم :_____ التاريخ: _____

Appendix L

اللقاءات التثقيفية والتدريسية
حول مرحلة المراهقة

اللقاء الأول
النمو الجسدي والتغييرات الحاصلة بسن المراهق

الهدف

يهدف هذا اللقاء الى رفع مستوى المعلومات الصحية لدى الفتيات المراهقات حول هذه المرحلة من خلال تعريفهن عن معنى كلمة المراهقة ، والتغيرات الجسدية والجنسية الحاصلة وكذلك زيادة الوعي الصحي لديهن عن التغيرات النفسية والاجتماعية المصاحبة بهذه المرحلة.
بعد نهاية هذا اللقاء سيتمكن الطالبات من:

- تعريف مفهوم مرحله المراهقة
- التميز بين النضوج الجسدي، النفسي والاجتماعي
- معرفة التغييرات الجسدية الحاصلة في كلا الجنسين
- معرفة الفرق بين الدورة الشهرية والحيض وكيفيه العناية بأنفسهن عند حدوث الطمث.

مجريات اللقاء

باعتبار هذا اللقاء هو الأول من عدة لقاءات بدأت المدربة والمثقفة الصحية بالتعريف بالذات وببرنامج اللقاءات الأربعة المعدة لهذا البرنامج التثقيفي. وأهمية الالتزام بالوقت المحدد لكل نشاط .

✧ النشاطات المتعلقة بهذا اللقاء

أ. النشاط الأول ولمده 10 دقائق

كتبت المدربة كلمه "مراهقة" على السبورة وطلبت من الطالبات شرح فهمهن لهذه الكلمة والمصطلحات الأخرى المستعملة مثل البلوغ، النضوج، الرشد. ثم سجلت كل ما ذكرنه من تسميات ومن خلال الشرح والنقاش أكدت على الطبيعة المتغيرة لهذه المرحلة.

ب. النشاط الثاني ولمده 20 دقيقه

قسمت المتدربة الطالبات الى 3 مجموعات ووزعت على كل مجموعه ورقه كبيره وأقلام عريضة. ثم طلبت من كل مجموعة أن تكتب على الورقة عدداً من المعطيات والأدلة التي بنظرهم تميز الشخص الناضج من النواحي التالية:-

1. الناحية الاجتماعية.
2. الناحية الجسمية.
3. الناحية النفسية.

✧ ومن ثم تم شرح معمق بين الطالبات والمدربة الصحية بالنسبة للنشاطات المذكورة أعلاه وقد ركزت المدربة على التالي:-

جوانب النضوج الاجتماعي والجسمي والنفسي:

المراهقة هي فترة انتقال الفرد من جيل الطفولة الى مرحلة البلوغ والنضج. وبداية هذه المرحلة تتحدد بعوامل أساسية مختلفة، هي:

1. من الناحية الجسمية: يعتبر الإنسان بالغاً عند وصوله مرحلة نضوج الأعضاء التناسلية والجنسية ويصبح الفرد قادراً على التكاثر.
2. من الناحية الاجتماعية: يعود للمجتمع والبيئة تحديد متى يكون الفرد ناضجاً من هذه الناحية: مثلاً، المجتمع يقرر متى نستطيع أن نقود سيارة، والمجتمع يقرر منى نستطيع ممارسة الحقوق والواجبات كأشخاص مسؤولين.
3. من الناحية الاقتصادية: يعتبر الإنسان ناضجاً عندما يبدأ العمل ويستقل مادياً.
4. من الناحية النفسية: يعتبر النضوج النفسي الأكثر تقييدا، لأنه من الصعب تحديد نضوج الفرد من ناحية الشخصية. إن النضوج النفسي من أهم المتغيرات التي تحدد درجة نضوج الفرد لأن له علاقة وثيقة وتأثيراً كبيراً على سلوك الفرد.

من الممكن أن يكون الفرد ناضجاً وفق معيار، ومراهقا (أو غير مكتمل النضوج) وفق معيار آخر. وهذا الواقع يخلق صعوبات ومشاكل لدى المراهق أو المراهقة، كما ويخلق للمراهقين مشاكل مع الأشخاص من حولهم، مثل الوالدين، والمجتمع، والمدرسين، والأصدقاء.

ولهذه التغيرات التي تمر مها الفتاة أو الفتى المراهق/ة في هذه الفترة علاقة كبيرة جداً وسببية في كيفية سلوك الفرد في مرحلة المراهقة بالذات. وقد يستمر تأثير هذه التغيرات ومدى تجاوب المراهق/ة معها على تكوين شخصيتها ومستقبلها الى سنوات عديدة. (مركز المرأة للإرشاد القانوني والنفسي، 2000)

التغيرات الجسدية والجنسية في مرحله المراهقة بين الجنسين

لتوضيح هذه التغييرات،فقد تم وضع ملصقات كبيره على الحائط لتبين الفرق بين الذكر والأنثى.ولمدة 15 دقيقه تم شرح التغييرات الجسمية بين الجنسين والمقارنة بينهما كالتالي:

تعريف التغيرات الجسمية في مرحلة المراهقة

مرحلة المراهقة هي مرحلة انتقالية من مرحلة الطفولة الى مرحلة النضج والرشد. وتمتد عاد من سن الثانية عشر الى سن التاسعة عشر تقريباً أو قبل ذلك بعام أو عامين أو بعد ذلك بعام أو عامين. وخلال هذه المرحلة تطرأ تغيرات واسعة على الجسم من مختلف النواحي النفسية والجسمية والاجتماعية والذهنية.

التغيرات الجسمية

تبدأ التغيرات التي تصاحب مرحلة البلوغ بالحديث بفضل نضج عدد من الغدد الصماء وزيادة إفرازها للهرمونات في الجسم، وخصوصاً الغدة النخامية التي تقع في أسفل الدماغ، وحجمها بحجم حبة الحمص، إذ يزيد إفرازها للهرمونات التي تسرع نمو الجهاز العظمي والأعضاء التناسلية ووضوح الصفات الجنسية الذكرية والأنثوية. ومن الجدير بالذكر أن التغيرات التي تطرأ خلال مرحلة البلوغ تحدث على مراحل وليست مرة واحدة. فمثلاً، يكتمل نمو عظام الحوض عند الإناث عند سن 17 عاماً.

علامات ا البلوغ الجسدي عند الإناث:	علامات ا البلوغ الجسدي عند الذكور:
1. زيادة في النمو، خاصة في الطول والوزن	1. زيادة في النمو، خاصة في الطول والوزن
2. نمو الثديين، ويعتمد حجم الثديين على عامل الوراثة وليس عامل الوراثة	2. كبر حجم القضيب والخصيتين.
3. نمو عظام الحوض واستدارة الوركين.	3. نمو الشعر تحت الإبطين وفي منطقة العانة وعلى الصدر والوجه.
4. ظهور الشعر في منطقة العانة وتحت الإبطين.	4. زيادة إفرازات الغدد العرقية والدهنية.
5. زيادة إفرازات الغدد العرقية وتراكم الدهن في أماكن معينة	5. تغير في نبرة الصوت اذ يصبح خشناً.
6. زيادة نمو العضلات.	6. زيادة نمو العضلات وقوتها.
7. بدء الدورة الشهرية.	7. نمو العظام وزيادة سمكها.
	8. اتساع الكتفين.
	9. بدء القذف المنوي.

يبدأ النمو في الجهاز العظمي عند الإناث في حوالي سن 11عاما بينما يبدأ عند الذكور في حوالي سن 14 عاماً، لذلك تكون أطول من الذكور في فترة العمر 11-14 سنة، وبعدها في الغالب يحدث العكس، إذ يبطؤ الطول عند الإناث ويزداد عند الذكور. ولا يحدث نمو الجهاز العظمي بالتساوي بين الأجزاء، فمثلاً نمو القدم يسبق الساق والفخذ، فتبدو الأقدام طويلة وبشكل غير متوازن مما يسبب عدم تناسق مؤقت لمنظر الأطراف.

بالنسبة للفتيات، فان التغيرات الجسمية للبلوغ تسبق بدء الحيض بحوالي سنتين، حيث تحدث تغيرات واضحة في الثديين مثل الحلمات وزيادة حجم الثدي، ثم ظهور شعر العانة والشعر تحت الإبطين، ثم يبدأ الحيض لأول مرة.

ويجدر التنبيه الى أن كل فرد ينمو بمعدل مختلف عن الآخر، وليس من الضرورة أن يمر كل الأفراد بجميع التغيرات في الفترة ذاتها. ولذلك تظهر التغيرات لدي بعض الفتيان أو الفتيات قبل غيرهم، فيتفاوتوا في الطول والوزن مثلاً بالرغم من تقارب سنهم. ولا داع للقلق من هذا الاختلاف.

الحيض والدورة الشهرية

الحيض(يطلق عليه أيضا "الطمث" أو "العادة الشهرية") هو حدث طبيعي يحصل في حياة كل فتاة. وعلى الفتاة أن تتقبل حصول الحيض لها، فهو علامة تدل على نضجها الجنسي وبداية تحولها من طفلة الى امرأة ناضجة. ويختلف توقيت أول حيض عند الفتيات. وفي فلسطين يحدث عادة بين 12-14 سنة.

ما هو الحيض؟

الحيض هو التدفق الدوري للدم والمخاط من الرحم الى خارج الجسم عن طريق فتحة المهبل، نتيجة انسلاخ الغشاء الرقيق المبطن للرحم في حالة عدم حدوث إخصاب أي التقاء البويضة الناضجة مع الحيوان المنوي.

كيف يحدث الحيض؟

1. عندما تصل الفتاة الى مرحلة البلوغ يزداد إفراز الغدة النخامية للهرمونات المنشطة للمبيضين. فتبدأ الحويصلات (عبارة عن أكياس مائية صغيرة توجد على سطح المبيضين) والنضوج وكل منها قادر على إنتاج بويضة وكلن لا يحدث النضوج الكامل إلا لحويصلة واحدة شهرياً.
2. تنفجر البويضة الناضجة فتلتقطها أهداب البوق وتدفع بها باتجاه قناة فالوب.
3. تستمر البويضة الناضجة بالسير في قناة فالوب، وفي هذه الأثناء ينمو الغشاء المبطن للرحم فيزداد سمكه ويصبح غنياً بالأوعية الدموية استعدادا لاستقبال البويضة الملقحة في حالة حدوث إخصاب. عادة يحدث الإخصاب إذا التقت البويضة بالحيوان المنوي في الثلث الأول من قناة فالوب.
4. إذا لم يحدث إخصاب بين البويضة والحيوان المنوي، يبدأ الغشاء المبطن للرحم بالانفصال ويخرج على شكل نزيف الدورة الشهرية.

ما الفرق بين الحيض والدورة الشهرية؟

الدورة الشهرية هي الزمن بين اليوم الأول لبداية الحيض واليوم الأول من بداية الحيض التالي. ويبلغ عادة طول الدورة الشهرية 28يوماً، ولكنها تختلف من فتاة الى أخرى، فقد تتراوح بين 22-35يوما. ويعتبر أول يوم من الحيض هو اليوم الأول من الدورة الشهرية، ويستمر لمدة 3-7أيام باختلاف من فتاة الى أخرى.
أما الاباضة (أي انطلاق البويضة من المبيض الى قناة فالوب) فتحدث عادةً في اليوم الرابع عشر من الدورة الشهرية.

يحدث أول حيض في حياة الفتاة عادة دون سابق إنذار، وقد لا يستمر الحدوث شهرياً في البداية. فمع أن الدورة الشهرية تكون منتظمة منذ البداية لدى بعض الفتيات، إلا أنها تحتاج لبضعة أشهر أو سنوات لدى البعض الآخر حتى تصبح منتظمة. ولا يجب القلق فهذا أمر طبيعي. أما إذا تأخرت الدورة الشهرية عنسن 15سنة، فينصح باستشارة الطبيب.

يتغير لون وكمية الحيض من أول يوم الى آخر يوم. ففي البداية يكون الحيض مائلاً الى البني، ومع تقدم الدورة يزداد تدفق الدم ويزداد لونه حمرة. وعند انتهاء الحيض يميل الى اللون البني.

الأعراض المصاحبة للحيض:

الأعراض المصاحبة للحيض تظهر عادةً خلال فترة 7أيام قبل حدوث الحيضِ، وهي تختلف من فتاة الى أخرى. ومن الأعراض الشائع حدوثها ما يلي:

- تقلب في المزاج قبل وأثناء الحيض.
- توتر في الأعصاب وصداع.
- آلام في أسفل الظهر.
- آلام في أسفل البطن.
- انتفاخ في الثديين.

بعض المشاكل التي قد ترا فق الحيض:

- عدم الانتظام في عدد أيام الحيض، وكذلك عدم انتظام مدة الدورة الشهرية عند بعض الفتيات.
- عدم انتظام في حدوث الحيض.
- نزيف مصاحب للحيض. عادةً يتخلص الجسم من 2-4 ملاعق كبيرة من الدم. في حالة حدوث نزيف شديد مصاحب للحيض أو استمراره لفترة طويلة يجب استشارة الطبيب، فقد يؤدي النزيف الشديد الى فقر الدم.

الأسباب التي قد تؤدي الى اضطرابات في الدورة الشهرية:

- الضغوط والاضطرابات النفسية(القلق التوتر، والخوف الخ، مثلاً في فترة الامتحانات).
- المرض.
- السفر الطويل والشاق.
- - تغير مكان الإقامة
- - انخفاض الوزن.

العناية بالجسم أثناء الحيض:

1. الاستحمام يوميا لتنشيط الدورة الدموية ونزول الدم بدون ألم وللتخلص من الرائحة غير المستحبة.
2. القيام بالتمارين الرياضية.
3. الحفاظ على نظافة المنطقة التناسلية لتجنب الالتهابات. ويتم تنظيف الفرج من المنطقة التناسلية أولا ثم باتجاه فتحة الشرج. وذلك لمنع انتقال الجراثيم من فتحة الشرج الى الأعضاء التناسلية.
4. استخدام الفوط الصحية.
5. التغذية السليمة.
6. يفضل تجنب عمل مغاطس الماء الساخن أثناء الحيض لان ذلك يزيد من احتقان الحوض ومن النزيف الرحمي.

اللقاء الثاني
تعزيز الصحة النفسية

الهدف

يهدف هذا اللقاء الى تعزيز الصحة النفسية والعاطفية لدي الفتيات وذلك من خلال إعطاءهن المعلومات حـول فهم الإنسان بطبيعته وقدراته لزيادة الثقة بنفسهن وتحقيق ذاتهن

مجريات اللقاء

تم تقسيم هذا اللقاء الى جزأين حيث كل منهما يتطلب 45 دقيقة

تعريف الصحة النفسية

الإنسان الذي يتمتع بصحة نفسية هو القادر على التفاعل الإيجابي مع واقعه من منطلق فهم واضح لذاته وللبيئة المحيطة به مشبعا بذلك لاحتياجاته ومتوافقا مع معايير المجتمع الذي يعيش به (دليل تدريبي فـي صـحة المراهقـة، 2000)

بعد نهاية هذا اللقاء سيتمكن الطالبات من:-

1. القدرة على التعامل الإيجابي مع المجتمع من خلال التعرف على الذات والمؤثرات الخارجية في تكوينها.
2. القدرة على مواجهة التوتر والضغوط بطريقة إيجابية.
3. معرفة وتفهم احتياجات الآخرين وانفعالاتهم والتجاوب معها بإيجابية.
4. القدرة على حل المشكلات التي تواجهه دون تردد أو اكتئاب.
5. الشعور بالرضا والإشباع من الحياة العائلية والعمل والعلاقات الاجتماعية.

التعرف على الذات

الذات: هي كيف يرى الإنسان نفسه عاطفيا وعقليا وبدنيا بما في ذلك قدراته الخاصة، وعيوبه، وكيف يراه الآخرون.

العوامل المؤثرة في تكوين الذات

- البيئة المحيطة:خاصة العائلة والأصدقاء، فالإنسان يكتسب كل معتقداته ممن حوله ومن نشأته وهكذا يكون تأثير البيئة كبير في تكوين الذات.
- كون الشاب ذكر أو أنثى: يحدد المجتمع الأدوار التي يقوم بها كل من الذكر والأنثى وبناء على هذه الأدوار يـتم تكوين المعتقدات لكل منهم.
- القيم: هي من أهم العوامل المؤثرة في تكوين الذات حيث يتحدد بناء عليها اهتمامات الشباب وميوله.

ومن النقاط السابقة نستنتج أن: ذات الإنسان= معتقداته عن نفسه وعن الآخرين وعن الحياة. وهنا نطرح السؤال التالي:

كيف يمكنك اكتشاف ذاتك؟

لكي تكتشف ذاتك يجب أن تعرف ما هي معتقداتك حيث أن معتقداتك تشكل حياتك، والمعتقدات تنقسم الى نوعين:

معتقدات إيجابية: وهى عبارة عن الأفكار التي تساند صحة أنك إنسان تتمتع بصفات جيدة وأن لك قيمة في الحياة. وفيما يلي بعض الأمثلة عن المعتقدات الإيجابية التي لها آثار جيدة تنعكس على أسلوب حياتك
مثال1: علاقتي بالآخرين تساهم في سعادتي الخاصة: هذا المعتقد إيجابي لأنه يجعلك تتصرف بإيجابية مع الآخرين من أجل الوصول الى السعادة. مثال2: لكل إنسان جانب خير:هذا المعتقد إيجابي لأنه يجعلك تنظر الى الإيجابيات في علاقاتك بالآخرين

معتقدات سلبية: وهى عبارة عن الأفكار السلبية التي تحد قدراتك على الإنجاز والسعادة والصحة، وفيما يلي بعض الأمثلة عن المعتقدات السلبية والتي قد يكون لها تأثير سلبي على أسلوب حياتك: مثال1: حياتي ليس لها قيمة أو هدف:هذا معتقد سلبي لأنه يحد من إيجابياتك في المجتمع ومن طموحك لتحقيق ذاتك. مثال2: الحياة غابة والإنسان يصارع فيها من أجل البقاء:هذا معتقد سلبي يحتوى على نظرة تشاؤمية للحياة تحبط من طموح الإنسان.

الضغوط العصبية: الكثير منا يتمتع بصحة نفسية جيدة معظم الوقت ولكن في بعض الأوقات تحدث ضغوطا عصبية شديدة، كالحزن على فقد إنسان عزيز أو حدوث مشاكل في الدراسة أو العمل أو الأزمات المالية أو المرض أو القلق على المستقبل.

ومع أن هذه الضغوط لا تحدث أمراضا عقلية أو نفسية في أغلب الأحيان ولكن من الممكن أن تلعب دورا في جعل الإنسان أكثر عرضة للأمراض، وحتى نستطيع أن نتحمل الضغوط في الحياة نحتاج الى إطار نفسي وصحي سليم كما نحتاج الى جسم صحي وسليم.

أنواع الضغوط التي يتعرض لها الفتيات:

✧ *الضغوط العائلية:*

- كثرة المجادلة مع الأخوة والأخوات والوالدين.
- التوقعات العائلية من الفتاة من ناحية الإنجاز الدراسي والعمل البيتي.
- ازدحام المنازل وافتقار الخصوصية.
- العنف داخل المنزل.

- الشعور بالتميز بالمعاملة بين الأخت وأخيها.
- الضغوط الاقتصادية

✧ *ضغوط من الزملاء والمحيط المدرسي:*
- القلق من أن لا يكون محبوبا ومقبولا بين زملائه.
- الضغط على الفتاه من قبل أصدقائها لعمل أفعال تتنافي مع مبادئها ومعتقداتها.
- الضغوط الدراسية والمسؤولية بالمنزل: مثلا مساعدة والدتها، العناية بأخوتها

✧ *الضغوط المجتمعية: الشعور بعدم الحرية في المشاركة بالنشاطات المجتمعية:*
- الشعور بالتمييز ضد الفتاه في المجتمع المحافظ كما هو في فلسطين
- الصراعات الشخصية وظهور العنف داخل الجامعة ووجود القيادات المتطرفة.
- الشعور بعدم الاحترام أو الاهتمام من رفقاء الدراسة.
- التأثير الشخصي على الطالب من المدرسين والمحيطين به.

✧ *الضغوط من خلال وسائل الإعلام:*
- العنف والجنس في الأفلام والمسلسلات وحتى أنواع الموسيقى العنيفة.
- كيفية التخلص من الضغوط (مرفق).

تأثير الضغوط العصبية على جسم الإنسان:

أي تغييرات جوهرية في الروتين اليومي للحياة سواء أكان للأحسن أو للأسوأ يضع أعباء نفسية وانفعالية على الإنسان، فقد أظهرت الأبحاث العلمية أنه كلما تراكمت الضغوط لدى شخص ما فانه يصبح أكثر استعدادا للإصابة بالأمراض الجسدية والنفسية وحتى للإصابات الناتجة عن الحوادث

الجزء الثاني من هذا اللقاء ولمدة 45 دقيقة تناول مواضيع الثقة بالنفس والإنجاز وتقييم الذات:-

الثقة بالنفس الإنجاز وتقييم الذات

1. الثقة بالنفس

الهدف: يهدف هذا الجزء من اللقاء الى تعريف الطالبات بأهمية الثقة بالنفس وبأهمية الإنجاز وتقييم الذات، وقيمة هذه المهارات في الصحة النفسية وتأثيرها على الحياة العملية للإنسان.

بعد نهاية اللقاء، ستتمكن الطلبات من القيام بما يلي:

1. توضيح أهمية الثقة بالنفس في مواجهة المواقف والأحداث المتغيرة في الحياة.

2. التعبير عن نقاط القوة والضعف في ذاتهم.
3. تعريف مفهوم الإنجاز وتقييم الذات.
4. تحديد المهارات التي تساعدهم في إنجاز مهامهم الحياتية.
5. تقبل آراء الآخرين والنقد البناء.

مجريات اللقاء بالنسبة الى موضوع الثقة بالنفس حيث تم النشاط التالي:

أجرت المدربة نقاشاً مع الطالبات حول مفهوم الثقة بالنفس اعتماداً على الأسئلة التالية:

ما معنى الثقة بالنفس؟ - ما أهميتها؟ - كيف يمكن تنميتها؟ - ما الذي يمكن أن يعيق تنميته

بناء على النقاش الذي حصل بين المدربة والطالبات، لخصت موضوع الثقة بالنفس كما يلي:-

الثقة بالنفس: صفة جيدة وممتازة يجب على كل فرد التجلي بها. وهي تشمل أكثر من معنى: فهي تشمل نظرة الفرد لذاته، وتصوره عن ذاته وقيمته كفرد. فهو يشعر بالراحة ويستطيع التصرف في حياته اليومية بشكل مريح، ولا يشعر بضغط نفسي كبير، إذا كان يملك ثقة بنفسه. الشخص الواثق من نفسه هو الشخص الذي يثق بقدراته وبشخصيته وبأدائه، يحب ويحترم ذاته. الثقة بالنفس تساعد الفرد على أن يطور قدرته على مواجهة المواقف والأحداث اليومية المتغيرة في الحياة.

لكي ينمي الفرد ثقته بنفسه، يجب عليه:

1. أن يثق بقدراته العقلية والجسدية، وبأنه يملك طاقة ومبادرة في المشاركة والعطاء، وأن له القدرة على التواصل في الحياة اليومية والعملية والأكاديمية، مثل المدرسة.من الأمثلة على ذلك: أنا أقدر أن أقوم بذلك، أنا عنصر ذو قيمة وقادر في مجموعة الصف وأية مجموعة.
2. قهر الخجل والتغلب عليه، لأن الخجل يؤثر على سلوك الفرد، ويجعله مرتبكاً، ويؤثر على الأداء ويشكك الفرد بقدراته. قد تكون تربية الأهل مسؤولة عن الخجل أو قد يكون للمدرسة أو المجتمع دور في ذلك. من الأمثلة على ذلك: حل المشاكل والتناقضات،النقد للآخرين واستقبال النقد من الآخرين.الشعور بالثقة من قبل الآخرين.
3. الثقة بالأداء، فإنها تساعد الفرد على أن يقوم بمهماته على أكمل وجه وبدون أدنى ارتباك. فإذا كان الشخص واثقاً من أدائه فانه ينجز مهماته بشكل سريع وممتاز ويظهر ثقة بالنفس.
4. أن يتعرف على نقاط الضعف والقوة في شخصيته، والتي تساعده على التعرف على ذاته أكثر، وقياس وتقييم قدراته وأدائه، وتطوير نفسه في المستقبل. والتعرف على نقاط الضعف والقوة شئ صحي بالنسبة للإنسان، ويؤهله لأن يملك قدرة عالية على التعامل مع الآخرين والمجتمع بشكل واثق ومتمكن. ويتم ذلك من خلال تقبل النقد البناء من الآخرين، لأن ذلك يساعد كثيراً في التعرف على الذات:

كيفية استقبال النقد من قبل الآخرين:

- استمع جيداً لما يقال عنك.

- احكم بنفسك فيما إذا كان هذا النقد صائباً.
- لا تجادل. وضح إذا أصاب النقد شعورك وجرح نفسيتك.

5. التعبير عن الذات وتقبل آراء الآخرين والنقد البناء: وذلك من خلال أن يعبر الفرد عن آرائه ومعتقداته ومشاعره وأحاسيسه أمام الآخرين بدون خوف أو خجل، وتقبل آراء الآخرين والإصغاء الجيد لهم والتفكير في آرائهم وعدم رفضها بشكل مباشر، وتقبل النقد البناء، لأن ذلك يساعده في تطوير ذاته.

2. الإنجاز وتقييم الذات:

أجرت المدربة نقاشاً بين الطلبة حول مفهوم الإنجاز وتقييم الذات من خلال طرح الأسئلة التالية:

- متى تشعرون بأنكم أنجزتم شيئاً يثير الرضا والسعادة لديكم؟
- كيف تعبرون عن هذا الرضا أو هذه السعادة؟
- كيف تعبرون إذا أخفقتم في تحقيق إنجاز ما؟
- ما الذي يمكن أن يكون السبب وراء إخفاقكم؟
- ما القدرات التي يمكن أن تساعدكم على تحقيق الإنجازات؟

وبناء على النقاش الذي حصل بين المدربة والطالبات، لخص موضوع الإنجاز وتقييم الذات كما يلي:-

الإنجاز وتقييم الذات

يرى علماء النفس والاجتماع أن الكائن البشري يسعى في مسيرة حياته باستمرار نحو اللذة، باحثاً فيها عن مشاعر الارتياح والأمان والسعادة والمتعة، ويبتعد عن التجارب التي قد تجلب أو تولد مشاعر الألم، ولذلك ينفر منها الكائن البشري ويحاول تجنبها. وذلك هو الحال بالنسبة للإنجاز أو النجاح الذي يحصل عليه، إذ يخلق مشاعر الراحة والمتعة والشعور بالرضا عن النفس، وبالتالي تدعيمها وتعزيزها.

ولكي نوصل هذه المفاهيم للطالبات وبلغة بسيطة يمكن في البداية أن نتوجه إليهم بالأسئلة التالية:

- ما هي المواقف التي يشعرون فيها بالراحة- بالسعادة- بالمتعة؟
- عندما يحقق الطالب إنجازا في جانب من حياته، ماذا يقول لنفسه؟
- كيف يعبر عن المشاعر المتولدة من النجاح أو الإنجاز؟

في الكثير من الأحيان، قد نشعر بالرضا والفخر بأنفسنا عندما نستطيع أن نحقق أمر ما، وخصوصاً إذا لاقى ذلك الاستحسان والرضا من الآخرين.. فهذا يعني أن لدينا قدرات إيجابية جيدة ساعدت على إنجاز أمر ما. ولكن في أحيان أخرى أيضاً قد نخفق في إنجاز أمر ما أو إتمام مهمة ما، وقد تكون عدة أسباب لذلك، وجزء منها متعلق بقدرات الطالبات:

1. يمكن أنه لم يتم استخدام القدرات من قبل الطالبة بالشكل المطلوب.
2. قد تكون هذه المهارات غير مبنية بعد بشكل كامل عند الطالبة.
3. من المهارات التي يجب تبنيها لزيادة فاعلية الطالب في التأثير على الظروف البيئية من حوله ونجاحه في استثمارها بما يعود على الآخرين بالنفع:
   - لقدرة على التخطيط.
   - القدرة على تحمل الإحباط، والقبول بمبدأ الربح الخسارة في المجريات الحياتية.
   - القدرة على تحمل المسؤولية والالتزام.
   - القدرة على حل المشكلات أو التعامل مع المواقف الضاغطة.
   - القدرة على التفاعل والتواصل مع الغير بشكل إيجابي.

اللقاء الثالث

العلاقات الإنسانية/الاجتماعية وأنواعهما

الهدف

يهدف هذا اللقاء الى تعزيز مفاهيم العلاقات الاجتماعية لدى الفتيات من خلال إعطاءهم المعلومات حول التواصل الفعال لمحيطهم العائلي، المدرسي والمجتمعي.

بعد نهاية اللقاء، ستتمكن الطلبات من معرفة وبحث ما يلي:

1. أنواع العلاقات الإنسانية مثل علاقات الزمالة، العلاقة الأسرية، علاقة الصداقة والعلاقة العاطفية
2. كيفية تنمية النجاح علاقات الفتيات بالآخرين
3. التعرف على مفهوم الأسرة من ناحية خصائصها، وظائفها، وتأثيرها على سلوك أفرادها
4. التعرف على مفهوم الصداقة وكيفية اختيار الأصدقاء
5. أهمية عملية الاتصال والتواصل وتأثيرها في بناء العلاقات الإنسانية والاجتماعية
6 مفهوم العلاقات الإنسانية، مفهوم الأسرة و الصداقة تم بحثهم بأول 25من اللقاء

العلاقات الإنسانية:

هي الصلة التي تربط بين الأفراد داخل الوحدات الاجتماعية بعضهم ببعض، مثلاً هي الصلة بين المعلم والطالب، الزوج والزوجة، صاحب العمل والموظف.....الخ.

1- **علاقة الزمالة:** تنشأ علاقة الزمالة بين فردين أو أكثر نتيجة المشاركة في نشاط ما سواء في العمل المدرسة أو غيرها وقد تكون بداية للصداقة أو تستمر كعلاقة زمالة.

2- **العلاقة الأسرية:** تعد الصلات الأسرية من أقوى الروابط التي تربط الأفراد بعضهم ببعض وتختلف هذه الصلات باختلاف المجتمعات، ونستطيع أن نقسم المجتمعات من هذه الوجهة الى نوعين:
مجتمعات عصبية: هذه المجتمعات تغالي في قيمة الروابط الأسرية. ومجتمعات تسودها الفردية نتيجة إنكار قيمة الروابط الأسرية.

3- **علاقة الصداقة:** الإنسان اجتماعي بطبيعته ويحب الاختلاط، وعلى الإنسان أن يختار أصدقائه بدقة وذلك لما لعلاقة الصداقة من تأثير على السلوك الاجتماعي للإنسان.

4- **العلاقة العاطفية:** يعتبر الحب من أقوى وأسمى العلاقات الإنسانية والأساس الأول الذي تقوم عليه أية علاقة إنسانية. يعرف الحب على أنه مجموعة من الانفعالات الصادقة التي تتكرر وتنتظم حول موضوع واحد يكون هو موضع العاطفة.

تنشأ علاقة الحب بين الرجل والمرأة نتيجة للتعاون والأخذ والعطاء والشعور بالارتياح حيال بعضهم البعض ثم يبدأ الإحساس بالحب ويأخذ في النمو ببطء الى أن يصبح عاطفة قوية يشعر بها كل منهم تجاه الآخر.

كيف يمكنك تنمية وانجاح علاقاتك بالآخرين ؟

العوامل التالية تساهم في إنجاح العلاقات الإنسانية إذا ساهم بها كل من طرفي العلاقة:

1- **الاحترام:** أن تحترم الآخرين وتنظر إليهم نظرة تقدير وتعاملهم على أنهم قيمة حقيقية حتى مع اختلافهم عنك. مثال1: احترام الوالدين باتباع القواعد التي يضعونها لك. مثال2: احترام الشاب لزميله عن طريق الإنصات له عند التحدث وعدم مقاطعته.

2- **تحمل المسئولية:** أن تتحمل المسئولية يعنى إمكانية اعتماد الآخرين عليك وأن تكون محل ثقتهم وأن تفي بالالتزامات الخاصة بك مع استطاعتك أن تفرق بين الصواب والخطأ. مثال1: الالتزام بالمواعيد مع الأصدقاء.مثال2: المشاركة الإيجابية في بعض النشاطات الأسرية.

3- **التفهم:** هو الإلمام باحتياجات الشخص الآخر، ماذا يريد وكيف يشعر التفهم يعنى أيضا إمكانية أن يضع الشخص نفسه في موضع شخص آخر ويتخيل الحياة من منظور آخر أو وجهة نظر أخرى. مثال: الاستماع الجيد لصديق عند مواجهته لمشكلة معينة ومحاولة مساعدته على حلها.

4- **بذل الجهد:** يعنى العمل بجد وصدق لانجاح العلاقة حتى يستفيد الطرفان. مثال: أن تعمل جاهدا لإظهار مشاعرك للشخص الآخر وتوصيل هذه المشاعر بأمانة.

5- **الرعاية المتبادلة:**الرعاية تعنى الاهتمام بمشاعر ورغبات واحتياجات الشخص الآخر ومعرفة ما هو الأفضل بالنسبة له. وهى تعنى أيضا الإحساس بالحب تجاه شخص معين والرغبة في حمايته والعناية به. مثال: يمكن إظهار الرعاية عن طريق مساعدة أحد أفراد الأسرة عند المرض بمحاولة الترفيه عنه بإحضار الكتب والمجلات وزيارته للتخفيف عنه.

تم عرض النتائج النوعية لإجابات الطالبات بالمرحلة_الأولى من الدراسة(the subjective questions) حيث عبرن عن شعورهن من خلال إعطائهن الفرصة لكتابة معتقداتهن ومواقفهن بالنسبة لما يشعرن به اتجاه أنفسهن،عائلاتهن ومجتمعهن.

ثم تم تقسيم الفتيات الى ثلاث مجموعات حيث طلب من كل مجموعة منهن أن تبحث جزء من هذه الإجابات.بعد ذلك تم شرح جميع الاهتمامات والتساؤلات كالتالي:

مفهوم الأسرة، وتأثيرها على سلوك أفرادها

الأسرة من الظواهر الاجتماعية التي ينطبق عليها تعريف النظام الاجتماعي فهي عبارة عن وظائف حيوية متشابكة ومتداخلة محاطة بمجموعة من المعايير الاجتماعية تنسق عملها وتسهل مهمتها وتربطها بنظم أخرى كالنظم الدينية والاقتصادية.

خصائص الأسرة:

- تقوم الأسرة على رابطة زوجية تجمع بين الزوج والزوجة وتكون قابلة للانفصال في بعض البيئات وينتج عن هذه الرابطة ما نسميه بصلة الدم والقرابة.
- تزاول الأسرة نوعا من النشاط الاقتصادي عن طريق القيام بجهود مختلفة تدر دخلا كافيا لها أو عن طريق حيازة بعض الممتلكات.
- الحياة داخل الأسرة تقتضي تقسيم العمل فنجد أن للذكور عادة أعمال يختصون بها وهذا يعزز استقرار البيت مع عدم إغفالنا بأن هناك أعمال كثيرة مشتركة بين الذكور والإناث وأعمال يمكن أن يقوم بها كل منهما.

وظائف الأسرة:

- وظائف بيولوجية كإرضاء الرغبات الجنسية للأزواج والزوجات ومن ثمرة ذلك إنجاب الأطفال.
- وظائف نفسية وعاطفية وتتصل بتوفير الاستقرار والأمن والحماية لأعضاء الأسرة كما تتصل بالحنو على الصغار مدة طفولتهم.
- وظائف تربوية وهى وظائف التنشئة الاجتماعية، والأسرة أقدر الهيئات في المجتمع على القيام بذلك.
- وظائف اقتصادية حيث كانت الأسرة في الماضي تنتج كل ما تحتاج إليه تقريبا ولكن نتيجة للتطور أصبح لكل فرد عملة مما أدى الى تضاؤل وظائفها بسبب اعتمادها على مهن أعضائها لسد احتياجاتها.
- وظائف اجتماعية حيث نجد أن الأسرة هي المانحة للمكانة والأدوار المبدئية التي تقوم بها أو بوضع فيها الأفراد.

دور الأسرة في التأثير على سلوكنا

- الأسرة هي الموثر المبكر في سخصية الفرد فهي التي تمده بتجاربه الأولى في هذه الحياة وقبل أن تتصل به أي جهة أو هيئة لمحاولة التأثير عليه حيث أن الأسرة تضع النواة الأولى لعادات وتقاليد المجتمع داخل الطفل.
- التجارب الأسرية لها صفة التكرار فالأسرة تمارس تجربتها وضغطها على الطفل بصورة مستمرة ومتكررة حيث أن الأسرة لا تتغير في حين أن أصدقاء اللقب ومدرسي الطفل في تغير مستمر.
- الأسرة هي الهيئة الكبرى لنقل الثقافة، فالطفل يكتسب ثقافة الوسط الذي يعيش فيه عن طريق الأسرة متأثرا بأوضاعها. مثال: طفل نشأ في منزل يلتزم الوالدين فيه بالوقار الديني، فينشأ الطفل ملتزما بالوقار الديني
- التعاون الأسرى والاعتماد المتبادل بين أعضاء الأسرة يخلق منها جماعة مترابطة ووحدة متماسكة لمواجهة أحداث الحياة.
- القدوة الأسرية في أعين الطفل تتمثل بجدارة في الأب أو الأم أو الأخ الكبير ذلك لأنهم نماذج أكثر ثباتا من غيرهم.مثال: معظم أبناء الأساتذة الجامعيين يتجهون الى سلك التدريس الجامعي اقتداء بوالديهم وكذلك أبناء الأطباء والحرفيين.

الصداقة: تعريف الصداقة

هي تفاعل بين طرفين على مستوى العقل والعاطفة في إطار من الثقة، وتنشأ الصداقة على أساس من الحب والاحترام والتفاهم بغض النظر عن نوع وجنسية ودين وثقافة الأطراف.

أنواع الصداقة

- صداقات التجمعات غير الرسمية: وهى التي يؤلفها الأصدقاء بشكل غير رسمي والمتمثلة في جماعة اللعب وشلة الأصدقاء.
- صداقات التجمعات الرسمية: وهى الجماعات التي تميل الى التنظيمات الرسمية كالأندية والنقابات والجمعيات ويجب الإشارة الى الدور الهام والفعال للهيئات التي تعمل على بناء الشخصية منذ الصغر وحتى ما بعد الرشد بمناهجها وتعاليمها مثل الكشافة لما لها من دور في نمو شخصية الفرد كذلك مراكز الشباب والجمعيات الأهلية.

معايير اختيار الأصدقاء

1. التفاهم والثقة والاحترام: عند اختيار الأصدقاء عليك أن تشعر نحو صديقك بالتفاهم وأنه محل ثقة لديك وأن بينك وبينه احترام متبادل.
2. تبادل الخبرات: الصديق هو الذي يمكن أن تتبادل معه الخبرات وتشعر بأنه لا يبخل عليك بأفكاره ويتقبل منك النصيحة.
3. تقارب الآراء والأفكار: عند اختيار الصديق يجب أن تكون آراءك وأفكارك قريبة الى حد ما من آراء وأفكار صديقك.
4. الأخلاقيات: الصديق الوفي هو الصديق الذي يكون على خلق ومحبوب وتصرفاته غير منتقدة وتجده الى جانبك في وقت الشدة.
5. البعد عن المنفعة الشخصية: العلاقة المبنية على منفعة فقط لا تدوم حيث تنتهي بانتهاء المنفعة بينما مع وجود المودة والحب تستمر العلاقة وتقوى.

ومن ثم تم شرح أهمية وكيفية التواصل الفعال من ضمن نقاش مشترك بين المدربة والطالبات ولمدة 15دقيقة لأهمية هذا الموضوع للحصول على الثقة بالنفس ومن ثم اتخاذ القرارات المناسبة

عملية الاتصال والتواصل

مقدمة: يعتبر الاتصال من الحاجات الضرورية والهامة في حياتنا التي لا يستطيع الفرد الاستغناء عنها. وتبدأ عملية الاتصال منذ ولادتنا، وتستمر طوال حياتنا. وتعتبر حياتنا بدون اتصال حياة جافة وقاسية. فبدون اتصال الفرد مع زملائه وأفراد أسرته، تكون حياته شاقة. مثلاً:

1- الطفل الصغير يضحك عندما نتحدث معه أو نلاعبه.
2- لا نستطيع العيش لوحدنا في غرفة مغلقة.
3- حاجة كل منا أن تكون له أسرة ينتمي إليها واسم ينادى به.

تعريف الاتصال:

يمكن تعريف الاتصال على انه عملية متبادلة لنقل معلومات وأفكار بين طرفين هما مرسل ومستقبل: والرسالة هي المضمون الذي يريد أحد الطرفين توصيلة للطرف الآخر. بمعنى آخر، الاتصال عبارة عن تبادل الأفكار والعواطف والمعلومات(بالكتابة أو بالكلام، أو بالإشارة) بين مرسل ومستقبل. عندما نتكلم نريد من يسمعنا، وعندما نكتب نريد من يقرأ لنا، وعندما نبتسم نريد من يستقبل ابتسامتنا ويفهمها.

أشكال الاتصال:

1- الاتصال اللفظي، الذي نتحدث فيه ونستخدمه في الكتابة والقراءة.

2- الاتصال غير اللفظي: لغة الإشارات، ولغة أعضاء الجسم.

لغة الجسم- الاتصال غير اللفظي 70%، الإيحاء 20%،الكلمات 10%.

عملية الاتصال تتوقف على عدة عوامل منها:

طبيعة العلاقة بين المرسل والمستقبل، وهل يوجد تقبل أم لا. الثقة وعدم الثقة. مدى الانسجام. الأسلوب، هل هو فوقي أو مريح. المكان والزمان المناسبان.

تتوقف عملية الاتصال الفعال على المرسل والمستقبل:

المرسل: (الطالبا‌ة أو المعلما‌ة)	المستقبل: (الطالبا‌ة أو المعلما‌ة)
غير خجول بطرح القضية المهمة له. يحترم رأيه ورأي الآخرين. يأخذ بعين الاعتبار حقوق الآخرين	يبدي الاهتمام بالموضوع أو القضية المطروحة 1. يحترم رأي الآخرين ويحترم نفسه. 2. يأخذ المسؤولية على عاتقه(أنا غير راض، أنا موافق وو وهكذا

معيقات الاتصال من طرف المرسل: عدم وضوح هدف الاتصال. عدم التناسب بين الاتصال اللفظي ولغة الجسم مثلاً: عدم تناسب تعابير الوجه مع الكلام الخوف أو التوتر أو الضغط النفسي. اختيار مكان غير مناسب. استعمال أسلوب فوقي.

معيقات الاتصال من طرف المستقبل: عدم الإصغاء الجيد. عدم الاكتراث بموضوع الاتصال. الخوف أو التوتر أو الضغط النفسي. المجادلة أو طرح أسئلة أو ردود مستفزة. السخرية أو التهكم وجود فرق في المفاهيم بين المرسل والمستقبل وعدم توفر راحة نفسية في الجو المحيط

طلب الدعم والمساعدة اتخاذ القرار

مقدمة: وضحت المدربة أن هذا الجزء من الوحدة يتناول المهارات الحياتية التي تساعد الإنسان على القيام بدور فاعل في علاقاته الاجتماعية وإجراء الاختيارات السليمة في سلوكه. يركز هذا اللقاء على مهارة طلب الدعم والمساعدة ومهارة اتخاذ القرار.

الهدف: يهدف هذا اللقاء الى تعريف الطلبة بوسائل اتخاذ القرار وكيفية طلب الدعم المساعدة، كمهارتين حياتيين ضروريتين.

بعد نهاية اللقاء، ستتمكن الطلبة من القيام بما يلي:

1. التمييز بين المواقف الضاغطة وتحديد الاقتراحات والآليات لمواجهة هذه الموافق
2. زيادة الثقة بالنفس، والقدرة على المواجهة والتعبير
3. تحديد مفهوم اتخاذ القرار وكيفية تحقيقه.
4. اتخاذ القرارات بشكل مستقل

مجريات اللقاء

2. اتخاذ القرار

ناقشت مع الطلبة مفهوم اتخاذ القرار والمواقف التي يحتاجون لاتخاذ قرارات فيها، بحيث يعطون أمثلة على مواقف يكون فيها اتخاذ القرار سهلاً وفورياً ومواقف أخرى تحتاج الى ترو وتفكير، أو حتى طلب المشورة من الآخرين. أكداي على أن مهارة اتخاذ القرار تساعد الإنسان على الاستقلالية وعمل الاختيارات السليمة.

طلب الدعم والمساعدة

في الكثير من المواقف الحياتية والتجارب اليومية مع الآخرين يعيش الطالب\ة تجارب ضاغطة قد تؤثر على فعالية أدائها في الجوانب الحياتية المختلفة.

وحتماً يمتلك الطالب القدرة والمارة على التعرف على هذه المواقف وعلى الجهات التي يمكن الاستعانة بها لتوجيه طاقاته نحو التقلب على هذه المواقف، وكيفية الصيغ التي سيتوجه بها.

من المهم للطالب التعبير عن هذه المواقف وما يمكن أن يفعله تجاهها، وذلك لكي يتمكن من فهم الآلية التي يستخدمها في تحديد الى من سيتوجه وكيف سيتوجه طلباً للدعم والمساعدة.

اتخاذ القرار

نحن نتخذ قرارات بشكل يومي عدة مرات. فنحن نقرر ماذا نأكل أو نلبس أو من نصاحب أو كيف ندرس. أيضاً نتخذ قرارات حول من نساعد وكيف، وحول كيفية الذهاب الى المدرسة، وكيف ننفق مصروفنا وهكذا.ان اتخاذنا القرارات الصائبة يعتمد على قدرة الشخص وخبرته في فهم الأمور وتحليلها. ولا ننسى أن هذه المهارة تبدأ ونحن في جيل صغير، فإذا تعودنا عليها ووجدنا من يساعدنا على اتخاذ القرار بشكل مستقل يساعدنا هذا كله على تنمية الشخصية وتحمل المسئولية.

وفي مجتمعنا نرى أن القليل من الأسر تفسح المجال لأولادنا لاتخاذ قراراتهم باستقلالية. وبالمقابل، فان أغلبية الأسر تتخذ القرارات نيابة عن أبنائها، حتى في التعليم والطعام واللباس، الخ مما يخلق من الابن شخصاً اعتمادياً غير واثق من نفسه وغير اجتماعي.

هنالك طريقة وضعها العلماء في مجال علم النفس والاجتماع مكونة من خمس مراحل توضح كيفية اتخاذ القرار بشكل مستقل:

1. **المرحلة الأولى:** تحديد الهدف بوضوح، لأنه بذلك يوجه خطواتنا نحو اتخاذ القرار.
2. **المرحلة الثانية:** التفكير بأكبر عدد مكن من الامكانيات، فمنها يستخلص وينبثق القرار.
3. **المرحلة الثالثة:** فحص الحقائق مهم جداً فعدم توفر المعلومات قد يقودنا الى قرار غير صحيح.
4. **المرحلة الرابعة:** التفكير في الايجابيات والسلبيات للقرار الذي تم اتخاذه، فيجب فحص كل امكانية وما يمكن أن ينتج عنها وقياس مدى كونها مناسبة أو غير مناسبة. ومراجعة جميع المراحل مرة أخرى، والانتباه فيما اذا أضيفت معطيات جديدة أو حدث تغيير. ثم نقرر بعدئذ. واذا لم يكن القرار مناسباً يمكن عمل فحص جديد.

اللقاء الرابع:الزواج والعلاقة بين
الرجل والمرأة (الجندر)

الهدف

يهدف هذا اللقاء الى زيادة معرفة الفتيات بمفهوم الزواج والعلاقة الجنسية بين الزوجين والعوامل المؤثرة عليهما. والتميز بالعلاقة بين الرجل والمرأة والفرق بين أدوارهما من الناحية البيولوجية والاجتماعية.

بعد نهاية هذا اللقاء، ستتمكن الطلبات من معرفة وبحث ما يلي:

1. العلاقة بين الرجل والمرأة
2. مفهوم الزواج والعوامل الموثرة لإنجاح.
3. الفرق بين الأدوار البيولوجية والأدوار من حيث النوع بين الرجل والمرأة.

مجريات اللقاء

قسم اللقاء الى جزئين حيث أن الجزء الأول ولمدة 45 دقيقة تم شرح الفرق مفهوم العلاقة بين الرجل والمرأة من الناحية البيولوجية والاجتماعية(الجندر) والجزء الثاني تم شرح مفهوم الزواج ومؤشرات الزواج الناجح

النشاطات المتعلقة بهذا الجزء من اللقاء :

حيث تم تقسيم الفتيات الى مجموعتين حيث طلب من المجموعة الأولى الإجابة على سؤالين ولمدة 10 دقائق ، عن أهمية الولد أو الذكر للعائلة ولماذا يفضل والمجموعة الثانية عن أهمية الفتاة أو الأنثى للعائلة ولماذا تفضل ثم تم شرح هذه النقاط كما يلي:-

العلاقة بين الرجل والمرأة

الجندر كلمة تشير الى الأدوار الاجتماعية للنساء والرجال والمسئوليات المرتبطة بهذه الأدوار، وتقسيم هذه الأدوار ليس محددا بيولوجيا وانما هو تقسيم اجتماعي ومفهوم الجندر هو الذي يمكننا من التمييز بين الفروق البيولوجية بين المرأة والرجل والفروق في الأدوار الاجتماعية والتي تحدد أدوارا مختلفة لكل من المرأة والرجل.

ولقد جاء في التشريع الإسلامي تحديدا عادلا لدور المرأة في المجتمع حيث قضى على مبدأ التفرقة بين الرجل والمرأة في القيم الإنسانية المشتركة، كما قضى على مبدأ التفرقة بينهما أمام القانون وفي الحقوق العامة وجعلها مساوية للرجل، فشرع الإسلام المساواة فيما بينهما في الخصائص الإنسانية في الدنيا والآخرة، قال تعالى " **فاستجاب لهم ربهم أنى لا أضيع عمل عامل منكم ذكر أو أنثى بعضكم من بعض". صدق الله العظيم**

فالمرأة في الإسلام لها شخصيتها المدنية الكاملة وثروتها الخاصة المستقلة مثل ما للرجل من واجبات وحقوق، الى جانب هذا فلقد عنى الإسلام بشؤون المرأة من ناحية خصوصيتها وطبيعتها عناية خاصة استهدفت حمايتها وتنظيم وتقوية مكانتها في المجتمع وهكذا فان الشريعة الإسلامية أقرت للمرأة حقوقها وواجباتها منذ أربعة عشر قرنا بما يجعلها باقية على مر الزمان.

ولقد كان ساندا على مدى قرون أن هناك اختلافات اجتماعية بين الرجل والمرأة وسبب هذه الاختلافات وجود اختلاف بيولوجي بينهما مما أدى الى ظهور قيم وأفكار لتقسيم المجتمع الى ما هو رجالي وما هو نسائي.
مثال: *المرأة عاطفية، المرأة لغسل الصحون والاهتمام، بشئون المنزل. *الرجل عقلاني،الرجل يقوم بالأعمال الشاقة.

لكن الدراسات أظهرت أن تلك الصفات تم تحديدها من خلال المجتمع والأسرة بناء على ثقافة المجتمع وإطاره السياسي ومعتقداته، والمجتمع هو الذي يوزع الأدوار المناسبة وغير المناسبة.

وقد ساعد على تأكيد الوضع الحالي للمرأة سيطرة الرجل سيطرة غير واعية اكتسبها من تراكمات ثقافية واجتماعية جعلت منه العنصر المفضل داخل الأسرة في التعليم والرعاية الصحية والتغذية حتى في مجال الترويح وغيرها من مجالات الحياة المختلفة وذلك منذ مراحل الطفولة المبكرة.

وان كانت المرأة قد عايشت هذا الوضع وهى أنثى صغيرة فهي تتحمل تبعاته وهى أم رغما عنها، وتبدأ رحلة جديدة من المعاناة والمشكلات الاجتماعية. ودائرة مغلق تدور في فلكها لمجرد أن الأقدار شاءت لها أن تكون أنثى وبذلك نجد أن للأسرة دور كبير في توزيع أدوار الرجل والمرأة توزيع غير عادل مما أدى الى ظلم المرأة في هذه الأدوار.

ويتضح الفرق بين الأدوار البيولوجية والأدوار من حيث النوع من الشكل التالي:

الجنس: بيولوجية نولد بها	النوع:أد اجتماعية حسب الجنس لا نولد بها
وبالتالي لا يمكن تغيير الصفات البيولوجية - أدوار الحمل والولادة للنساء فقط. - الرجل الوحيد القادر على الإخصاب.	وبالتالي: يمكن تغيير الأدوار الاجتماعية 1- يمكن للنساء أن تقوم بكل الأعمال التي تسند للرجال 2-يستطيع الرجال أن يقوموا برعاية الأطفال.

أدوار الرجل والمرأة من حيث النوع ونظرة كل منهما للآخر:

قد يتم تقسيم الأدوار في بعض المجتمعات بنمط يتم فيه تخصيص مجموعه مفرده من الأدوار النوعية للمرأة ومجموعه أخرى للرجل وهذا التقسيم غير العادل يؤدي الى أن المرأة تعمل في الأعمال المنزلية أو في عمل لانتاج الغذاء غير مدفوع الأجر،أو يعمل الرجل في وظائف مدفوعة الأجر مثال المحاصيل النقدية والأعمال الأخرى ، ولكن كيف يتم توزيع الأدوار الاجتماعية تبعاً لقدرات ومؤهلات كل من الرجل والمرأة على السواء ؟ يتم ذلك بالآتي:

1- عدم التميز بين الرجل و المرأة في التعليم منذ النشأة الأولى لاختلاف الجنس.

2- المساواة في الحصول على فرص العمل.

3- المساواة في الحقوق والواجبات والعدالة بينهم.

وللحصول على العدالة بين الرجل والمرأة يتم توزيع الموارد والمسئوليات بين الرجل والمرأة بالتساوي وتحصل بالتساوي المرأة على حقها العادل من الخدمات والمسئوليات وثمار التنمية مثلها مثل الرجل.

ويوضح الجدول التالي أدوار النوع للرجل والمرأة في الأسرة والمجتمع.

أدوار النوع للنساء والرجال في الأسرة والمجتمع

الأدوار/النوع	النساء	الرجال
1- الدور الإنجابي Re Reproductive Role (R)	حمل وإنجاب الأطفال (استمرار استمرارية لجنس البشرى). • مسئوليات رعايتهم وتربيتهم. • الأعباء المنزلية للحفاظ على إعادة إنتاج القوى العاملة.	• يمكن المشاركة في رعاية الأطفال وتربيتهم. آراء الواا المشاركة في آراء الواجبات المنزلية الأخرى من إعداد الطعام والتنظيف...الخ.
2- الدور الإنتاجي Pr productive Role (P)	•العمل ال العمل الذي تؤديه النساء مقابل الدفع النقدي أو العيني ويشتمل على الإنتاج التسويقي ذو القيمة التبادلية وانتاج الإعاشة المنزلية ذو القيمة الاستعمالية الفعلية ول الفعلية ولكنه ذو قيمة تبادلية مستقبلية. مستقبلية.	العمل الذي يؤديه الرجال مقابل الدفع النقدي أو العيني والعيني ويشتمل على الإنتاج التسويقي ذي القيمة التبادلية و التبادلية وانتاج الإعاشة المنزلية ذي القيمة الاستعمال الاستعمالية الفعلية ولكنة ذو قيمة تبادلية مستقبلية.
3- الدور التنظيمي C community Man managing Role (C.M) (C.M)	• يشمل أنشطة مجتمعية أخرى تمارس النساء مع النساء معظمها وهو مكمل للدور الإنجابي مثل (الحصول على الماء، والعناية بها والعناية بالصحة، التعليم...الخ). • عمل تطوعي بدون أجر يمارس في وقت الفراغ.	• يمكن أن يساويه الرجال (مثل خلق وتقوية القروقات الاجتماعية والاشتراك في العمل العام واتخاذ القرارات والعمل التنظيمي. • تدبير السلع ذات الاستهلاك الجماعي والخدمات والخدمات الأساسية.
4- دورا التمثيل السياسي Constituency Base Based Politics Role	• غالبا تعمل كقائدة بالجمعيات التي لها علاقة بال علاقة بالتنظيمات النسائية أو التي تهتم بشئون ال بشئون المرأة وفي الوقت الحالي بدأت المرأة تتخذ طريقها الى البرلمان والى المناصب السياسية العليا.	• غالبا نشاط قيادي يشمل المشاركة في اتخاذ القرارات أو الدور التنظيمي على المستوى السياسي في المجتمع في المجتمع وهذا الدور السياسي يشمل أنشطة سياسية ع سياسية على المستويات التالية: المجتمع المحلى والقومي والدولي.

ولقد كرم الدين الإسلامي المرأة وجعل لها مكانة عالية وأعطاها حقوقها كاملة بل ليس ذلك فقط ولكنه حث الرجال على المساعدة في شئون المنزل وفي تربية الأطفال، ولقد كان رسول الله صلى الله علية وسلم يساعد زوجاته في شئون المنزل وحياكة الملابس وليس هذا فقط بل كان يداعبهم ويمرح معهم. إلا يكفينا رسول الله صلى الله علية وسلم كأسوة لنقتدي بها.

إذن الرجل والمرأة متساويان من حيث الأدوار الاجتماعية وأن كل منهما مكمل للآخر ويبحث كل منهما عن الآخر لتكوين أسرة سعيدة.

الجزء الثاني من اللقاء عن مفهوم الزواج

النشاطات المتعلقة بهذا الجزء من اللقاء :قسمت الفتيات الى مجموعتين، المجموعة الأولى أن تكتب مؤشرات أو عوامل الزواج الناجح والمجموعة الثانية أن تكتب مؤشرات أو عوامل الزواج الفاشل ومن ثم تم عرض الإجابات من كل مجموعة بواسطة واحدة من كل مجموعة ومن ثم دار النقاش ولمدة 45 دقيقة تم شرح مفهوم الزواج ومؤشرات الزواج الناجح والزواج الفاشل وكيفية اختيار شريك الحياة كما يلي:

اختيار شريك الحياة

مما لاشك فيه أن اختيار شريك الحياة هو الخطوة الأولى في تكوين الأسرة، ورضاء كل من الطرفين من أهم عوامل نجاح الأسرة ولا يقتصر نجاح هذه العلاقة على الرضا فقط ولكن هناك معايير أساسية متعارف ومتفق عليها لاختيار شريك الحياة.

معايير اختيار شريك الحياة

قال رسول الله صلى الله عليه وسلم " **تنكح المرأة لأربع لمالها ولحسبها ولجمالها ولدينها فأظفر بذات الدين تربت يداك**" صدق رسول الله صلى الله عليه وسلم.

كما أن هناك حديث عن الحسن عندما سأله رجل أن لي بنتا فلمن أزوجها؟ فقال" **زوجها لمن يتقى الله ان أحبها أكرمها وان أبغضها لم يظلمها**":

ليس الجمال المعيار الوحيد لاختيار شريك الحياة حيث أن الجمال فان وكما قال أحد الأدباء". أن كل امرأة بها لمحة جمال حتى ولو كانت غير جميلة ولا يميز هذه اللمحة إلا من يحبها"، لذا يجب أن نضع التفاهم والارتياح والاهتمامات المشتركة موضع الاعتبار عند اختيار شريك الحياة لتحقيق صمود الأسرة وتخطيها العقبات التي تواجهها في الحياة، ويرتبط تحقيق هذا التفاهم من خلال بعض العناصر أو المعايير المقاس عليها الاختيار والتي تتمثل في:

1- التكافؤ العلمي:(التماثل في مستوى التعليم والثقافة).

التباين في مستوى التعليم يؤدى الى عدم التجانس في طريقة التفكير حتى لو كان هناك حب بين الطرفين فان العاطفة تهدأ بمرور الوقت ويكتشف كلاهما الفارق بينهما وعدم القدرة على تحقيق التفاهم المنشود لنجاح الأسرة واستمرارها.

2- التكافؤ الاجتماعي:

الفرق في المستوى الاجتماعي لكلاهما لا يضمن زواجا ناجحا فالزواج وان كان علاقة بين رجل وامرأة الا أنه أيضا تزاوج بين أسرتين، وشخصية كل من الزوجين نابعة من بيئته الاجتماعية التي نشأ فيها وتشبع وتطبع بعاداتها وتقاليدها ومن الصعب التخلص منها أو تغييرها حيث أن الطبق دائما ما يغلب التطبع ويؤثر أيضا على طريقة تربية الأطفال ويسبب خلل في الأسرة.

3- القيم والأخلاق المشتركة:

من الممكن أن يكون هناك تكافؤ علمي ولكن تختلف نظرة كل من الرجل والمرأة للقيم والأخلاقيات، وبما أن القيم هي المبادئ التي يضعها الإنسان كمعيار لسلوكه وسلوك الآخرين لذا عليه أن يختار الشريك الذي يتفق معه في القيم حيث أن الاختلاف في القيم بلا شك يؤدى لصراع دائم وتعاسة مؤكدة.

4- الصحة الجسمية والنفسية:

نظرا لأهمية هذا العامل في حياة الأسرة وإقرارها وإنجاب أطفال أصحاء فانه يوصى بالفحص الطبي قبل الزواج، خاصة وأن عامل الوراثة له تأثير، حيث أن هناك أمراض تنتقل بالوراثة من الأبوين بل من الأجداد الى الأبناء ولهذا كان الحديث الشريف " تخيروا لنطفكم فان الفرق دساس " صدق رسول الله صلى الله عليه وسلم.

5- السن: إن التقارب في السن من أهم عوامل التفاهم حيث يؤدى للتوافق في الميول والاهتمامات.

6- التدين: أوصى الدين عند اختيار شريك الحياة باختيار من له دين وخلق حسن وسمعة طيبة، فان عاشرها، يجب عليه أن يعاشرها بالمعروف وان سرحها فليسرحها بإحسان وقال الرسول صلى الله عليه وسلم " ومن زوج كريمته من فاسق فقد قطع رحمها"

7- الجمال وحسن المظهر: إن حسن المظهر والجمال لهما دور إنساني في اختيار شريك الحياة ولا يقصد بالجمال هنا الجمال الفاتن ولكن الجمال البسيط وجمال الروح ولهذا فهو من الصفات التي يجب توافرها في شريكة الحياة.

كما أن النظافة الشخصية والأناقة دليل الثقة بالنفس وهى الواجهة التي يهتم بها الرجل وتحرص عليها المرأة أشد الحرص حيث أنها من مظاهر الاحترام، وهذا يعنى أن الأناقة عنصر أساسي في حياتنا سواء كان رجلا أو امرأة لأنها تعطى الانطباع الأول والقوى الذي يؤثر في الغير.

تم نقاش واسع حول مواضيع الرجل والمرأة حيث وجدن الفتيات متنفس لهن ليعبرن عن ما يواجهوا من صعوبات في فهمهم للبيئة المحيطة وفهم البيئة لهم. وبما انه لم يتح لنا الوقت الشرح الكافي للفتيات اللواتي شاركن بهذا البرنامج بما يشعرن من احتياجات وهموم فقد أعطين نشرات تثقيفية لها علاقة بجميع المواضيع التي طرحت باللقاءات الأربعة إضافة الى المواد التالية لتساعدهن على العيش في مجتمعهن بطريقة صحية و صحيحة:

الصراع وحل المشكلات

- يحدث الصراع عندما لا يستطيع الفرد الاختيار والحصول على متطلباته، وذلك لوجود تعارض مع الآخرين حول حاجاته ومتطلباته، وهنا يحدث الصراع.
- أنواع الصراع: صراع على مستوى أفراد، صراع فئوي، صراع عقائدي، صراع اجتماعي، صراع دولي، صراع فكري.
- أسباب الصراع بين الأفراد: تتأثر عملية الصراع بالمشاعر التي يحملها كل فرد والتي تؤثر على نظرته الى موضوع الصراع، أي أن كل فرد ينظر للمشكلة والصراع بطريقه دون سماع رأي الآخر .
- وأفضل أسلوب لحل الصراع هو التعاون بين الأفراد. مثال على ذلك ظاهرة الزواج المبكر، اذ يرى الأهل من خلال وجهة نظرهم أن زواج ابنتهم في سن مبكرة أمر جيد، وفي الوقت نفسه تراه الابنة أن تعليمها وذهابها الى المدرسة أهم من الزواج في الوقت الحالي. وهنا نرى اختلاف وجهة النظر بين الطرفين: الأهل والابنة. وأفضل حل هو التعاون بين الأهل والابنة لإيجاد حل لهذه المشكلة.
- بعض الأفراد لا يختارون أسلوب التعاون لحل الصراعات والمشكلات ويختارون الحل الأسهل وهو الانسحاب. مثال على ذلك الطالب المقصر في الواجبات المدرسية يختار الحل الأسهل لعلاج المشكلة، فيبدأ بالغياب عن المدرسة لتجنب المواجهة مع المدرسين. مما يؤثر على تحصيله الأكاديمي.

هناك عدة طرق لحل المشكلات بخطوات مرتبة وتبدأ:-

1- معرفة أن هناك مشكلة تؤثر على حياة الطالب أو الفرد في المدرسة أو البيت أو الشارع أو مع أصدقائه أو في حياته العامة.

2- الأعداد للعثور على حل لهذه المشكلة.

3. محاولة صنع حل ثم تقييمه من خلال قياس الضرر أو النفع العائد من هذا الحل.

4. محاولة الحل، وتشمل هذه المرحلة خطوات عملية لحل المشكلة من خلال قاعدة منظمة ومنطقية.

إذا توفر ظرف ملائم وجيد واتبع هذا النظام في حل المشكلات، فانه يساعد على إيجاد حل ناجح وفعال. ويدخل هنا عامل التجربة والخبرة لأن قدرة الفرد على رؤية المشكلة والصراع بالشكل المطلوب تساعده في حل المشكلة التي يعاني منها.

يختار الناس أساليب مختلفة للتعامل مع الصراع والمشكلات وتختلف باختلاف الأشخاص، وقد تؤدي بعض الخيارات للخسارة.

هناك ثلاثة أساليب شائعة لدى الأفراد في حل الصراع:

1- أسلوب التهجم والعدوان، وهو أسلوب يمكن أن يشمل الربح والخسارة، ولكنه في معظم الأحوال غير مقبول اجتماعياً.

2- أسلوب الانسحاب(التجنب): وهو عدم حل الصراع والمشكلات بل الانسحاب وتجنبها، أي أسلوب الهرب وترك الصراع والمشكلة بدون حل. وهذا الأسلوب يمكن أن يشمل الربح والخسارة، ولكنه لا يتضمن عملية مواجهة أو حل للمشكلة.

3- أسلوب التعاون: وهذا الأسلوب يشمل التعاون بين جميع الأطراف في الصراع والمشكلة لحل هذا الصراع أو المشكلة: وهذا الحل يكفل الربح للجميع (ربح/ربح) ولا يشمل أية خسارة. وهو أسلوب متطور. وتكون ظاهرة التعاون اتجاهات ودودة صادقة بين الطرفي، ويكون كل طرف معلماً للآخر.

التفاوض

كل منا يتفاوض كل يوم، وكثير من وقتنا يضيع في محاولة الوصول الى اتفاق مع الآخرين، ومعظم الوقت يسعى الإنسان فيه للتفاوض للحصول على كلمة نعم أو الموافقة من الطرف الآخر، ولكن هذا لا يحدث دائماً.

التفاوض هو عملية تفاهم وأخذ وعطاء بهدف الوصول الى اتفاق مع الآخرين، ومع الذين تجمعنا بهم بعض المصالح أحياناً وتتعارض المصالح بينا وبينهم أحياناً أخرى. مثال ذلك العلاقات السياسية، والاجتماعية، والأكاديمية، والعائلية. التفاوض ليس نشاطاً سياسياً فقط، بل هو نشاط يومي غير رسمي، يقوم به الفرد للحصول على احتياجاته ورغباته.

التفاوض من أهم أشكال صنع القرار، سواء في حياتنا الشخصية أو الاجتماعية أو الدراسية. وقد أصبح التفاوض- بشكل مطرد- وسيلة لصنع القرار في الحياة، فهو يساعد كثيرا في حل المشاكل، لأنه يدور حول المشكلة وحول المصالح المشتركة، فيبدأ كل طرف يتحدث عن مصالحه ورغباته ومحاولة الح من خلال الموافقة التفاوضية بين الطرفين.

صفات المفاوض الناجح:

لكي تكون ناجحاً في التفاوض، يجب ا، تقوم بعدة أشياء منها.

أ- حدد نقاط ضعفك: قبل أن تتعرف على الطرف الثاني أو تتفاوض معه عليك أن تتعرف على مشاعرك وانفعالاتك ونقاط ضعفك، مما يساعد في التفاوض. أي أنه من المهم التعرف على النفس قبل التعرف على قدرات الآخرين.

ب- اشتر لنفسك وقتاً للتفكير: حاول أن تستغل أية لحظة في عملية التفاوض، مثال: العد من 1-10 قبل الدخول في مناقشة سواءً قبل التفاوض أو أثناء التفاوض.

ت- أصغ جيداً للطرف الآخر: عند انتهاء الطرف الأخر من الحديث، لا تقل(ولكن...)، وقل: (نعم)، ذلك كي يستمر النقاش في الشكل الصحيح. بعدها يمكن أن تقدم أداءك بالشكل الذي تريده دون إظهار تعارض مع الطرف الآخر.

ث- ابدأ عبارتك ب(أنا)، وليس(أنت): في أثناء التعبير عن الرأي، إذا بدأت العبارة بكلمة أنت فإنها توحي للطرف الآخر بالملامة، ولكن إذا بدأت ب(أنا) فإنها توحي بروح الود والتفاؤل.

ج- دافع عن وجهة نظرك: لا تتردد في الدفاع عن وجهة نظرك والتمسك بها، فالتمسك بوجهة نظرك لا يعني عدم اعترافك بسلامة رأي الآخرين.

ح- اعترف بالخلافات بينكما بروح متفائلة: إن التعبير عن الخلافات مع الطرف الآخر لا يعني تجاهلك لموقفك، فذلك يبين ويوضح للطرف الآخر أنك متفهم لوجهة نظره.