Deanship of Graduate Studies

Al-Quds University

Lifestyle Pattern and Quality of Life among School Children in Gaza City- Palestine

Kholoud Khaled Al Sedawi

MPH Thesis

Jerusalem - Palestine

1440 / 2018

Lifestyle Pattern and Quality of Life among School Children in Gaza City- Palestine

Prepared By

Kholoud Khaled Al Sedawi

Physics Science – Al Aqsa University, Gaza, Palestine

Supervisor

Dr. Amal Sarsour

PhD, Assistant Professor- Environmental Health Earth and Human Center for Research and Studies

Thesis Submitted in Partial Fulfillment of Requirements for the Master Degree of Public Health / Health Management

School of Public Health - Al-Quds University

1440 / 2018

Deanship of Graduate Studies
Al-Quds University
School of Public Health

Thesis Approval

Lifestyle Pattern and Quality of Life among school children in Gaza City- Palestine

Prepared by: Kholoud Khalid Al Sedawi
Registration No.: 21411050

Supervisor: Dr. Amal Sarsour

Master thesis was submitted and accepted, Date: 28/11/2018
The names of signatures of the examining committee members are as follows:

1. Head of committee: Dr. Amal Sarsour — Signature
2. Internal examiner: Dr. Bassam Abu Hamad — Signature
3. External examiner: Dr. Ashraf Eljedi — Signature

Jerusalem - Palestine
1440 / 2018

Dedication

To my husband who supported me through each step of the way, for being for me the greatest source of motivation, inspiration and push me in the success way ... The sun of my life "Ghassan"

To who sacrificed a lot for me to become what I am now … My mother and father.

To the light of my eyes ... My kids "Waseem, Rama, Khalil & Jad"

To who supported me, my second family ... My mother in law and father in law.

To my friends

To my colleagues

And

To everyone who encouraged, supported, and helped me to make this study a reality

I dedicate this research for all of them…

Thank you all for your endless support.

Kholoud Khaled Al Sedawi

Declaration

I certify that this thesis submitted for the degree of master is the result of my own research, except where otherwise acknowledged, and that this thesis or any of its parts has not been submitted for higher degree to any other university or institution.

Kholoud Khaled Al Sedawi

Signed: *Kholoud Khaled Al Sedawi*

Date: 28 Nov. 2018

Acknowledgment

This study would not be feasible without the guidance and assistance of many individuals who helped me to overcome all the obstacles I have faced during completion of this study.

- My deep gratitude to my advisor Dr. Amal Sarsour for her inspiration, patience, nurturing, guidance and unlimited support. I am very grateful for her advice and encouragement.
- I am grateful for Dr. Yehia Abed, Dr. Bassam Abu Hamad and Dr. Khitam Abu Hamad for their guidance and for their kind support in reviewing the study instrument. Deep thanks must also go to the experts who reviewed the study tools and provided fruitful feedback.
- Whilst words could not pay their dues, to my husband for his constant love and support, who has encouraged me throughout my academic career and support in my professional life. Thank you for your belief in me. You have been my pillars of strength!
- I am grateful to the administrative staff of UNRWA schools, governmental schools, and privet schools.
- Deep thanks to all students who participated in the study because without them this work could not be accomplished. .
- Finally, my appreciation is presented to all who provide me an advice, support, information, or encouragement in order to complete my master study. Sincere thanks to my colleagues at the school of public health. .

With respect,

Kholoud Al Sedawi

Abstract

Universally, there is a growing interest in studying the Quality of Life (QOL); where, most studies have shown that the quality of life has positive outcomes on both the individual and societal levels. This study ascertains the status of quality of life of the Gaza children and explores its correlates with their life style among children aged 10, 11 and 12 years.

Triangulated study design was used. For the quantitative part; 370 randomly selected (multi-stage cluster sampling approach) school children consented to participate of the study with 95.2% response rate. In addition, four focus group discussions with student' mothers were conducted. Quantitative data were collected first through face-to-face interviewed questionnaire and preliminary findings derived from the analysis of the questionnaires had informed the qualitative data collection. The researcher used the international scales for lifestyle and Kidscreen-52 Instrument for QOL. Cronbach Alpha readings for these scales were high (Cronbach's Alpha 0.937). The Statistical Package for SPSS software was used for the quantitative data entry and analysis while open coding thematic technique was used to analyze the qualitative data.

Findings revealed that 74.9% of children presented with normal weight for age, 2.2% of children were underweight with higher prevalence amongst girls (2.4%) than boys (2.0%). Furthermore, 23% were obese and overweight, boys showed higher obesity rates than in girls 29.5% and 15.3% respectively. The study findings revealed that a large percentage of Food Consumption Score (FCS) for food groups (94.9%) of children have acceptable food consumption and a very small percent (0.8%) of children have poor food consumption. It is worth mentioning that, more than half of children (62.2%) were living active and very active life, of the boys were (35.2%) higher than girls (27%). Differently, 36.8% of children were sedentary and low active, where the boys equal girls at this point. Also, most children sleep more than eight hours daily and practice appropriate personal hygiene habits. Main results indicate that most of the children had a high level of QOL in all dimensions, where the QOL among girls was higher than boys in most domains of QOL. Where the lowest domain of QOL for both was autonomy had the lowest score (74%), and the parent relations and home life which elicited the highest scores (93%). There was a significant association between high level of QOL and food intake with some socio demographic-economic factors such as had the monthly income more than 1500 NIS, children who always took pocket money and number of family members that 6 members and less. Inferential statistics show that children who have parents educated, parents employed, members of smaller families and take pocket money respondents had elicited statistically significantly higher quality of life scores than their counterparts (P value less than 0.05). Interestingly, ANOVA analysis shows that most of life style patterns were statistically significantly with the overall of QOL (P value less than 0.05). Where the children with undesirable lifestyles, such as skipping breakfast, longer television viewing, and later bedtime, were more likely to have poor level of QOL. These correlations were independent of sex, BMI and social background. Also there were no statistically significant differences in the overall of QOL in relation to participants' physical activity and their BMI Z-score.

The study concluded that the QOL is a multi-faceted concept and interventions aiming to enhance it, must be multi-sectoral. The study results can be used for the purposes of addressing the children needs and help to solve their lifestyle problems such as promoting healthy life style, positive behaviors, good food habits, conduct health education and increasing physical activity need to be implemented. Further understanding of these relationships will facilitate the development of interventions to help children with poor QOL.

Content

Tables

Figures

Annexes

Abbreviations

AASM	American Academy of Sleep Medicine
ANOVA	Analysis of Variance
BMI	Body Mass Index
CDC	Center of Disease Control and Prevention
CNPP	Center for Nutrition Policy and Promotion
FCS	Food Consumption Score
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GSHS	Global School-based Student Health Survey
HRQOL	Health related Quality of Life
HUC	Health Unit Collaboration
IFH	International Scientific Forum on Home Hygiene
IRC	International Water and Sanitation Centre
MOH	Ministry of Health
MOEHE	Ministry of Education and Higher Education
NCES	National Center for Education Statistics
NIDDK	National Institute of Diabetes and Digestive and Kidney Diseases
NIS	New Israeli Shekel
NPAP	National Physical Activity Plan Alliance
PASSIA	Palestinian Academic Society for the Study of International Affairs
PCBS	Palestinian Central Bureau of Statistics
PNGO	Palestinian Non-Governmental Organization Network
QOL	Quality of Life
SD	Standard Deviation
SES	Socioeconomic Status
SPSS	Statistical Package for the Social Science
UN	United Nations
UNICEF	United Nations for children's Fund
UNRWA	United Nations Relief and Work Agency for Palestine Refugees in the Near East
US	United States
WFP	World Food Programme
WHO	World Health Organization

Chapter One

Introduction

1.1 Background

Research over the past decades has proven that childhood is a period when the lifestyle patterns are initiated.). As children grow up, the life style evolves in general. One of this pattern is the physical activity, where the physical activity has immediate health benefits in childhood and adolescence, and it can be considered the construction phase for adulthood, thus resulting in the long-term health benefits (Macera, 2010). However, many children and adolescents in developed countries have sedentary lifestyles such as inactive physical activity, too much television viewing, video games, and increasing use computers (Kimm et al, 2002; Salmon et al., 2005; Rey-López et al., 2008; Clarke, 2015). Sedentary lifestyles are recognized to be associated with children and adolescents' obesity, diabetes, sleep disorders, violent behaviors, and other problems (Singer et al, 2004; WHO, 2002).

Recent several studies have revealed that lifestyles are associated with physical and mental health status, as well as the Quality of Life (QOL), where it is considered to be a multifactorial structure that focuses on individuals' personal evaluation of their physical health, mental health, and social functioning (Sawyer et al, 2001; Velten et al, 2014), It may be compatible with the World Health Organization (WHO) definition of health as status of complete physical, mental, and social well-being, and not merely the absence of disease and infirmity (WHO, 2006b; WHO, 2011a).

Lifestyle plays an important role on a person's health synchronized with technological development that affects positive or negative on the daily lifestyle such as breakfast, physical activity, smoking, watching television and using computer (WHO, 2008)

The dietary behaviors is another important factor of lifestyle, that influenced by many factors in a complex interplay manner. At the beginning of their lives, parents and the

family environment are playing a critical role in teaching children and developing their food choices and eating habits and behaviors. When children start going to school, the influence of teachers, friends and other people at school together with the media and school environment becomes more important but still under parental control. Gradually, children become more independent and able to start making their own food choice. Especially, the peer group can greatly influence their food preferences and lifestyle behavior at an advanced age - adolescence - (Verstraeten et al, 2016; Story et al., 2002).

The quality of life (QOL) has received well-deserved attention, where it is an important outcome indicator of health and well-being. The QOL is a worthwhile goal where there is a consensus that measurement of QOL has benefits to the individual level and has additional benefits to the community. The QOL provides important information describing the health status of different populations, and it determines the effectiveness of treatment, choose the main concern for resources distribution, and help in policy developments, where the low QOL may threaten and hinders the society development (Asada, 2005). Many studies have consistently reported that adolescents do not get enough sleep and that their sleep patterns are characterized by staying up late (Laberge et al, 2001; Matthews et al, 2014; Hershner and Chervin, 2014). In general, the relationship between specific sleep problems and low QOL is well documented (Rosen, 2002). Therefore, the health and QOL could be seen in a dynamic way as drivers for development, not only as outcome of it (Eckersley, 2011).

Up to present, there is limited information about the associations between lifestyle factors and QOL in children. The information about daily lifestyles and children's QOL is useful, where the QOL can be improved by changing the unhealthy lifestyle factors, such as diet, exercise, sleep, and other aspects of children, specifically in school settings. It is interesting issue and challenging to some extent to figure out the relationship between some lifestyle patterns and QOL, where one of the major difficulties facing researchers

when trying to link lifestyle patterns to QOL is determine variables. For example, socioeconomic status has a clear impact to QOL. Thus, it is hard to determine cause and effect (Boixados et al, 2009), so the factors such as race, gender and socioeconomic status will remain constant throughout the study period. Therefore, this study will be useful to the decision-makers, planners and stakeholders who know that QOL is a multifactorial issue (Boixados et al, 2009).

This study is an organized trail to understand the QOL concept from children's perspectives and the associations between children lifestyles and their QOL.

1.2 Research problem

The Palestinian community in the Gaza Strip was already victimized with a long-term attack that affected all aspects. Where they have been subjected to three offensive invasions during short lifespan, the children were drastically influenced. This was reflected in their lifestyle and quality of life (Vostanis, 2014). Furthermore, all studies focused after the war on the psychological state of children with neglecting other aspects such as their life patterns and the quality of their life. Children are the masters of the future and them vulnerable group; childhood is also the best time for children to gain right health behaviors and practices (Emerson et al, 2015). Moreover, children can be useful change agents, as they transfer what was learned at homes and school to their communities and to other children. In future these children will be turned to be parents then they will be keen to create right healthy patterns for their own children'.

In Gaza according to The Palestinian Central Bureau for Statistics - PCBS (2017), children under 18 years forming 48% of Gaza's inhabitants and more than a quarter of the population are school students. Thus, schools and homes could play an important role to improve the lifestyle among children and therefore to improve their QOL, this could help prevent any health problems in the later stages of life, so will benefit the entire society

undoubtedly. Regrettably, a very little attention has been paid to children' lifestyle and their quality of life in the Gaza Strip so far, and this group has received inadequate consideration in research.

Therefore, the study finding might help in determining the level of lifestyle among our school children (boys and girls) and fill this gap of information may help policy makers to identify the strengths and weaknesses areas and conducting suitable solution to develop the lifestyle of children which may affect their quality of life; this is the core aim of this study.

1.3 Justification

Lifestyle defined as it is a way of life or style of living that reflects the attitudes and values of a person or group (Abd El-Kader and Mohammad, 2013). A healthy lifestyle leaves you fit, energetic and at reduced risk for disease, based on the choices you make about your daily habits. Although there are many literature describing associations between healthy eating, physical activity and QOL, the relationships need to be better characterized due to their synergistic nature (McIsaac et al, 2015a). There is robust evidence on the importance of breakfast consumption (Hoyland et al., 2009), that child's nutritional status may be influenced by a diet that is lacking in overall food (nutrient insufficiency) or in important micronutrients (nutrient deficiency) that help the brain and body function (Taras, 2005), thereby having an impact on QOL. In other words, previous studies have found that the benefits of breakfast consumption were observed most on measures such as memory, errors on attention tasks and on-task behaviors (McIsaac et al, 2015a). As well, there are suggestions to support an association between energy expenditure through participation in physical activities on improved cognitive health and function (Burkhalter and Hillman, 2011).

Today's children are fundamental to the community because they are our future. They have in their hands the change key for a successful future. Therefore, it is our duty attention to

the health of our children. There is increasing interest in measuring QOL in children, but this interest has developed without careful attention given numerous important issues. Consequently, there is much diversity and confusion in this measurement area. Thus, the purpose of this cross-sectional study is to examine the association between lifestyle patterns with QOL among school children from different socio-economic levels in the Gaza city.

The results that will be obtained from this study will give a clear picture about the pattern of lifestyle and quality of life of students' children in Gaza and bridge the gap of data about this age group to conclude recommendation for relevant intervention.

1.4 Study objectives:

1.4.1 Aim

The overall objective of this study is to explore the association of lifestyle patterns with quality of life among children from different socio-economic levels in the Gaza city. The study is looking ultimately to provide decision makers with recommendations that might help in promotion of wellbeing of children and their caregivers and to improve their life styles.

1.4.2 Objectives

1. To identify the lifestyle pattern among children in Gaza city.
2. To appraise the status of quality of life among the children in Gaza city.
3. To ascertain the effect of life style patters on quality of life.
4. To recognize variations in quality of life in reference to socio-demographic factors.
5. To suggest possible recommendations that might enhance planning by policy makers to improve the quality of life of children and their life style.

1.5 Research questions

1. What is the quality of life status and life style patterns of the surveyed population?

2. How satisfied people are about domains constituting the quality of life?

3. Which style will elicit high scores, and which ones will elicit low scores?

4. Which domains in the quality of life will elicit high scores, and which ones will elicit low scores?

5. How do Gazans children differ from other countries in relation to quality of life status?

6. Are there differences in quality of life in reference to socio-demographic characteristics age, gender, years of education, years of education of parents, employment status of parents and other economic characteristics on quality of life status?

7. Among the life style variables under study, which ones are best predicting the quality of life status, and by how much?

8. What are the feasible interventions that can be significant to promote the quality of life of children and their life style?

1.6 Context of the study

This study is about the life style and QOL among schoolchildren in the Gaza strip, so the geographical area and the socio economic, educational situation will affect it. However, it is important to show some details about this context as follows:

1.6.1 Demographic context

Palestine lies on the western edge of the Asian Continent and the eastern extremity of the Mediterranean Sea. It is bordered to the north by Lebanon and Syria, to the west by the Mediterranean Sea, to the south by Egypt and the Gulf of Aqaba, and to the east by Jordan, whereas from the 26,323 km² land area of historical Palestine only West Bank and Gaza Strip remained unoccupied with total area 6,257 km² (Palestinian Academic Society for the Study of International Affairs - PASSIA, 2009). Gaza Strip represent a small piece of land

lying on the coast of the Mediterranean Sea in the southern region of Palestine with its area 365 km² and constitutes 1.33% of total area of Palestinian territory land (PCBS, 2018a). After the end of the First World War, historical Palestine was placed under the British Mandate from 1948 to 1967 and the Gaza Strip was under the Egyptian Administration. In June 1967, it was occupied by the Israeli army. Then according to Oslo agreement the Israelis officially handled the Gaza Strip to the Palestinian Authority in 1994. In the year 2000, the Palestinians protested against the Israeli measures, and the second Intifada broke out. The Israelis then fastened the siege and intensified their military operations against Palestinians, where the political and socioeconomic situation started to deteriorate. In June 2007, the internal division occurred and Gazan people have begun to suffer from all kinds of unrest (Ministry of Health - MOH, 2013)

Recent reports indicate that the Gaza Strip is among the most densely populated areas worldly. According to PCBS (2017), the population density of 5,203 inhabitants per km² and the total number of the Palestinian population residing in the Gaza Strip in mid-2016 is around 1.88 million, concentrated mainly in 7 towns, 10 villages and 8 refugee camps and Gaza Governorates are five: North of Gaza, Mid Zone, Khan Yonis, and Rafah. The percentage of children aged 0-14 is more than 42.6% which increases the burden on the health system and other systems (PCBS, 2017).

Such high population density, high growth rate, and young generation increase the burden on the Palestinian healthcare system (Hamad and Pavanello, 2012). This in turn requires careful planning from policy makers to invest this high percentage of young population to develop a strong economy rather than leaving them for unplanned and unclear future with possible increased unemployment and poverty levels and shortage in resources by improved their lifestyle and QOL.

1.6.2 Socioeconomic characteristic

In recent years, the economic situation continued to deteriorate in the Gaza Strip after the Palestinian legislative elections in 2006 and the Palestinian conflict, which lead to the gap between the two sides in the Gaza Strip and the West Bank. Furthermore, the terrible attack of Israeli military in December 2008, November 2012 and August 2014 in Gaza Strip increase the burden of poverty due to the massive destruction of the public infrastructure and utilities including water, sanitation, electricity, transportation networks, educational institutions and homes (MOH, 2013).

Economic situation, poverty levels, education, peace, security, equity, women empowerment and safe and healthy environment, all these factors interact together and contribute to shaping the current health status in Palestine. However, the recent deterioration in these entire factors in the current situation left 80 % of the population relying on the international humanitarian aid (Palestinian Non-governmental Organizations - PNGO, 2009; United Nations Relief and Works Agency for Palestine Refugees in the Near East - UNRWA, 2016).

According to the PCBS in 2018b, poverty among individuals in the Gaza Strip was 38.8% in 2011 while it jumped to 53.0% in 2017 with 37% increase, deep poverty percentages also increased significantly in the Gaza Strip, as the deep poverty percentage was 21.1% in 2011 and became 33.8% in 2017 with an increase by around 60% (PCBS, 2018b). The unemployment rate at the third quarter of 2017 was 46.6%, while among youth it stood at 64.9% and 71% among women (United Nations Office for the Coordination of Humanitarian Affairs in the occupied Palestinian territory - OCHA, 2017a). People living in poverty often go hungry and have limited access to safe drinking water, adequate sanitation or healthcare services. They are more likely to live in dangerous environments with low quality housing, in areas prone to natural disaster, dangerous traffic and/or higher

rates of conflict (Action on Disability and Development International, 2012). More than half of the households in Gaza are either food insecure (44%) or vulnerable to food insecurity (16%) (United Nation - UN, 2012) due primarily to a lack of economic means, rather than a shortage of food in the local market.

1.6.3 Education System

In (2015-2016) according to Ministry of Education in Palestine, there are 2858; 714 schools in Gaza Strip and 2144 in West Bank where 2095 Government Schools, 349 UNRWA Schools and 412 private schools (PCBS, 2015a).

In Gaza Strip, there are 714 schools: 392 Government Schools, 267 UNRWA Schools and 55 private schools. The number of students in school is 523,880 (262,974 males and 260,906 females). Among these, there are 243,838 in Government Schools at rate of 46.54 %, 261,657 in UNRWA schools at rate of 49.95 % and 18,385 in private schools at rate of 3.51 %. In primary schools, there are 427,523 students at rate of 81.61 % (208,396 females, 219,127 males): 153,920 in Government Schools at rate of 36 %, 261,657 in UNRWA schools at rate of 61.2 % and 11,946 in private schools at rate of 2.79 %. In secondary schools, there are 96,357 students at rate of 18.39 % (52,510 females, 43,847males): 89,918 in Government Schools at rate of 93.32 %, 0 in UNRWA schools at rate of 0 % and 6,439 in private schools at rate of 6.68 % (Ministry of High Education - MEHE, 2016).

1.6.4 Health Status of School Children

The school is the next step after the family to teach children the skills and the development of intelligence and acquire positive habits to achieve their goals in life later (Huitt, 2011; Mondal, 2015). From the perspective of the Ministry of Education showed that there is a very close and reciprocal relationship between general health and education. It has been

proven that the health of students have a significant effect on students' concentration and their participation in classroom and other school activities which leads to positive changes in their skills, academic achievement, lifestyle and QOL (MOHE, 2016). Kishore (2014) observed that to learn effectively, children need good health. The deterioration of the political, economic and social conditions resulting due to the blockade pressure and the war in Gaza strip have led to a state of general frustration and appearance of some negative practices especially on the children.

1.7 Operational definitions

The following operational definitions used in this study.

1.7.1 Lifestyle:

The lifestyle is the way of living of individuals, families, and societies which denote the interests, opinions, behaviors, allocation of income and behavioral orientations and is influenced by factors such as culture, family, reference groups, and social class (Wald et al, 2014; Kontogianni, 2010).

1.7.2 Lifestyle Pattern:

According to different scholars, life style pattern can be defined as the way in which people live to do their daily activities in their lives. Such as dietary habits, physical activity, sleeping, hygiene and sedentary lifestyle (Kontogianni et al., 2010; Abd El-Kader and Mohammad, 2013; Wald et al., 2014 and Stea and Torstveit, 2014).

1.7.3 Dietary Habits:

Dietary Habits are the habitual decisions of individuals or group of people regarding what foods they eat. Proper dietary choices require the consumption of vitamins, minerals, carbohydrates, proteins and fats (WHO, 2016a; CDC, 2012).

1.7.4 Physical activity:

Physical Activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure (WHO, 2016b).

In this study, physical activity was classified according to the time spent and type of physical activity. All times spent in each specific daily physical activity over 24 hours were summed up to each other. The obtained number was multiplied by a specific factor for each physical activity. The net result was added to 1.1 in order to give a specific score. According to this score, the physical activity was classified into:

- **Sedentary:** from level score 1.0 to 1.39,
- **Low active:** from level score 1.4 to 1.59,
- **Active:** from level score 1.6 to 1.89, and
- **Very active:** from level score 1.9 and above (Rolfes, Pinna, and Whitney, 2006).

1.7.5 Sedentary Lifestyle:

A sedentary lifestyle is a type of lifestyle such as sitting, reading, watching TV, playing video games, using the computer with little or no physical activity. This factor can contribute to the many causes of death that could be prevented, where the wrong to follow the lifestyle was linked to the negative consequences on health (Berg et al, 2016; Henson, 2013; Varo et al, 2003).

1.7.6 Body mass index (BMI):

A person's weight in kilograms divided by the square of height in meters (BMI = wt. / ht^2) (CDC, 2015).

1.7.7 Body mass index percentile (BMI percentile):

The BMI percentiles express a child's because the weight and height change during growth and development, as does their relation to body fatness, a child's BMI must be interpreted relative to other children of the same sex and age.

The level of BMI percentage:

- **Underweight**: Less than the 5th percentile.
- **Normal or Healthy Weight**: from 5th percentile to less than the 85th percentile.
- **Overweight**: from 85th to less than the 95th percentile.
- **Obese**: Equal to or greater than the 95th percentile (CDC, 2015).

1.7.8 Quality of Life:

WHO defines Quality of Life as individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, a level of independence, social relationships, personal beliefs and their relationship to salient features of their environment. (WHO, 2012).

The level of QOL:

- **High level QOL:** The status in which a person describes his/her life to be one close his/ her ideal preferences. When operationalized, it reflects responses with points 4 and 5 in the used Likert scale from 1 to 5 (75-100%),
- **Moderate (medium) level QOL:** The status of at which, a person's life reality is around half the way into how his/her ideal preferences. The assumption is that the moderate QOL level is expected from the responses lie around the mid of the used Likert scale when operationalized (50-74%),

- **Low level QOL:** The status at which a person describes his/her life to be far away from his/her ideal preferences; the responses reported will be closer to the minimum anchor of the evaluation scale when operationalized (below 49 %) as concluded from WHO (1995) manual.

1.8 Study Layout

The study consists mainly from five chapters: introduction, conceptual framework and literature review, methodology, results and discussion, conclusion and recommendation.

The first chapter presented general introduction to the study, where a brief background regarding the subject of the study was provided. The researcher illustrated the problem statement, justification for conducting the study, the general goal and specific objectives, research questions, definition of terms and context of the study. The second chapter included two parts; conceptual framework where the researcher provided a schematic diagram of the conceptual framework of the study, and the second part presented the literature review related to the study topic and variables. In depth detailed theoretical inquiry including previous studies were presented to enrich the study. The third chapter described methodology including study design, population, sample, instruments, pilot study including validity and reliability of study instruments, ethical considerations and statistical procedures. The fourth chapter presented the study results and discussion. The researcher presented the results in form of figures and tables that make it easy for the reader to understand and make comments. The results were discussed in relation to available previous studies that directly related to the topic of this study and its objectives. Finally, in the fifth chapter, the researcher presented conclusion, recommendations and suggestions for further research that related to the study results and open a horizon for other researchers to work on this conception and its effect on our work environment.

Chapter Two

Conceptual framework and literature review

This chapter summarizes the arguments, studies, and claims pertaining to the lifestyle and QOL of children as presented in the reviewed scholars, reports and local studies. This is described after introducing the conceptual framework of this study which presents the primary domains of lifestyle and QOL of children and potential correlates assumed among them in this study.

2.1 Conceptual framework

A conceptual framework is an analytical tool used to guide their research studies. It enables researchers to organize ideas and find links and relations between the existing literature and their own research goals and objectives (Jabareen, 2009). The researcher drew the conceptual framework based on the literature review and personal experience. **Figure (2.1)** illustrated the variables that interact and affect the quality of life among schoolchildren in Gaza city. All these factors interact in different degrees with each other, consequently, affecting QOL either positively or negatively.

Most of the previous studies are concentrating mostly on the QOL among adolescents and adult. In this study, the researcher tries to explore the relationship between the QOL and the lifestyle among children. So, the study aimed to shed lights on the importance of this relationship and the effect of the lifestyle and socio demographic factors on the QOL among children. In the following, the researcher discussed the lifestyle and QOL dimensions in more detailed description.

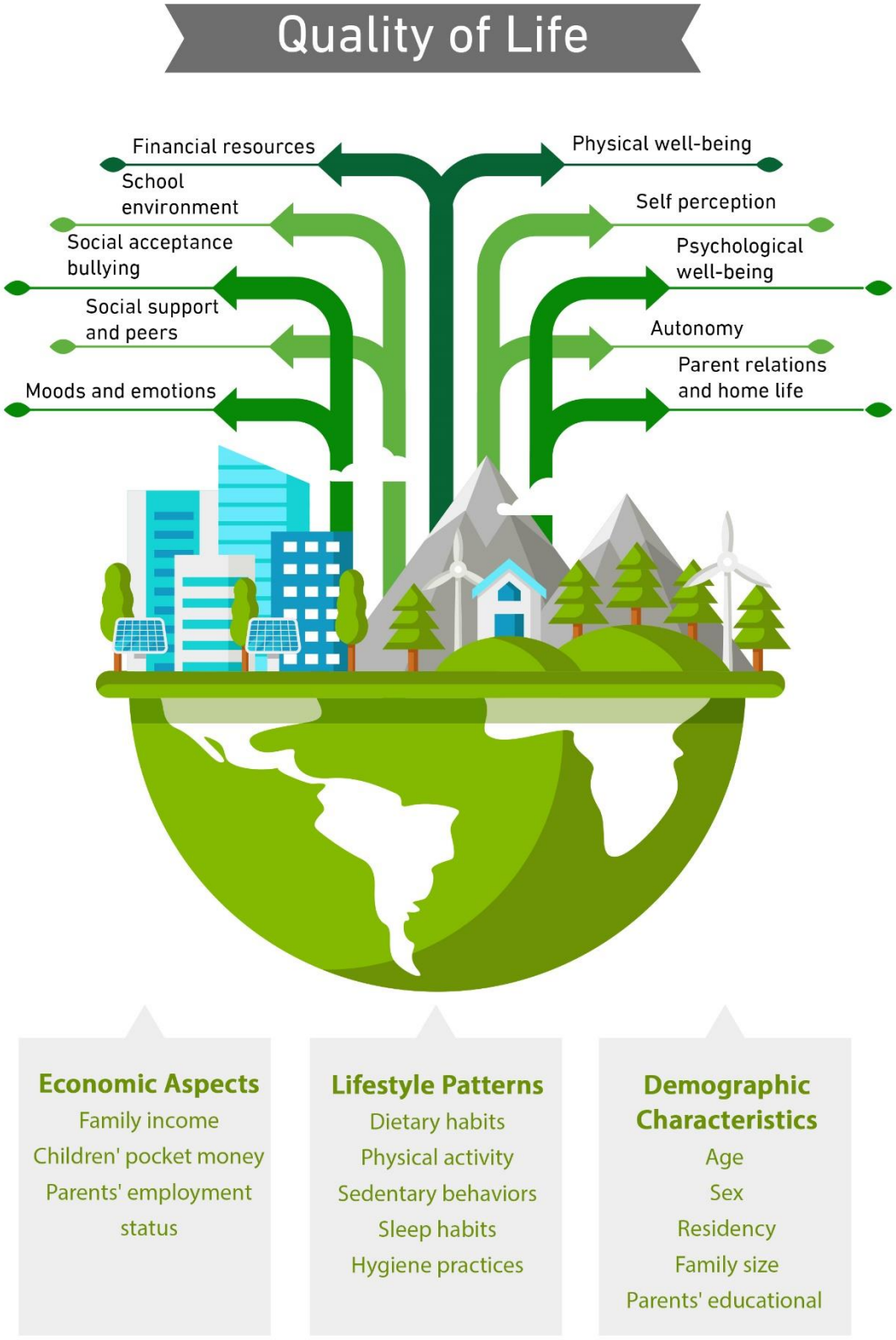


Figure 2.1: Conceptual Framework - self constructed

2.1.1 Socio demographic characteristics

Many studies showed a high positive relationship existing between the socio-economic and demographic on the QOL of person (Pappa et al, 2009). On the other hand, these factors affect on some lifestyle patterns such as dietary habit, sleeping and physical activity … etc. As shown in **Figure (2.1)**, the researcher has included several socio demographic factors such children's age, sex, educational level of parents, parents' employment status, family structure (living with two parents, parents and grandparent (s), single parent), number of siblings, etc. Children's family socioeconomic status (SES) was based mainly on paternal employment status. Therefore, the researcher aimed to know the effect and the exploring potential influence of the socio demographic factors on the lifestyle and QOL.

2.1.2 Lifestyle variables

Schools students experience transitional period from childhood to adolescent period that could be characterized by changes in lifestyle patterns such as decreasing physical activity and increasing sedentary behavior and changing in sleeping and dietary patterns (Crombie et al., 2009).

Many studies have shown that the lifestyle among adolescent such as physical activity and sedentary behaviors (For example; watching television, computer use, sitting for work, chatting and studying), dietary habits are associated with the QOL (Chen et al, 2005; Moksnes et al, 2013; Bolton et al, 2014).

The researcher in this study has investigated several students' lifestyle patterns such as:

(1) Dietary habits, including the frequency of eating breakfast , taking milk product at breakfast, taking lunch, taking dinner and daily consumption of fruits and snack food consumption;

(2) Physical activity and sedentary behaviors, including preference for physical activity, the frequency of physical activity, duration of television viewing, using computer and video game playing , and method of transport to and back from school and exercise time per week;

(3) Sleep habits: rising time, bedtime, sleep duration, etc.; and

(4) Hygiene practices.

These patterns have been shown to have a positive impact on QOL of adolescents. Now it is worthy to be discussed and to identify the impact the lifestyle patterns on QOL of children. Also, the researcher would like to examine if the socio demographic factors effects on the lifestyle of children.

2.1.3 QOL dimensions

The QOL status is the dependent variable which has been made operational through studying children perceptions and satisfaction about the quality of their lives. According to the KIDSCREEN-52 instrument, the QOL measures ten domains, in the following the researcher discussed the ten QOL dimensions in more detailed description.

Physical well-being: This explores the level of physical activity, energy, and fitness of the children.

Psychological well-being: This examines the psychological well-being of the children, including positive emotions and satisfaction with life.

Moods and emotions: This covers how much the children experiences depressive moods and emotions, and stressful feelings.

Self-perception: This explores whether respondents perceive their bodily appearance positively or negatively; body image is explored by questions concerning satisfaction with looks as well as with clothes and other personal accessories.

Autonomy: This looks at the respondent's opportunities to create social and leisure time.

Parent relations and home life: This examines relationships with parents and the atmosphere at home.

Social support and peers: This examines the nature of the respondent's relationships with other children.

School environment: This explores the perceptions of the children about their cognitive capacity, learning and concentration, and their feelings at school.

Social acceptance/bullying: This covers the aspect of feeling rejected by peers in school.

Financial resources: This assesses respondents' perceptions of their financial resources.

In this study, the researcher aimed to determine the impact the lifestyle patterns on the QOL among children and to what extent that demographic and economic variables affect their lifestyle and QOL.

The dependent variable in this study is QOL among schoolchildren. While, **the independent variables** compose of personal variable including demographic and socioeconomic factors and the lifestyle variables (dietary habits, physical activity, sleeping patterns and hygiene practices). These variables seem to affect the study concepts, but to what extent? All of these queries were examined in this study

2.2 Literature review

2.2.1 Development periods in children and adolescents

WHO defines an adolescent as any person between ages 10 and 19. On the other hand, WHO defines a child is a person 19 years or younger unless national law defines a person to be an adult at an earlier age. However, in these guidelines when a person falls into the 10 to 19 age category they are referred to as an adolescent. Studies differ on the classification of the class from 10 to 12 of the children or adolescents category. The

consensus was that it was the beginning of adolescence period. WHO divided adolescent's growth into three developmental stages based on physical, psychological and social changes. These are early adolescence (10-<15 years), mid adolescence (15-<17 years) and late adolescence (17-19 years). Adolescents make up roughly 20% of the total world population where most of them live in the developing countries (WHO, 2005). Adolescence is a period of rapid growth: up to 45% of skeletal growth takes place and 15 to 25% of adult height is achieved during adolescence. Adolescence is a unique intervention point in the life cycle. The adolescent is considered the second most critical period of physical growth in the life cycle after the first year, where, they growth spurt begins at age 10-11 for females and 12-13 for males. During this period differences in growth between the genders become apparent in the skeletal system, lean body mass, and fat store. In females, fat cells increase and represent a large percentage of body weight, in addition to changes in body image. In males, the lean body mass increases, muscle, and bone, which represent a large percentage of body weight (Rolfes et al, 2006).

2.2.2 Understanding children's lives

Children are a vulnerable group because of their immaturity and dependence, at the same time; children are the most important natural resource. So, they must be at the very heart of "development". It is important also to recognize their potential and resilience. Their well-being, capabilities, knowledge, and energy will determine the future of villages, cities, and nations around the world. Additionally, a healthy child's vitality, inquisitiveness, and readiness for new experiences can be unbounded (WHO, 2004; UNICEF, 2013). Additionally, Children can maintain lifestyle habits throughout their lives if they are established early. Where, the children from a young age start to formulate beliefs, ideas, and attitudes about their health, lifestyle that effect on quality of their lives. So,

understanding their perception of health and health issues is of vital importance to understanding how children and adolescents engage with their health and can result in both short-term and long-term population health gains (Russell and Barker, 2005).

The WHO has reported that '*The health of young people is significant for the well-being of this age group and also for future public health'* (WHO, 2011b). Furthermore, article 12 of the United Nations Convention on the Rights of the Child (2009) states: '*The child has a right to express an opinion and to have that opinion taken into account, in any matter or procedure affecting the child, in accordance with his or her age and maturity'* (UN, 2009). The UN Convention on the Rights of the Child has affirmed respect for children as a global ideal. Palestinian Child Law (7) of 2004 stressed on the most important achievements and the efforts made to improve the quality of life of children, and identify the obstacles that prevent children from fulfilling their potential and ensuring their right to survival, growth, life and participation (PCBS, 2015b). As well as highlighting the need for research to ensure that '*Children's lives will be better understood'* (Department of Health and Children, 2000). Children and adolescents-centered situation analysis may be important in identifying, assessing and responding the particular needs of children and adolescents in particular situations to ensure timely and quality services for them (Russell and Barker, 2005; PCBS, 2015b).

2.2.3 School-based research

Based on the principles of the WHO Ottawa Charter of 1986, the school has been identified as a setting for health and health promotion, the Health Promoting Schools concept was first introduced. The aim of this concept is to achieve whole of school implementation, thereby addressing all stakeholders and realizing health promotion as a coordinated school-wide activity (WHO, 2018). Areas of intervention as suggested by

McIsaac et al. (2015a) are school policies, the physical and social environment, the formal and informal curriculum (individual health skills, action competencies), community links and health services (McIsaac et al., 2015b).

Another principle of the WHO Ottawa Charter, the school has been identified as a positive and appropriate setting in which to reach children and adolescents for their opinions, attitudes, behaviors, knowledge and feelings about their perception of health. The WHO identified that 'a health-promoting school can be characterized as a school constantly strengthening its capacity as a healthy setting for living, learning and working' (WHO, 2017). In Palestine, Public Health Policy for Palestinian Children for the year 2012 identified the school as an important setting for health promotion activities (MOEHE, 2012).

Schools are settings where the health of children and adolescents can be identified and where specific health issues can be addressed (St. Leger, 2004). In terms of research, the structure of the educational system provides a ready-made sampling frame in terms of age, sex, educational level, geographical area and so on. The school is a setting where access and obtained to whole school classes, then data can be rapidly obtained by means of self administered questionnaires completed in the classroom; such procedures have obvious advantages over home visits or mail questionnaires (Oppenheim, 2003). Participation rates are high and costs per respondent are low. The school survey generates relevant contextual information on students, classes and schools. It can also generate contextual information on the students' households and the communities in which they live. School-based research provides direct comparison of groups and individuals in the classroom (Hopkins, 2003). With a promise of confidentiality, excellent results can be obtained from large numbers of school children with the use of pre-coded questionnaires and many other closed techniques

(Oppenheim, 2003). Therefore, schools provide a setting that is primarily the most accessible for reaching children and adolescents.

However, there are many disadvantages for school-based research such as; it does not reach children who are not in school or absence of children due to illness. Other disadvantages of carrying out school-based research include limitations imposed on research schedules by the school timetable, school holidays and examinations. Additionally, the children tend to write much slower than they can read, so this can takes greater time. Several fieldworkers may be needed in each classroom to help with spelling, to answer questions and to distribute and collect questionnaires (Oppenheim, 2003). Hopkins (2003) identified some disadvantages to classroom questionnaires, including: effectiveness depends very much on the reading ability and comprehension of the child; children may be fearful of answering candidly; and children will try to produce the 'right' answers. Despite these limitations, the schools are deemed a feasible setting for obtaining the data and knowledge to identify the perceptions of children and adolescents on their health and well-being.

2.2.4 Lifestyle patterns

2.2.4.1 Dietary habits

- **Eating behavior**

Children can maintain healthy eating and lifestyle habits throughout their lives if they are established early. Children's eating behaviors are fundamental to their health. Where, the healthy eating habits start at home by teaching the children about healthy eating habits that it can help the children maintain a healthy weight and normal growth. Also, the eating habits when the children are young will help them maintain a healthy lifestyle when they are adults (Campbell and Crawford, 2001).

Nowadays childhood and adolescents obesity is a global concern because dramatic increase of its prevalence worldwide (WHO, 2003; Hruby and Hu, 2016). It is a risk factor for different chronic diseases (CDC, 2017; NIDDK, 2015). Moreover, it is associated with negative impact on mental, physical and social functions in children (WHO, 2005; Reilly and Wilson, 2006). In Arab countries, it has reached to alarming figures with prevalence rates ranging from 25% to 60% (Musaiger et al, 2011). Energy imbalance such as excessive energy intake and physical inactivity is the most significant cause for obesity and its related chronic diseases such as type 2 diabetes, metabolic syndrome, and high blood pressure (Lobstein et al, 2004). Dramatically change of adolescence lifestyle behavior and dietary habits during past three decades as result of modernization which characterized by excessive intake of energy, fat and salt became common habits (Musaiger et al, 2011).

Eating a nutritious breakfast regularly is an important diver to a healthy lifestyle and health status. Many studies have shown a significant relationship between skipping breakfast and obesity among children (Taskar et al, 2010; Goon and Islam, 2014; Okada et al, 2018). Breakfast skipping is also associated with an increased risk of obesity (Goon and Islam, 2014). Okada and colleagues (2018) explained that children whose mothers or fathers skipped breakfast were more likely to skip breakfast and had significantly increased risk of overweight or obesity. Parental attitudes effect on their children, where Brown and Ogden (2004) explained that the children aged between 9 and 13 in southern England whose parents indicated greater attempts to control their child's diets reported higher intakes of both healthy and unhealthy snack foods. In addition, parental control has a differential impact depending upon whether this control is focused on the child's diet or on other aspects of their behavior. Taskar and colleagues (2010) explained that skipping breakfast was significantly greater among adolescents (aged 14 to 18 years) 31.5% compared to children (aged 9 to 13 years) 20%. Prevalence of obesity (body mass index ≥95th

percentile) was higher in adolescents, and study in Lithuania showed that the prevalence of overweight and obesity among 7–17 years old children and adolescents was more prevalent in younger age. Meals frequency, breakfast skipping, paternal education and unemployment as well as a family history of arterial hypertension were found to be associated with children's and adolescents' overweight/obesity (Smetanina et al., 2015). Daradkeh and colleagues (2015) showed the prevalence of obesity and overweight was significantly higher among males (25.6%) than in females (23.7%) among Qatar adolescents aged 15 to 18 years (Daradkeh et al, 2015). The number of eating episodes was inversely associated with the risk of obesity. Furthermore, it was reported that the risk of obesity would increase, if the number of meals were three or fewer per day (Yunsheng et al., 2003). Irregular main meal intake may be associated with poorer lifestyle factors and decreased diet quality compared to regular main meal intake. (Sjoberg et al., 2003).

Al-Rethaiaa and colleagues (2010) reported that the most common eating habits developed among Saudi students were eating with family, having two meals per day including breakfast, together with frequent snacks and fried food consumption. El Qudah and colleagues (2012) investigated the fast food consumption, eating patterns and physical activity habits among Saudi Arabia college students; they found that about 15.7% of the study participants skip their breakfast daily. Both males and females eat their meals irregularly, as well as, more than half of the students stated that they consume fast foods; the proportion of females consuming fast food was higher (64.9%) than the males (51.4%) and the difference was statistically significant (El Qudah et al., 2012). As well as, Bin Zaal and colleagues (2009) found a significant relationship between snacking in between breakfast and lunch and obesity among girls, while, midnight snacking was significantly associated with obesity among boys. The obesity risk was higher among girls who always consumes midnight snacks.

In addition, the frequency of eating fast food was significantly related to obesity among girls (Bin Zaal et al., 2009). Al Muammar and colleagues (2014) found no significant differences between BMI category and dietary pattern and lifestyle among female adolescent students (age 12–15 years) at schools in Riyadh. Also, about half the students (53.3%) were within normal weight, 28.6% were underweight, 12.4% overweight and 5.7% obese. The majority of the students did not have healthy dietary or exercise habits (Al-Muammar et al, 2014).

A cross-sectional study was carried out to explore the double burden of under nutrition and obesity in Palestinian schoolchildren in West Bank, the researcher reported that the prevalence of stunting was 7% and underweight 3%. Around 12% of students were overweight and 6% obese. The hunger index was negatively associated with height for age. Factors associated with being underweight were male sex, the mother being unemployed, and households not having enough food to eat for at least 2 days in the previous month. Factors associated with obesity were older age and time spent watching television. When overweight and obesity were combined in the analysis, they were inversely associated with increasing number of days spent playing sports. (Massad et al., 2016). In Gaza Strip, Abu Nada and colleagues (2013) investigated the zinc nutritional status among early adolescents in the Gaza Strip; they found that the prevalence of high body mass index and stunting was 29%, 7.6% respectively. The stunted males (8.8%) were more prevalent than the females (6.4%). 49% of the females live in sedentary lifestyle, whereas 55% of the males practiced active and very active leisure physical activity (Abu Nada et al, 2013).

On other aspect, the increase of non-communicable diseases at all ages has fostered the general concern for sustaining population health worldwide. Unhealthy lifestyles and dietary habits impacting physical and psycho-social health are well known risk factors for developing life threatening diseases. Identifying the determinants of quality of life is an

important task from a public health perspective. Consumer-reported outcome measures of health-related quality of life (HRQOL) are becoming increasingly necessary and relevant in the field of nutrition. However, quality of life questionnaires are seldom used in the nutrition field (Guyatt et al, 2007). Cash and colleagues (2012) reported that the dietary behaviors related of obesity and higher BMI are significantly associated with decreased QOL and productivity to different degrees in women and men (Cash et al, 2012). Many studies showed the QOL generally improved after participating in behavioral weight loss interventions. The several different dietary approaches (low carbohydrate, low calorie, low fat, combinations) were recommended to improve the QOL. However, findings revealed a lack of evidence to definitively determine whether reported changes in QOL were a result of weight loss or independent of it (Carson et al, 2014).

- **Food groups consumption**

Food pyramid (or diet pyramid) is an easy tool representing the optimal number of servings to be eaten each day from each of the basic food groups. As a general rule, a nutritionally balanced diet should include at least 3 of the 5 food groups at each meal and the snacks should contain two groups. The USDA Food Guide Pyramid and the MyPyramid had six food groups. However, the latest food guide, MyPlate, has five: (1) Grains for fiber and energy, (2) Fruits for fiber and vitamins, (3) Vegetables for fiber, vitamins, and minerals, (4) Dairy for calcium, vitamins, and protein, (5) Meat, fish, and beans for protein (Cataldo et al., 2003; CNPP, 2017).

The Food Guide Pyramid was designed by USDA Food Guide Pyramid and the MyPyramid. It is an easy tool to build healthy eating habits and lifestyles for kids, with equal emphasis on diet and activity. Additionally, it considers the age, gender, weight, height and the amount of physical activity of the child to come up with a personalized meal

plan. The food guide pyramid presents the daily food guide in images. Parents can use the images and activities to encourage their children to eat healthy foods and keep away junk foods. Teachers can also use the food pyramid to introduce the idea of nutrition and healthy eating in school (Cataldo et al., 2003; Smolin and Grosvenor, 2008; CNPP, 2017). The food pyramid has a pyramid shape; the grains/ cereals at the base in pyramid, grains are the foundation of healthy diet. Then fruits and vegetables share the next level of the pyramid, followed by meat and milks with smaller section before the top. Finally, fats, oils, and sweets at the top of the pyramid, namely that food should be in a very little amount in the diet.

Literature shows inconsistencies about the mechanisms for the association between fruit and vegetable intakes and body weight (Yao and Roberts, 2001). Bazzano and colleagues (2002) found significant decreases in BMI as fruit and vegetable intake increases among the participants. Fruits and vegetables with low calories and high water content, so that it could increase satiety and decrease body weight (Bazzano et al., 2002). According to the Food Guide Pyramid, it is recommended to consume grains food six to eleven servings each day (Cleveland et al., 2000). Many studies have revealed an inverse dose-response relationship between the BMI with the whole grain intake (Steffen et al., 2003). Diets rich in whole grain are associated with a healthier dietary profile, including greater intakes of fruits and vegetables, fiber, iron, zinc, calcium, folate, and vitamin E and lower intake of saturated fatty acids, meat, cholesterol (McKeown et al., 2002; Liu et al., 2003 and Steffen et al., 2003). Where, the grains are rich sources of dietary fibers, starch, vitamins, minerals, complex carbohydrates, phytoestrogens, antioxidants and other substances which regulate the body weight and reduce the insulin resistance and cardiovascular disease risk factors (Anderson et al., 2000). The whole grains are characterized by high-fiber content, which may protect against weight gain or promote weight loss (McKeown et al., 2002).

High fiber diets decrease energy intake due to its bulk, low energy density and through promoting earlier satiety which helps in losing weight (Koh-Banerjee et al., 2003). Additionally, high fiber diets also slow starch digestion or absorption, this lower insulin and glucose responses to induce the oxidation and lipolysis of fat rather than its storage (Liu et al., 2003). Ying Lee and Lin (2005) reported that the frequency of physical exercises was found to be positively associated with normal weight and that sedentary behavior was negatively associated with normal weight and positively associated with overweight among children of ages between 12 and 18. Also, the consumption of low fat milk, other dairy products, fruits and legumes is negatively associated with the probabilities of being at risk for overweight and overweight among school-age children. In contrast, increasing consumption of soft drinks, fat and oils, and sodium appears to be the major dietary factors that positively associated with childhood overweight (Ying Lee and Lin, 2005).

Daradkeh and colleagues (2015) showed eating habits among the Qatar adolescents aged 15 to 18 years that frequency of foods intake (fruits, milk and energy drinks per week) was significantly higher among males than females, while intake of (sweets, French fries and cake/doughnuts) was higher among females than among males (Daradkeh et al, 2015). In Palestine, a cross-sectional study was carried out to describe the food habits and physical (in) activity patterns and to investigate the relationship with socio demographic factors among Palestinian school-aged children. The researchers reported that adolescents in the West Bank consume more fruit, meat, chicken, sweets and soft drinks, but less vegetables than adolescents in Gaza ($P<0.01$). Girls reported more daily consumption of fruit, vegetables, and sweets than boys ($P<0.001$), and less consumption of soft drinks, milk, meat and chicken ($P<0.01$) (Al-Sabbah, 2007).

2.2.4.2 Physical activity and sedentary behavior

Physical activity is an important lifestyle and defined as any bodily movement produced by skeletal muscles that require energy expenditure (WHO, 2016b). Regular physical activity in childhood and adolescence is important for promoting lifelong health and well-being and preventing various health conditions (US, 2008a; Janssen and Leblanc, 2010). The 2008 US Physical Activity Guidelines for Americans recommend that children and adolescents aged 6 to 17 years should have 60 minutes (1 hour) of moderate to vigorous-intensity physical activity each day to ensure healthy development (Ulijaszek, 2007; Krebs et al., 2007; US, 2008b). Also, WHO (2010) released recommendations for physical activity levels for promoting and maintaining health among children. Where the WHO recommends the children and youth aged 5–17 should accumulate at least 60 minutes or more of physical activity each day and the amounts of physical activity greater than 60 minutes provide additional health benefits, also most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week (Haskell et al., 2007; WHO, 2010). Unfortunately, many children and adolescents do not meet the recommendations set forth in the WHO recommends or physical activity guidelines for Americans (NPAP, 2016).

Physical activity is an important lifestyle related to well being of individuals. Regular physical activity program in childhood and adolescence promote health and are associated with substantially reduced risk of chronic diseases and also contribute to improving school performance (Abudayya et al, 2007).

Regular moderate physical activity results in many health benefits for adults. For example, it improves cardio-respiratory endurance, flexibility, and muscular strength and endurance. Physical activity may also reduce obesity alleviate depression and anxiety and build bone mass density. Specific forms of physical activity and exercise in which young people might

participate include walking, bicycling, playing actively, participating in organized sports, dancing and doing active household chores. Regular physical activity among children and adolescents with chronic disease risk factors is important. It decreases blood pressure in adolescents with borderline hypertension, increases physical fitness in obese children, and decreases the degree of overweight among obese children. The international consensus conference on physical activity guidelines for adolescents recommends that all adolescents should be physically active daily, or nearly every day, as part of play, games, sports, work, transportation, recreation, physical education, or planned exercise (Phongsavan, 2004; WHO, 2010).

Recently, both developed and developing countries have had reported a significant alarming increase in physical inactivity among young adults (Kohl et al., 2012). Our modern lifestyle and all the conveniences made us sedentary. Sitting around in front of the TV or the computer, riding in the car for even a short trip and using elevators instead of stairs all contribute to our inactivity, where the physical inactivity is as dangerous to our health (Clarke, 2015).

Rey-López and colleagues (2008) have found a positive association between television watching and obesity among children and adolescents. Watching TV seemed to be the most sedentary behavior affecting overweight and obesity among them (Rey-López et al., 2008). Additionally, physical inactivity and poor diet are potential risk factors for chronic diseases, especially cardiovascular disease. It is noteworthy that the physical activity measurement is described by the combination of information on the type, frequency, intensity, and duration of activity over a specified period (WHO, 2010). Many studies have pointed out that sedentary behaviors, such as watching television, computer use, sitting for work, chatting and study purposes, are highly associated with overweight and obesity (Hu, 2003; Must and Tybor, 2005; Miller, 2010; Owen et al., 2010).

Additionally, the literature showed that higher levels of sedentary behaviors are associated with decreased quality of life, increased risk of depression, and weaker cognitive functioning (Iannotti et al., 2009; Miller, 2010; Teychenne et al., 2010; Syvaoja et al., 2014). In the most study showed the boys are more physically active than girls, Huang and colleagues (2002) confirmed that male students are more likely to be engaged in aerobic exercise with more days per week than female. Furthermore, students aged ≤ 19 years were more likely to practice aerobic exercise than students aged ≥ 20 years, this means that the level of physical activity may decrease by time (Huang et al., 2002). Al-Hazzaa and colleagues (2013) pointed a very high proportion (84% for males and 91.2% for females) of Saudi young adolescents spent more than 2 hours on screen time daily and almost half of the males and three-quarters of the females did not meet daily physical activity guidelines (Al-Hazzaa et al, 2013). Guthold and colleagues (2010) have described and compared the levels of physical activity and sedentary behavior in schoolchildren from 34 countries across five WHO Regions. Where, the analysis included 72,845 schoolchildren from 34 countries that participated in the Global School-based Student Health Survey (GSHS). The study findings have revealed very few students engaged in sufficient physical activity. Across all countries, 23.8% of boys and 15.4% of girls met recommendations, with the lowest prevalence in Philippines and Zambia (both 8.8%) and the highest in India (37.5%). The prevalence of walking or riding a bicycle to school ranged from 18.6% in United Arab Emirates to 84.8% in China. In more than half of the countries, more than one third of the students spent three or more hours per day on sedentary activities, excluding the hours spent sitting at school and doing homework (Guthold et al, 2010).

In Palestine, the boys were more physically active than girls, with those in West Bank more physically active than those in the Gaza strip (Husseini et al, 2009). In addition, students in UNRWA schools in the Gaza strip practice ten minutes of physical activity

daily before starting the educational day. Moreover, through the researcher worked in Gaza schools, whether UNRWA, government and private schools, she found the students obtained forty-five minutes weekly for physical activity through sports class whether it was UNRWA, governmental or privet schools. However, some of the students especially girls did not participate in this activity. In return, some active students especially males try to practice around 15 minutes additional physical activity during the break time. Al-Sabbah and colleagues (2007) reported that boys were physically more active than girls ($P<0.01$), whereas girls reported doing more homework ($P<0.001$). Both boys and girls reported less physical activity with increasing age ($P<0.001$) in West Bank and from the Gaza Strip (Al-Sabbah, 2007).

2.2.4.3 Sleeping patterns

Sleep habits are another type of lifestyle that sleep is defined as a naturally recurring state of mind and body, characterized by altered consciousness, relatively inhibited sensory activity, inhibition of nearly all voluntary muscles, and reduced interactions with surrounding (Bethesda, 2017).

Healthy sleep is increasingly recognized as an important determinant of children and adolescents health. Where the healthy sleep requires adequate duration, appropriate timing, good quality, regularity, and the absence of disturbances and disorders. Shalini Paruthi, MD, Pediatric Consensus Panel moderator and the fellow of the American Academy of Sleep Medicine, said in a statement (AASM), "*Healthy sleep is not only dependent on sleep duration, but also appropriate timing, regularity, and sleep quality*". Also, sleep duration is a frequently investigated sleep measure in relation to health outcomes. Many studies have shown that adequate sleep duration is associated with better attention, behavior, cognitive functioning, emotional regulation, and physical health among children.

While inadequate sleep may affect daytime cognitive functions, academic performance, behavior, emotional regulation, weight and the risk of accidental falls (Ciccone, 2016). Parents report sleep difficulties in 10-75% of children worldwide, ranging from transient benign behavioral problems to more persistent and severe conditions such as the sleep apnea syndromes (Petry et al, 2008; Mindell et al, 2011)

Now it is worth knowing, how much sleep is needed for optimal health in children?

The American Academy of Sleep Medicine (AASM) has released consensus recommendations for the amount of sleep needed to maintain optimal health in children and adolescents. Where, the AASM recommendations are: 1) Infants 4 to 12 months should sleep 12 to 16 hours per 24 hours (including naps) on a regular basis to promote optimal health. 2) Children 1 to 2 years of age should sleep 11 to 14 hours per 24 hours (including naps) on a regular basis to promote optimal health. 3) Children 3 to 5 years of age should sleep 10 to 13 hours per 24 hours (including naps) on a regular basis to promote optimal health. 4) Children 6 to 12 years of age should sleep 9 to 12 hours per 24 hours on a regular basis to promote optimal health. 5) Teenagers 13 to 18 years of age should sleep 8 to 10 hours per 24 hours on a regular basis to promote optimal health (Ciccone, 2016).

All lifestyles interact with each other and each pattern affects the other in a positive or negative way. Several studies have explored the association between sleeping patterns and other lifestyle patterns as dietary behavior or physical activity etc. Paruthi and colleagues (2016) have examined the amount of sleep needed to promote optimal health in children and adolescents and found it associated with better health outcomes including improved attention, behavior, learning, memory, emotional regulation, quality of life, and mental and physical health. Regularly sleeping fewer than the number of recommended hours is associated with attention, behavior, and learning problems. Insufficient sleep also increases the risk of accidents, injuries, hypertension, obesity, diabetes, and depression. Insufficient

sleep in teenagers is associated with increased risk of self-harm, suicidal thoughts, and suicide attempts (Paruthi et al, 2016). Additionally, the association of physical activity with distinct aspects of sleep has been the subject of much research (Youngstedt, 2005). People sleep significantly better and feel more alert during the day if they get at least 150 minutes of exercise a week, a new study concludes. A nationally representative sample of more than 2,600 men and women, ages 18-85, found that 150 minutes of moderate to vigorous activity a week, which is the national guideline, provided a 65 percent improvement in sleep quality. People also said they felt less sleepy during the day, compared to those with less physical activity. "*Increasingly, the scientific evidence is encouraging as regular physical activity may serve as a non-pharmaceutical alternative to improve sleep*", said Brad Cardinal, a professor of exercise science at Oregon State University and one of the study's authors (Cardinal, 2011). Woods and Scott (2016) reported a positive association between sleep quality duration and increased levels of used the social media. Also, the poorer sleep quality was associated with higher anxiety and depression (Woods and Scott, 2016).

Bawazeer and colleagues (2009) have examined the relationship between sleep pattern and obesity among Saudi students, aged between 10 and 19 years. It was reported, that the sleeping for seven hours or less was significantly associated with increasing the risk of obesity among both boys and girls (Bawazeer et al., 2009). Many studies have proven that the short sleep duration among children is associated with increased risk of obesity during adolescence (Calamaro et al., 2010; Lumeng et al., 2007; Lytle et al., 2012; Snell et al., 2007; Van Cauter, 2010). "*Sleep is essential for a healthy life, and it is important to promote healthy sleep habits in early childhood*", "*It is especially important as children reach adolescence to continue to ensure that teens are able to get sufficient sleep*". Shalini Paruthi said in a statement. (Ciccone, 2016).

2.2.4.4 Hygiene practices

- **Hygiene**

Hygiene is a term which essentially means cleaning the body or the direct environment of people and the point of sanitation that may be well thought-out hygienic that depends on the situations (SCA Group, 2016). The principle of adopted hygiene is to focuses on recognizing the key routes by which pathogens are spread, and intervening at serious points at the suitable time to decrease the hazards of transfer of contamination, as well as distinguishing the value of sustaining exposure to our environment (IFH, 2012). According to Erkal and Shahin (2011) stated that hygiene is a personal matter, as well as personal hygiene is defined by Hassan (2012) as the basic concept of cleaning, training and it is the first step to good health. Additionally it is reflect as one of the most essential part of our daily lives at home and at workplace which helps us to keep ourselves and protect us with worthy health. Moreover, hygiene is the practice of protecting oneself and one's environments clean, mainly in order to prevent diseases or the spread of infections (IRC and UNICEF, 2004). Hygiene has been studied from various perspectives, including that of history. Where, Muslims throughout the world have very high standards of personal hygiene, because Islam seats great highlighting on both physical and spiritual, hygiene and cleansing (Stacey, 2009). Additionally, Fischman (2000) supported the idea by giving an example that Islamic teaching emphasizes the use of a special wooden stick, called Siwak, for cleaning the teeth and preventing bad breath.

A good number of the verses of Holy Quran and traditions of Prophet Mohammad deliver best guideline for human beings in order to enjoy the maximum standard of personal hygiene than other people of the world (Bhat and Qureshi, 2013).

WHO and UNICEF have identified hand washing with soap, before and after eating, after defecation and before preparing food; safe disposal of faeces and use of latrines; safe

weaning food preparation, water handling and storage as the key hygiene behaviors (Shammi and Morshed, 2013). In addition, hand washing with soap and water has been reflected a measure of personal hygiene (Patel, 2011).

A review of different definitions of hygiene introduced by researchers, experts, and studies agrees that hygiene promotes wellbeing, protection, and health consequently the QOL of individual.

- **Hygiene and Health**

Over the past century, hygiene improvements became a major role in reducing morbidity and mortality at community and individual level. Such as healthy living conditions and practices, clean water, and sewage facilities, particularly from infections that transmitted by the feco-oral and direct contact routes (Aiello and Larson, 2002). The hygiene and human health are closely associated to each other, where undertaking antibiotic resistance is a global priority in health and hygiene is a means to reduce the silent epidemic transmission of resistant tensions in the community (Huuhtanen and Laukkanen, 2006; IFH, 2012).

Hygiene, including personal hygiene is of great importance for individuals and communities, also it is the most important factor in health promotion and disease prevention since the safety and well-being of any society is linked to the health status of its individuals (Aiello and Larson, 2002). On other hand, individuals who do not look after their personal hygiene i.e., dirty clothes, body odour and bad breath will suffer from discrimination and this will principally lead to mental problems (Hassan, 2012).

Suitable supplies of safe drinking water and appropriate disposal of sewage within communities, joined with personal hygiene practices, such as regular hand washing, decrease the transmission of anti-hepatitis “A” virus (Franco et al., 2012). Also, more

frequent showering and bathing has also been implicated as a major change in society over the last half-century (Bloomfield et al., 2012). In the same context UNICEF report in 2009 declared that improvements in access to safe water and adequate sanitation, along with the promotion of good hygiene practices (particularly hand washing with soap), can help prevent and avoid childhood diarrhoea (UNICEF, 2009). In reality, diarrhoea is one of the consequences of poor hygiene, given that diarrheal diseases are the second leading causes of death in children aged less than 5 years worldwide (You et al., 2010). An estimated 2.5 million cases of diarrhoea occur annually in these children, with Asia and southern Africa accounting for more than half of them (Boschi-Pinto, et al., 2008). The World Health Organization (2001) estimates that diarrhea and respiratory infections are the main responsible for two-thirds of child deaths. Moreover, diarrheal diseases are endemic in countries where the water and sanitation infrastructure is poor (Cairncross and Valdmanis, 2006). As well, an estimated 88 % of diarrheal deaths worldwide are referring to unsafe water, insufficient sanitation and poor hygiene (UNICEF, 2009).

- **Hand Washing and Health**

WHO (2009) defined hand washing as any action of hygienic hand antisepsis in order to reduce transient microbial flora, whereas generally performed either by hand rubbing with an alcohol-based formulation or hand washing with plain or antimicrobial soap and water. Hand washing is considered to be the main control for disease spread during food preparation and as one of the most effective ways to diminish the risk of diarrhea and it can help to inhibit diarrheal organisms' attainment of the environment and prevent the consequent uncleanness of food and water (Ejemot et al., 2009; LSHTM et al., 2012). For this reason, detailed consideration must be given to hand hygiene (EU; ASEAN, 2005).

Hand hygiene, when done properly, is the single most effective way to prevent the transmission of infection, where the major infection foundations may include raw food, pets, soiled nappies, dirty surfaces and reservoir sites such as toilets, sneezing, coughing and transfer of nasal secretions to the hands. Consequently, this practice should become the first priority to be presented to the community (IFH, 2002; HUC, 2007; Usfar et al, 2010). It is principally important in schools, where many things are shared between students such as: desks, books, pencils, food, and even microbes. Without correct hand cleaning, a single infection can quickly spread among students, teachers, family, and friends (Columbus public health, 2009). According to Bloomfield and colleagues (2007) explain the hand washing intervention studies offer data supporting the causal link between hand uncleanness and infectious disease spread, defining the significance of hand hygiene relative to other hygiene practices, such as surface and cleaning cloth hygiene (Bloomfield et al., 2007). Additionally, the Tansey (2010) said the child caregivers should talk with and regularly remind children of when to wash their hands, including before and after meals, after going to the toilet, after playing outside with sands and after painting, and other activities. Moreover, due to shortage of time, limited access to hand hygiene facilities and lack of promotion or education, some students do ineffectively wash their hands on a regular base (Tansey, 2010). This may put them at risk for diseases and sicknesses such as colds or the flu which can be spread easily to other students and school workers (HUC, 2007). So, for many years hand washing with soap and water been reflected as a measure of personal hygiene (Rama et al., 2011).

2.2.5 Quality of life (QOL)

Since the early 1970s, the QOL concept has increased attention in research or clinical practice. Where, the QOL has been of dominant importance for evaluating the quality and the outcomes of health. Despite its value, there is still no consensus on the definition or proper measurement of QOL. Some articulate that there is more misunderstanding on what quality of life means compared it with any other concept in social, medical, and psychological research because it multi-axes (Dijkers, 2005; Veenhoven, 2006), in addition to the lack of a single tool to measure QOL (Almarshad, 2015).

Newly, social researchers evaluated the quality of life by assessing socioeconomic status, housing, education, and neighbourhoods. A standard definition of quality of life has not been agreed because the quality of life is a vague concept and a multidimensional term (Bowling, 2001).

QOL is the general well-being of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, religious beliefs, finance and the environment (Barcaccia et al, 2013). Additionally, the WHO defines the QOL as "an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns. It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, and their relationships to salient features of their environment" (Forward, 2003; WHO, 2012).

There are two aspects of this definition; the first one, the QOL is a subjective concept that refers to positive and negative aspects of life, the second, the QOL appears to be a comprehensive and multidimensional concept. Thus, all the health professionals should give special attention to not only the influence of the physical health status of the patients

or any person, but also to their patients‘ satisfaction with their physical, psychological, and social functioning that equal QOL (De Vries, 2001; De Vries and Drent, 2006).

The most appropriate definition of QOL is satisfaction with life. It reflects the degree to which a person completely evaluates the overall subjective and objective components of his or her life. Furthermore, QOL refers to the level of enjoyment and satisfaction with the life led so far. Other definitions of QOL have been to emphasizing components of happiness and satisfaction with life (Al-Attiyah and Nasser, 2016). Quality of Life Research Unit (2015) defended the quality of life as the degree to which a person enjoys the important possibilities of his or her life.

As we mentioned the QOL is a broad, complex and multidimensional concept, which includes an assessment of the ability of the individual to meet their needs and how they react to the limitations they face. It is therefore, subjective, individualized and difficult to measure but its assessment is crucial to a holistic understanding the life of the individual. QOL has been developed as a worldwide concept that is affected by several factors. Besides, it is considered that individuals are the only ones who can dependably estimate their own QOL (Post, 2014). The situation of individuals, religion, and culture influences it (Patel, 2006).

Synopsis of hadith, QOL is affected by the environmental, socio-economic and health conditions in which an individual finds himself. The dimensions of QOL include psychological health, physical health, social relationships, and environment.

2.2.5.1 Health-related quality of life (HRQOL)

Health is a complex concept with many components, although health is assessed through classical health indicators derived from the biomedical model. The Global Strategy for Achieving the Sustainable Development called for greater emphasis on prevention and

promotion to children's health and well-being (UNICEF, 2015). The WHO defines the health: 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO, 2011a). This definition carries an important expansion in the health perspective, which is not only understood by physical indicators, but also includes how a person feels, psychologically and physically, and how to manages with other persons and adapt with everyday life (WHO, 2012; Jadad and O'Grady, 2008; Taylor and Marandi, 2008).

In recent years, HRQOL is increasingly gaining importance in the health field and is becoming a central research theme. Although experts continue to disagree on the definition of quality of life, there seems to be a consensus that definition of HRQOL, where it is a broad multidimensional construct and is relevant on many levels to almost all levels of human function, also it considers the level of physical, psychological, and social functioning, and that it includes abilities, relationships, perceptions, life satisfaction, and well-being (Barcaccia et al, 2013). Researchers are not concerned in quality of life in its wide sense in health research, thus, the HRQOL has been introduced into epidemiology to provide a descriptor of perceived health in the population as a basis for planning, monitoring and evaluating health-related interventions. The measurement of health-related quality of life is a subjective assessment of one's own -welfare- a perception to the degree of satisfaction with an ability to perform and control different facets of one's life (Molassiotis et al., 2001).

Research has shown that including HRQOL in child and adolescent health surveys is feasible. Hence, many projects and questionnaires have developed to examine the physical, emotional and social aspects associated with individuals' health. These multidimensional instruments measure the impact of health problems on general health status, and allow for a common metric to compare between different diseases. It should be noted that the

HRQOL can be assessed using either a generic or a disease -specific questionnaire, the WHOQOL and Medical Outcomes Study short form health surveys, SF-36 are an example of a generic HRQOL questionnaire and KIDSCREEN project to the measurement of child and adolescent HRQOL. These questionnaires are designed to measure the most important aspects of HRQOL.

2.2.5.2 Health-related quality of life in children and adolescents

Over recent years, while the quality of life research in adults has progressed, the quality of life in children has not been extensively researched. In addition, the literature was apparent that studies related to the quality of life research of children only pertain to 13% of the studies related to adults. Also, the assessment instruments from the literature and their application in studies are very rare. It is worth mentioning that the development of quality of life research in children has occurred in three phases, starting to emerge in the late 1980s and continued to evolve even to the mid-1990s, final phase recently began about 1995 and still going on. The first phase was concerned with how to assess quality of life in children as a theoretical concept; the second phase consists of constructing and developing quality of life measures for children; and the third phase concerns the application of these measures in clinical and epidemiological studies (Pennacchini et al, 2011).

For research reflecting children's views about well-being (QOL) is a developing area. There is increasing number of general questionnaires that assess HRQOL in children and adolescents. However, a number of difficulties have been observed, particularly doubts about whether children are able to express opinions, attitudes and feelings about their HRQOL (Giannakopoulos et al, 2009). However, newly the research has proved that children are able to reliably report their well-being if the questionnaire is appropriate for the child's age and knowledge level. An understanding of the HRQOL concept or

assessment of health and well-being aspects is determined by age, maturity and cognitive development (Ravens-Sieberer, 2014). Another impediment in children, the children may have difficulty reading and writing. One shortcoming of the theoretical discussion and construction of questionnaires is that children are rarely asked to express their point of view. It is therefore interesting to focus increasingly on the child's point of view in constructing questionnaires equal to or more important than expert opinions or the results of literature reviews.

2.2.5.3 Measuring health-related quality of life in children and adolescents

The history of research on health indicators shows that generic self-reported HRQOL instruments, while still in a developmental stage, have become a prime focus in the health field (Rajmil et al, 2004). Instruments to assess HRQOL have been developed mainly in the adult area, but only a few instruments exist in the children's area (Solans et al, 2008). It is notable that when analyzing the results of public health surveys that include HRQOL measures for children and adolescents, important determinants to take into account include children's perceptions of health on the physical, cultural and social environment (Keenaghan and Kilroe, 2008; Rueden, 2006); on social stressors (Giannakopoulos,2009); on health behaviors (Ravens-Sieberer et al, 2001); and on psycho-social processes, such as adaptation and social support (Ravens-Sieberer, 2014; Santos, 2016).

Consequently, in this study the QOL domain is adopted and modified from KIDSCREEN 52 instrument, this instrument is a European-wide effort, covering 13 countries and it a self-report measure suitable for administration in a range of settings. The KIDSCREEN 52 instrument developed, tested and implemented the HRQOL instrument to assess the well-being and subjective health of healthy children and those who suffer from chronic conditions, aged between 8 and 18 years. The project approaches children's HRQOL from

a holistic perspective. HRQOL is understood as a multidimensional construct covering physical, emotional, mental, social, cultural and behavioral components of well-being and function as perceived by the child or adolescent (Keenaghan and Kilroe, 2008). Additionally, KIDSCREEN 52 instrument is of a generic nature, applicable in different national and cultural contexts, complies with quality standards in instrument development and is practical, short and easy to use. The instrument results in a profile describing health-related quality of life. It was designed with the aim of contributing to a better understanding of perceived health in children and adolescents in Europe and thus to contribute to planning, implementing and evaluating innovations in the healthcare field. The instrument is available in English, German (Austrian, German and Swiss versions), Dutch, French, Spanish, Italian, Polish, Czech, Hungarian, Greek and Swedish. It can be used in representative surveys with children to obtain reference data (Keenaghan and Kilroe, 2008). As a result, children and adolescents at risk in terms of their personal health can be identified and appropriate responses designed.

In this study, the KIDSCREEN-52 instrument was used to ask Gaza children about their quality of life. The instrument measures ten HRQOL dimensions, which address the following main areas:

Dimension 1: Physical well-being (5 items)

This dimension explores the level of physical activity of the child or adolescent in terms of their energy and fitness. The level of physical activity is examined with reference to their ability to get around the home and school, and to play or do physically demanding activities (e.g. sports) since any impairment will affect physical activity. The dimension also looks at the capacity of the child or adolescent to engage in lively or energetic play. In

addition, the extent to which a child or adolescent feels unwell and complains of poor health is examined (Keenaghan and Kilroe, 2008).

Dimension 2: Psychological well-being (6 items)

This dimension examines the psychological well-being of the child or adolescent, including positive emotions and satisfaction with life. It specifically reveals the positive perceptions and emotions experienced by the individual. The questions look at how much a child or adolescent experiences positive feelings, such as happiness, joy and cheerfulness. They also reflect the person's view of their satisfaction with life so far (Keenaghan and Kilroe, 2008).

Dimension 3: Moods and Emotions (7 items)

This dimension covers how much the child or adolescent experiences depressive moods and emotions, and stressful feelings. It specifically reveals feelings such as loneliness, sadness, sufficiency/insufficiency and resignation. Furthermore, this dimension takes into account how distressing these feelings are perceived to be. This dimension shows a high score in HRQOL if these negative feelings are rare (Keenaghan and Kilroe, 2008).

Dimension 4: Self-perception (5 items)

This dimension explores the child or adolescent's perception of self. It includes whether the appearance of the body is viewed positively or negatively. Body image is explored by questions concerning satisfaction with looks as well as with clothes and other personal accessories. The dimension examines how secure and satisfied children or adolescents feel about themselves, as well as their appearance. Results are meant to reflect the value individuals assign to themselves and the perception of how positively others value them (Keenaghan and Kilroe, 2008).

Dimension 5: Autonomy (5 items)

This dimension looks at the opportunity given to a child or adolescent to create his or her own social and leisure time. It examines the person's level of autonomy, seen as an important developmental issue for creating an individual identity. This refers to the child or adolescent's freedom of choice, self-sufficiency and independence. In particular, the extent to which they feel able to shape their own lives, as well as being able to make decisions about day-to-day activities, will be considered. The dimension also examines if the child or adolescent feels sufficiently provided with opportunities to participate in social activities, particularly in leisure activities and pastimes (Keenaghan and Kilroe, 2008).

Dimension 6: Parent Relations and Home Life (6 items)

This dimension examines the relationship of the child or adolescent with their parents and the atmosphere in the home. It explores the quality of the interaction between the child/adolescent and the parents/carers, as well as the feelings of the child/adolescent towards the parents/carers. Particular importance is attached to whether the child/adolescent feels loved and supported by the family, whether the atmosphere at home is comfortable or otherwise, and whether the child/adolescent feels fairly treated (Keenaghan and Kilroe, 2008).

Dimension 7: Social Support and Peers (6 items)

This dimension examines the nature of the child or adolescent's relationships with other children or adolescents and considers the social relations with friends and peers. The dimension explores the quality of the interaction between the child/adolescent and peers, as well as their perceived support. The questions examine the extent to which the child/adolescent feels accepted and supported by friends and their ability to form and maintain friendships. Also explored is the extent to which the person experiences positive

group feelings and how much he or she feels part of a group and respected by peers and friends (Keenaghan and Kilroe, 2008).

Dimension 8: School Environment (6 items)

This dimension explores the perception of the child or adolescent about their cognitive capacity, learning and concentration, and their feelings about school. It includes their satisfaction with their ability and performance at school. General feelings about school (e.g. whether school is an enjoyable place to be) are also considered. In addition, the dimension explores the child or adolescent's view of their relationship with their teachers. For example, questions include whether they get along well with their teachers and whether the teachers are perceived as being interested in them as individuals (Keenaghan and Kilroe, 2008).

Dimension 9: Social Acceptance/Bullying (3 items)

This dimension covers the aspect of feeling rejected by peers in school. It explores both the feeling of being rejected by others as well as the feeling of anxiety towards peers. 'We say a student is being bullied when another student or a group of students say or do nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she does not like. But it is not bullying when two students of about the same strength quarrel or fight. This dimension shows a high score in QOL if these negative feelings are rare (Keenaghan and Kilroe, 2008).

Dimension 10: Financial Resources (3 items)

This dimension deals with money matters and assesses the perceived quality by the child or adolescent of their financial resources. It explores whether the child/adolescent feels that they have enough financial resources to allow them to live a lifestyle that is comparable to

other children or adolescents and to provide them with the opportunity to do things together with their peers (Keenaghan and Kilroe, 2008).

2.2.5.4 Benefits of QOL measurement for children

Through which it is assessing children's opinions, attitudes and feelings about their perceived health for healthy children and those who suffer from chronic conditions, increase understanding of children's subjective health, monitor health status over time, assess public health interventions, and identify children and young people at risk. In addition, the QOL measurement can help to monitor on a routine basis the subjective health and well-being of children, to screen for possible impairments in well-being and function in children and to identify social and behavioural determinants of health, such as socioeconomic factors, health behaviours and acute and chronic health conditions. Tracking quality of life in children can identify subgroups with poor physical or mental health.

2.2.6 The relationship between demographic and socioeconomic factors and lifestyle pattern and QOL

Three main parameters have been most often used to define SES, i.e. occupation, education and income. These characteristics cover different aspects of the socio-economic structure of people. The majority of the studies directly relate SES with health outcomes or dietary habits. For example, a lower SES is positively associated with a lower consumption of both fruit and vegetables (direct relationship with SES) (Vlismas et al, 2009). It is generally accepted that socio-economic status (SES) influences dietary habits as well as human health.

In a study by Larrea and Kawachi (2005), the association between economic inequality and child malnutrition in Ecuador was examined. The researchers found both maternal

education and housing conditions affect child nutrition, where the results showed that maternal education, basic housing conditions, access to health services, ethnicity, fertility, maternal age and diet composition was independently associated with stunting. However, after controlling for relevant covariates, economic inequality at the provincial scale had a statistically significant deleterious effect on stunting (Larrea and Kawachi, 2005). Poverty is major variable that positively associates with overweight among school-age children (Ying Lee and Lin, 2005).

Syahrul and colleagues (2016) found factors such as mother's level of education, having an underweight father, and playing outdoors on weekends for more than two hrs were significantly associated with underweight children. By contrast, mothers with high levels of education, overweight parents, sleeping for less than 9 hrs, and playing outdoors on weekends for less than 1 hr were significantly associated with overweight children. In general, children's gender, education level of their mothers, BMI of their parents, and children's lifestyle, particularly the time they spend playing outdoors and for sleep, are associated with their nutritional status (Syahrul et al, 2016).

Al-Sabbah and colleagues (2007) reported that the consumption of fruit and milk was positively associated with both parents' education, while consumption of meat, chicken and soft drinks was positively associated with mother's education only. Having breakfast on school days was positively associated with the father's education. Physical activity and television viewing were associated with the mother's education ($P<0.01$). The parents' level of education had no effect on vegetable consumption and dieting status during description the Palestinian health behaviour in West Bank and from the Gaza Strip (Al-Sabbah, 2007).

Additionally, individual hygiene manners can be affected by many elements, including beliefs, values, habits, socio-economic and cultural factors, level of knowledge, personal preferences, family characteristics, and physical and social characteristics of the work and

living environments (Erkal and Shahin, 2011). The relationship of the social disadvantage with worse health outcomes is well recognized and there is a strong connection between socio economic status of persons and their health (Bloomfield et al., 2012; Rathnayaka and Wang, 2012). Most socioeconomic factors are not easily measured and regularly act as 'confounders' in epidemiological studies, that is, a factor that misrepresents two other factors being studied, such as a type of contact and apparent effect, for example poor hygiene and safety against allergy, because it is mixed up with the actual exposure effect (e.g. 56 poverty and poor diet linked with living in insanitary conditions) (Bloomfield et al., 2012). In improving hygiene promotion programmes, it is significant to take account of local economic, cultural and political conditions, so it is important to plan for programmes which reach all socioeconomic groups in developing countries, including those in great poverty, and connect in a manner that achieves hygiene behaviour change which is most applicable to their certain socio-economic situation (IFH, 2009).

The concern about Palestinian children's health stems from the fact that they have suffered difficulties in recent decades. In fact, they are still suffering difficult living conditions due to the Israeli occupation. But, as part of the efforts aiming at improving the socioeconomic conditions of Palestinian children, the PNA has sought, since it took control, to prepare a national strategic program for child's health. The Convention on the Rights of the Child was used as the general framework for children's services.

Many researcher studying QOL take the gender of the study sample subjects as a very important factor affecting QOL. For example, in the study of Wahaidi and colleagues (2018) who conducted the study in Gaza to assess associations of nutritional and psychological risk factors and quality of life (QOL) among adolescent by KIDSCREEN-52 questionnaires among 378 students reported that the girls had worse QOL compared to boys. Also, Chen and colleagues (2005) conducted a study to assessment of lifestyle

factors and quality of life in Japanese children with 7794 children reported that not significantly association between sex and the quality of life of children. Additionally, in the study of Keenaghan and Kilroe (2008) where they applied quality of life tool KIDSCREEN on children and adolescents in Ireland with 1,265 children, aged 8-17 years. The results suggest that the highest HRQOL mean score was indicated for social acceptance/bullying (86.69 and 84.35 respectively). Females had the lowest score for self-perception (62.51), followed closely by school environment (62.60), while males had by far the lowest score for school environment (59.73). It is noteworthy the females had the lowest score for almost domains. Bielderman and colleagues (2015) indicated an indirect effect of SES on the quality of life by social functioning, depressive symptoms, physical function, and self-efficacy among older adults in community (Bielderman, 2015).

2.2.7 The relationship between lifestyle pattern and QOL

The literature indicates that during the transition from childhood to early adolescence, considerable changes in lifestyles occurred and effect on the QOL directly or indirectly.

For children, Chen and colleagues (2005) found that the predominant factors for poor QOL were irregular eating habits, inactive lifestyle (including low frequency of physical activity and long television watching), and late bedtime during the school nights. On other hand, they found the desirable lifestyles are associated with good QOL after controlling for the effects of sex, age, BMI, social backgrounds, and other confounding factors. (Chen et al, 2005). Recent studies show that obese children and adolescents have poor QOL when compared with healthy peers (Schwimmer et al. 2003). Slingerland (2014) showed the fostering active lifestyles in childhood and adolescence may help to establish enduring positive health habits, since physical activity at school is an important component of overall exercise behavior (Slingerland, 2014). Previous studies of adult populations show

that healthy eating habits and active lifestyles are positively associated with QOL (Maeda et al. 2002). Previous studies have supported a relationship between positive health practice such as, good nutrition, much exercise and much health promotion activities, etc., and mental health variables such as, depression, anger, and loneliness, in children and adolescents (Mahon, 2004), where the mental health variables is one domain of QOL. A cross-sectional study was carried out to explore the association between the lifestyle and health promotion show that eating breakfast was related to some measures of the SF-36, including the emotional role and mental health that is effect on their well-being (Kimura et al, 2000). Chen and colleagues (2005) results are similar to those findings in adults; where in children the behavior of skipping breakfast may not only correlate with an insufficient energy supply but also with unhealthy psychosocial health, eventually with poor QOL.

Also, the children who participated in low-frequency physical activity had poor QOL when compared with their active peers (Chen et al, 2005). The negative effects of excessive television viewing have been well researched and documented. Heavy television viewing by children may indicate the presence of problems such as depression, anxiety, and violent behaviors and poor influences on children's perceptions of society (Huesmann, 2007). Several investigations have demonstrated that late bedtime and short sleep time during term time are correlated with excessive daytime sleepiness, poor mood liability, behavioral difficulties, depression, anxiety and deterioration in healthy sleep among children and adolescents (Arakawa et al, 2001). In Chen and colleagues study, show that adolescents with a late bedtime after 11 p.m. experienced lower overall health and general quality of life when compared to their early bedtime peers. Where many adult insomniacs report that their problems began in adolescence (Chen et al, 2005). WHO (2005) reported that the oral health affects general health by causing considerable pain and suffering that effect on cost, speech, quality of life and well-being for people. Oral health also has an

effect on other chronic diseases (Petersen, 2003). Because of the failure to tackle social and material determinants and incorporate oral health into general health promotion, millions suffer poor quality of life. Chronic diseases such as obesity, diabetes and caries are increasing in developing countries, with the implication that quality of life related to oral health, as well as general quality of life, may deteriorate. So, by integrating oral health into strategies for promoting general health planners can greatly enhance both general health and QOL (WHO, 2005). Schwimmer and colleagues (2003) showed that most lifestyle factors were significantly associated with QOL measurement, as well as some confounding factors (Schwimmer et al, 2003).

After reviewing the literature, the researcher becomes persuaded by the importance of the healthy lifestyle for children. It is a bridge to improve the good QOL for them. The researcher now is raring to examine this relationship between the lifestyle and QOL among children in Gaza city.

Chapter Three

Methodology

This chapter provides a detailed description of all aspects of the study methodology. It begins by explaining the design of the study, the method of data collection and analysis, sampling technique, study population and study setting. Then, it describes to ensure the validity and reliability of the study instrument. Finally, the ethical consideration and the limitation of the study are included.

3.1 Study design

The design of this study is a mixed-methods one, in which data has been triangulated (quantitative and qualitative). This study is a descriptive analytical cross-sectional one. This design was used to describe and assess the lifestyle and QOL among Gaza schoolchildren. Where, cross sectional design reflects the existing facts at the same point of data collection time. It consumes less time than other longitudinal studies (Naoum, 2012). It is anticipated that the quantitative part captures quantifiable perceptions and the qualitative part attempts to reveal the reality behind these perceptions through deeper understanding of the life of children through participants' mothers of children in the study.

3.2 Study settings

This study was conducted at Governmental, UNRWA, and Private basic schools (4^{th}, 5^{th} and 6^{th} grade students) in West and East area of Gaza City **(Annex 1).** For more representativeness and accuracy, the schools were selected randomly.

3.3 Study population

The study includes two groups of population who were represented the quantitative and qualitative parts.

- **Quantitative part:** School students where the MOEHE divides the schools in Gaza City into two areas; East Gaza and West Gaza based on the annual report of the MOEHE (2016-2017) containing 142,275 students; where distributed 48,929 students at governmental schools, 88,033 students at UNRWA schools and 5,313 students at privet schools as shown in **Annex (2)** (MOEHE, 2016).
- **Qualitative part**: Four focus groups discussion; two with children' mothers in East Gaza and the others with children' mothers in West Gaza.

3.4 Eligibility criteria

3.4.1 Inclusion criteria:

- School students (Boys and Girls) from 4th, 5th and 6th grade who enrolled in the governmental, UNRWA and private elementary schools in Gaza city.

- Students aged from 10 to 12 years old.

- Students whom their parents signed the consent form and agreed upon participating their children in the study.

- Students who agreed verbally to participate in the study.

3.4.2 Exclusion criteria:

- Students who are less than a 4th grade.

- Students who are in preparatory and secondary school.

- Any student younger than 10 years or older than 12 years old.

- Students who are on sick leave during the study and collection of information.

- Students with different types of disability.

- Students whom their parents rejected to sign the consent form.

3.5 Study Period

The study was started after having a letter of approval from the university and obtaining the ethical approval from Helsinki committee to conduct the research. The study was performed in the year 2018; it was starts in February 2016 and completed in Jun 2018. The researcher developed the tools and consulted a group of 10 experts at the arbitration stage before the finalization of the tool, all of them have responded. The arbitration stage lasted for three weeks including refining of tools in the light of reviewers and the academic supervisor's feedback. In February 2017 (actual work began to collect data due to delay of the researcher), a peer was asked to propose Arabic version translation of the tool.

In March 2017, the tool was ready to go for data collection and the researcher trained two data collectors and carried out the required training prior to piloting and fieldwork. Piloting took place between 2nd and 7th of March 2017. Actual data collection started on 28 March through 6 May 2017. The researcher and data collectors identified daily work hours to start at 08:00 am through 04:00 pm in order to increase the likelihood of distributing the questionnaires as many participants as possible. Data entry of quantitative data was done in May 2017. After finishing quantitative part, qualitative data collection started in May 2017. The researcher stayed about one week in collection of the qualitative data. Four FGDs were done. The analysis of quantitative and qualitative data was done in November 2017. The researcher extracted findings, created descriptive tables and performed inferential statistical analysis. The drafted report "thesis" has been frequently enriched and edited by the research supervisor. The final draft for defence was handed on 30 Jun, 2018.

3.6 Sample size and sampling process

3.6.1 Sample size

- **Quantitative part**

In order to calculate the required sample, the Epi Info program was used and the result indicates that the representative sample should be at least 368 students (**Annex 3**). The researcher used the following parameters for sample calculation:

- Maximum acceptable percentage points of error (confidence interval 5%)
- Confidence level 95%
- Total eligible population 142,275 according to the MOEHE (2016).

The sample size was 368 students، and it was increased up to 400 in order to compensate for the non-respondents. A proportional sampling have been done according to the type of schools and total numbers of the students as follow; 127 students were selected from governmental schools, 227 students from UNRWA schools and 14 students from privet schools divided among two areas (East and West Gaza) as shown in **Annex (2).**

- **Qualitative part**

The qualitative sample consisted of 41 mothers who agreed to participate in the focus groups. Four focus groups discussions were carried out. The idea of including this sample is to deep understand the perspectives about lifestyle and QOL of children. The qualitative component was carried out after the quantitative one in order to explore issues that emerge from the quantitative study.

3.6.2 Sampling process

For the quantitative part; the researcher utilized multi stage of proportional stratified cluster random sampling technique to determine the targeted schools and students in each

governorate. Then, the study population in these schools was separated into different strata (Governmental, UNRWA and private schools, Girls and boys).

The sample is conveniently depending on the number of students in each school, and its size was selected considering the total number of governmental, UNRWA and private schools in each area. Accordingly, out of the 392 governmental, 267 UNRWA and 55 private schools, 6, 12 and 3 schools were included in this study respectively **(Annex, 4).** Accordingly, 123 students (boys and girls) were collected from 6 governmental schools, 202 students from 12 UNRWA schools and similarly, 45 students from 3 private schools. All students were selected systematically from the students' name list in each school, with total study respondents 370 (200 boys, 170 girls); 136 students from the east Gaza and 234 students from the west Gaza.

For the qualitative part; out of 48 students' mothers who were purposively selected and called to participate voluntary in the focus groups discussion, 41 mothers responded to the researcher call and participated in four focus groups. Focus groups participants were selected in a way that ensures they represent mother from different economic conditions and cultural backgrounds.

- **Response rate:**

In **quantitative part**, after finishing data collection and get back the distributed questionnaires, (370) questionnaires were recovered from (400) distributed questionnaires and then the response rate is (92.5%). The rejection to participate in the study was from two sides; rejected by the guardian to not share their children and the students themselves refused to do the interview. For **qualitative part**, 41 mothers were present in the four focus groups out of 48.

3.7 Study instruments

This research used qualitative and quantitative research method and used a descriptive analytical method, which studies the phenomenon as it is, describes it accurately and clarifying its characteristics through collecting, analyzing and explaining data. The researcher used two types of data sources. The first type is the secondary sources, which are the previous studies and books that are related to the research subjects. The second type is the primary sources which are the data that the researcher collected through the questionnaire that analyzed by using SPSS for students for quantitative part and focus groups for student's mothers for qualitative part.

3.7.1 Quantitative Instrument

- **Interview questionnaire:**

A face-to-face interview questionnaire was used in this study. After questionnaire was developed by the researcher according to the study objectives (**Annex 5, 6**), it was reviewed and approved by public health and research experts to increase the validity of the content. The research questionnaire consists of **three sections** as follows:

- **Section (1)**: The socio-demographic variables such as: age, gender, family income, residency, parents education, parents employment status, family structure (living with two parents, parents and grandparent(s), single parent) and family size.
- **Section (2)**: Life style information, divided into four parts:
  (1) Dietary habits such as breakfast skipping, meal patterns, snacking, eating fast food, eating during watching TV, using social media and studying. (2) Physical activity and sedentary behaviors, including preference for physical activity, duration of television viewing, using computer and video game playing, method of transport to and back from school and exercise time per week. (3) Sleep habits: rising time, bedtime, sleep duration, etc. and (4) Hygiene practices.

The life style was assessed by using more than one questionnaire. The researcher constructed it and it was reviewed and modified by the experts to ensure the content validity according to the study objectives and Gaza context. The questionnaires was adopted from different references namely; the Global School-Based Student Health Survey (GSHS) that was developed by the WHO and CDC in collaboration with UNICEF, UNESCO, and UNAIDS.

The Food Consumption Score (FCS), a tool developed by World Food Programme (WFP), is commonly used as a proxy indicator for access to food. It is a weighted score based on dietary diversity, food frequency and the nutritional importance of food groups consumed. FCS measures the frequency of usual eating food item during the last 7 days. A seven day recall period is used to make the FCS as precise as possible and reduce recall bias. Statistically, first part the responses were re-categorized into (1) three times or more weekly, (2) less than 3 times weekly and (3) rarely/never (Rolfes et al, 2006).

The second part, Eight-food frequency scores were constructed based on the WFP. They were constructed by the sum of recoded responses for the food items included in each score. The scores included the following items: 1) Cereals and tubers: potatoes and sweet potatoes, other tubers, rice, sorghum, pasta, bread and other cereals. 2) Pulses: Beans, Peas, groundnuts and nuts. 3) Vegetables: salad and fresh and cooked vegetables. 4) Fruit: fruits and fruit juice and salad. 5) Meat and fish: beef, turkey/chicken, liver, fish, hamburger, shawerma/kebab, canned meat and eggs. 6) Milk and dairy products: yogurt, white cheese, yellow cheese and lebneh. 7) Sugar: sugar and sugar products, honey. 8) Oil: Oils, fats and butter. After the FCS was calculated, the typical thresholds are (1) 0-21 Poor (2) 21.5-35 Borderline (3) > 35 Acceptable food consumption.

Physical activity pattern, the participants were asked how often did they practice a specific leisure activity and how long did they practice in each time. The responses categories were daily, weekly and minutes in each time. Different classifications were used for physical activity. In this study, physical activity was classified according to the time spent in each physical activity and type of physical activity. All times spent in each specific daily physical activity in 24 hours were summarized to each other. The summarized number was multiplied by a specific factor for each physical activity. The net result was added to 1.1 to give a specific score. According to this score, the physical activity was classified into (1) Sedentary (2) Low active (3) Active (4) Very active (**Annex 9**) (Rolfes et al, 2006).

- **Section (3)**: The QOL for schoolchildren.

The QOL was assessed by using the third version of the KIDSCREEN-52 for children and adolescents from 8 to 18 years that was developed within a European project "Screening and Promotion for Health-related Quality of Life in Children and Adolescents - A European Public Health Perspective". The KIDSCREEN-52 questionnaire offers an imaginative and innovative approach to measure the QOL domains when compared with SF-36 or WHOQOL. These two measures have good tools for measured the QOL for adults and they have confirmed the validity, but the KIDSCREEN-52 questionnaire have some advantages for use in young children and adolescents. In general, the KIDSCREEN-52 questionnaire has details and easy to understand for children. It instrument measures 10 dimensions: Physical- (5 items), Psychological Well-being (6 items), Moods and Emotions (7 items), Self-Perception (5 items), Autonomy (5 items), Parent Relations and Home Life (6 items), Social Support and Peers (6 items), School Environment (6 items), Social Acceptance (Bullying) (3 items), Financial Resources (3 items).

The scores achieved using KIDSCREEN-52 represent an empirical assessment for children of 10-12 year-olds' QOL from their point of view. For the interpretation of the KIDSCREEN scores, the content of the scales has to be considered, as show in **Annex (10)**. The basic information about the scales was given by their definitions, where a 5-point Likert response scale was used in all dimensions. The children respond by indicating one point on the scale. Across most dimensions, the highest scale (i.e. 5) receives the highest score (representing, for example, 'extremely', 'always'), indicating better quality of life.

3.7.2 Anthropometric measurement

Anthropometric measurements (weight, height) are an essential feature of children nutritional status and its basic descriptive information for calculating BMI percentile. BMI was calculated as body weight divided by squaring the height (m2). After BMI is calculated for children, it is expressed as a percentile which can be obtained from a graph or a percentile calculator. The researcher used the BMI percentile because the weight and height for children changed during growth and development, as does their relation to body fatness. A child's BMI must be interpreted relative to other children of the same sex and age. The researcher did these measurements and it took around 5 minutes to complete the measurement for every participant.

The children were asked to take off their shoes, bags and any heavy clothes and stood vertically looking at a point horizontally. Children weight was recorded to the nearest 0.1 kg using an electronic personal weighing scale (Seca). Children height was recorded to the nearest 0.5 cm using a stand-meter height measurement tool (Seca). Accordingly, BMI % was calculated by WHO anthropometric programme. Cut-off values that were used for classification of the anthropometric indicators according to CDC (2015) was classified into (1) Underweight: Low BMI for age < 5th percentile (2) Normal: Normal BMI for age 5th ≤

BMI < 85th percentile (3) Overweight: High BMI for age 85th ≤ BMI < 95th percentile (4) Obesity: High BMI for age ≥ 95th percentile.

3.7.3 Qualitative Instrument

For the qualitative data the researcher used open-ended (semi-structured) questions was designed based on the initial findings of the quantitative data, see **Annex (7)**. FGDs seek participants' views and opinions about two themes, life style of children and their QOL. FGDs seek mothers' views and opinions about what does the concept of QOL mean to them and for their children? What kind of experiences their children passed through and affected their QOL; whether their life style or socio demographic aspects? What are their aspirations and needs to realize their QOL?. In addition, to triangulate the initial findings concluded from the questionnaire analysis through digging to obtain multi-perspective explanations from the FGD participants.

3.8 Ethical and administrative considerations

In this study, carefulness has been exercised to ensure that the rights of the participants are protected. The proposal was submitted to Al Quds University-School of public health research committee for discussion and academic approval. Additionally the Modified International Code of Ethics Principles (1975), known as the Declaration of Helsinki, which is adopted by the World Medical Assembly were followed and an official letter of approval to conduct the research was obtained from the Helsinki Committee (**Annex 12**). In accordance with the Principles of the Helsinki Ethical Declaration, every participant in the study received a complete explanation of the research purposes, program, confidentiality and sponsorship (**Annex 13, 14**). Every participant in the study knew that participation in the research was optional. Verbal consent was obtained from the students who participated in the study after the paper consent was obtained from the parents.

Additionally, formal permission for taking notes and tape recording of the focus groups discussions were obtained. Last but not least, to increase the responses' credibility, the researcher maintained adherence to the Ethical Code Principles, through providing and maintaining anonymity and confidentiality. The researcher assumed that other ethical rights were protected through respect for people and respect for truth.

3.9 Pilot study

For **quantitative part**: A pilot study was conducted before the actual data collection started. It was implemented on 30 students were randomly selected and filled the questionnaire with them from two schools one was girls and the other was boys school from West Gaza to explore the appropriateness of the study instruments, the clarity of meanings and scales and the time taken to fill the questionnaire and for expecting response rate. A result of this stage, one question was eliminated and minor modifications were done including rephrasing some questions. The result of the pilot study was not included in the real study results.

For **qualitative part**: one FGD was conducted with seven students' mothers in West Gaza, As a result, questions were rephrased and ordered differently. One of the conclusions, the FGD took more than expected time.

3.10 Data collection

- **Quantitative part**

After the pilot study, the researcher and two field researchers conducted the data collection. Prior the field work, the researcher conducted training to the two field researchers about the aim of the study, its objectives and tools that will be used and illustrated some questions that may be vague. In addition, they were given the needed instructions related to ethics and approaches to dealing with the participants and filling the

questionnaires. The researcher met the school's principal for each school and provided information about the purpose and objectives of the study.

The same information was given to the selected students in addition to the instructions regarding the questionnaire's questions. Personal identification numbers were assigned to each participant in order to maintain anonymity. The identification number was used to confirm consent status and to link students to their respective schools. The objectives were achieved by using face-to-face questionnaire which covered different themes. Furthermore, anthropometric measurements including; weight and height were also made. Time allocation for each questionnaire ranged between 20-25 minutes.

It is worth mentioning that the two data collectors were present with the researcher alternately, where the researcher was present at all days of data collection. The anthropometric measurements for all participants in the study were done by the researcher.

- **Qualitative part**

The second component of the data collection was conducted after the initial analysis of the quantitative part. The researcher conducted four focus groups discussion in each area, the first two in East Gaza and the others in West Gaza. Each FGD lasted for 120 minutes in average, and had ten to twelve participants with various characteristics to ensure they represent mothers of students from government schools, UNRWA schools, and privet schools from different socio-economic conditions. During the FGD; the researcher introduced the study objectives briefly and explained its purpose, then asked the first question which made to explore the initial thoughts/perceptions about the lifestyle and QOL among children. Notes were taken through FGD; additionally, they were recorded to allow further capturing of information**.**

3.11 Scientific rigor and trustworthiness

3.11.1 Quantitative part (questionnaire)

3.11.1.1 Validity

Validity can be explained as the ability to measure what you actually intended to measure (Cozby, 2001; Kimberlin and Winterstein, 2008; Brains, 2011). In addition, where the applied/utilized questionnaire were international and already tested, eight experts in public health field evaluated all the components and the context of the instrument, in order to ensure that it is highly valid and relevance and their comments were taken in consideration. The questionnaire was properly formatted in order to ensure face validity, this including appealing layout, logical sequences of questions and clarity of instructions such as skipping and professional production. Also, a pilot study was conducted before the actual data collection to examine students' response to the questionnaire and how they understand it.

3.11.1.2 Reliability

To ensure reliability, field researchers were trained and received detailed instructions to ensure standardization and to reduce filling errors. Checking and verification the filled questionnaires and data entry have been done at the end of each data collection day, so error identification, correction and prevention were more feasible. Re-entry of 5% of the data was done after finishing data entry to assure correct entry procedure and decrease entry errors. Weight and height were taken by the researcher after standardizing the scale following each student. Minutes were taken during FGD and also sound recording took place in four FGDs.

The QOL domains of the questionnaire were tested twice through the statistical analysis software Statistical Package for Social Sciences (SPSS) and indicated high reliability (Chronbach's Alpha coefficient was 0.817 at the pilot stage and 0.937 at the actual study).

Reliability of the actually collected data of each domain and the total scale are presented below.

Table (3.1): Reliability estimates for QOL domains

Dimension	No. of items	Cronbach Alpha coefficient
Physical wellbeing	4	0.887
Psychological wellbeing	6	0.922
Mood and emotion	7	0.863
Self-perception	5	0.813
Autonomy	5	0.748
Parent relationship	6	0.856
Financial resources	3	0.952
Social support and peers scale	5	0.846
School environment and learning	6	0.855
Bullying	3	0.823
Total scale reliability	**50**	**0.937**

3.11.2 Qualitative part (Focus groups)

The following was done to assure the trustworthiness of the qualitative part of this study. First, the questions of the FGD were consulted by the supervisor to ensure relevance and convenience of the tool and cover all the required dimensions. Then the prolonged engagement was done as the researcher tried to probe for answers and cover all the interview dimensions properly. In addition, recording the interviews would enhance tracking up facts and re-check the accuracy of the transcripts.

3.12 Data entry and analysis

Mixed methods were applied in order to provide a combination between quantitative (face-to-face interviewed questionnaire) and qualitative paradigm (Focus groups). Then, triangulation was adapted by combining both quantitative and qualitative approach. This combination aimed at ensuring preciseness of findings, in order to obtain in-depth answers that could help propose effective solutions.

- **Quantitative part**

The researcher used Statistical Package of Social Science (SPSS) program version 22 for data entry and analysis. Data analysis was done by the researcher with support from the supervisor. Frequency tables that show sample characteristics and describe the lifestyle of students and their QOL. Moreover, the researcher followed the following processes:

- The questionnaires were reviewed.
- The data entry was performed after over viewing of the questionnaires.
- Designing a data entry model by SPSS program version 22.
- The questionnaire was coded and entered into the computer.
- Re-entry test was performed on about 5% of the entered data.
- Data cleaning was performed by checking the frequencies of all variables to look for illogical values, missing values, inconsistencies and to ensure that data are entered correctly.

The central tendency measures were performed including descriptive frequencies, mean, and standard deviation (SD). The advanced statistical analysis used to explore the potential relationship among the study variables such as; an independent T-test and Chi- square were used to compare the means of two groups are statistically different from each other as QOL in relation to gender. One-way Analysis of Variance (ANOVA) test was conducted to determine whether there are any significant differences between the means of two or more independent groups such as the QOL in relation to governorates. Additionally, correlation test was applied to associate the QOL with independent continuous variables such as age.

The statistical difference was considered as significant when the P value equals or less than 0.05, with confidence interval (CI) of 95%.

- **Qualitative part**

Qualitative findings stemmed from the open-ended questions in the focus group discussion with students' mothers. Debriefing reports of the FGDs were done immediately after the end of each focus group. Also, objective considerations of non-prompted intimations, group dynamics, and non-verbal cues were noted and considered. Relevant qualitative data and reflections on initial results were extracted. The researcher obtained the main findings from the transcripts of the interviews. Then, categorization of related ideas and comparison and integration between the quantitative and the qualitative findings was done to create rich items for discussion.

3.13 Study Limitations

The study faced some limitations such as; the burden of the time where the questionnaire was long and the interviews were done mostly for students at break time or empty classes. Additionally, some UNRWA schools were subject to three periods of time rather than two periods. In addition, some school principals in UNRWA schools refused to conduct the interviews in their schools. Also, the data collectors exist only a few days with the researcher, so the most work was completed by the researcher herself. The tools of the study based on international tools. Finally, contextual limitations include the electricity cuts and limited access to international publications.

Chapter Four

Results and Discussion

Introduction

The results of this study were consolidated from the responses of the study children and verified through in-depth discussions with purposefully selected mothers who participated in four focus group discussions. The following sections provide an overview of demographic, economic, life style and QOL of the study sample. As the reader moves on, more analytical results show up to describe the subjective status of life style and QOL among children and to figure out key variances and correlations between their characteristics, life circumstances and potentials in relation to their QOL. The descriptive tables illustrate the results complied from the total respondents (N=370).

4.1 Descriptive analysis

4.1.1 Socio-demographic characteristics

- **Characteristics of the students:**

The surveyed population consisted of 370 children distributed across the Gaza City; 63.2% for the West Gaza and 36.8% for East Gaza **(Table 4.1).** Boys respondents represented 54.1% of the study' school children, as show in **Figure 4.1.**

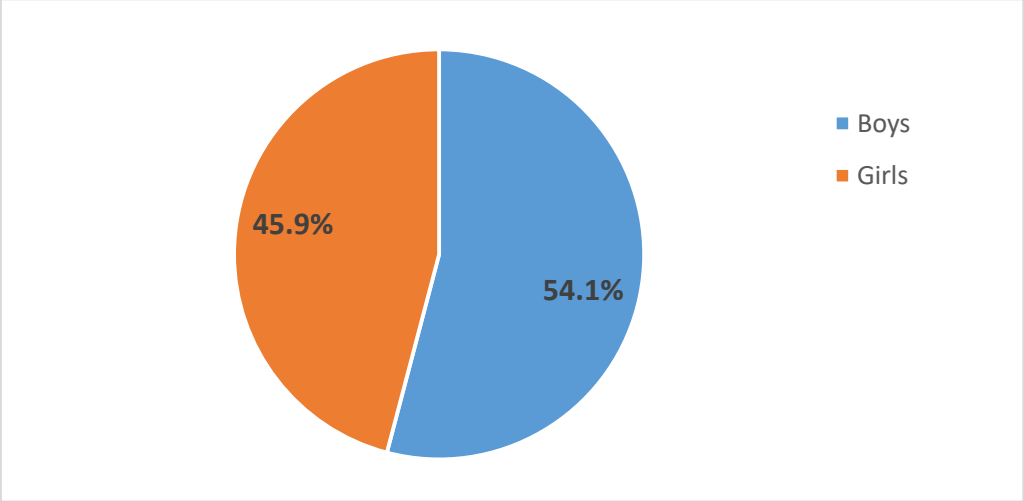


Figure (4.1): Distribution of the study' school children by Gender

Regarding study' school children age, the percentage almost equal 34%, 33% and 33% for children age 10, 11 and 12 years respectively. As **Table 4.1** indicates, around half of the respondents were from UNRWA schools (54.6%) while 33.2% were from governmental schools and 12.2% were from privet school. This could be attributed to the nature of the elementary schools where the UNRWA schools provided the services only to 6th grade. MOHEH Annual report 2016-2017 indicates that 61.2% of all elementary students in Gaza are UNRWA students (MOHEH, 2016). About 34.3% of study' school children were students in the 4th grade, followed by 32.4% of the study' school children who were students in the 5th grade, finally, 33.3% of the study' schoolchildren were students in the 6th grade.

Table (4.1): Distribution of responses by demographic characteristics (N=370)

Demographic Data		Frequency	Percent%
Age	10	126	34
	11	122	33
	12	122	33
Places of residence	East Gaza	136	36.8
	West Gaza	234	63.2
Type of school	UNRWA schools	202	54.6
	Governmental schools	123	33.2
	Private schools	45	12.2
Class grade	4th grade	127	34.3
	5th grade	120	32.4
	6th grade	123	33.2
Daily pocket money	Yes	317	85.7
	Often	45	12.2
	No	8	2.2
Pocket money Satisfaction	Yes, enough	189	52.2
	Yes, enough sometimes	66	18.2
	Not enough sometimes	76	21.0
	Not enough always	31	8.6
Daily pocket money	**(Mean= 1.51 NIS, SD= 0.84)**		

*New Israeli Shekel

The majority (85.7%) of study' school children stated that they take pocket money and 52.2% of them were satisfied about their pocket money. The overall mean of participants daily pocket money was 1.51, with (SD=0.84). The mothers through the qualitative part

agreed with these results that daily expense for children is important when they go to school but maybe in some days, the family goes through conditions beyond its control that cause the family to be unable to give pocket money to the child.

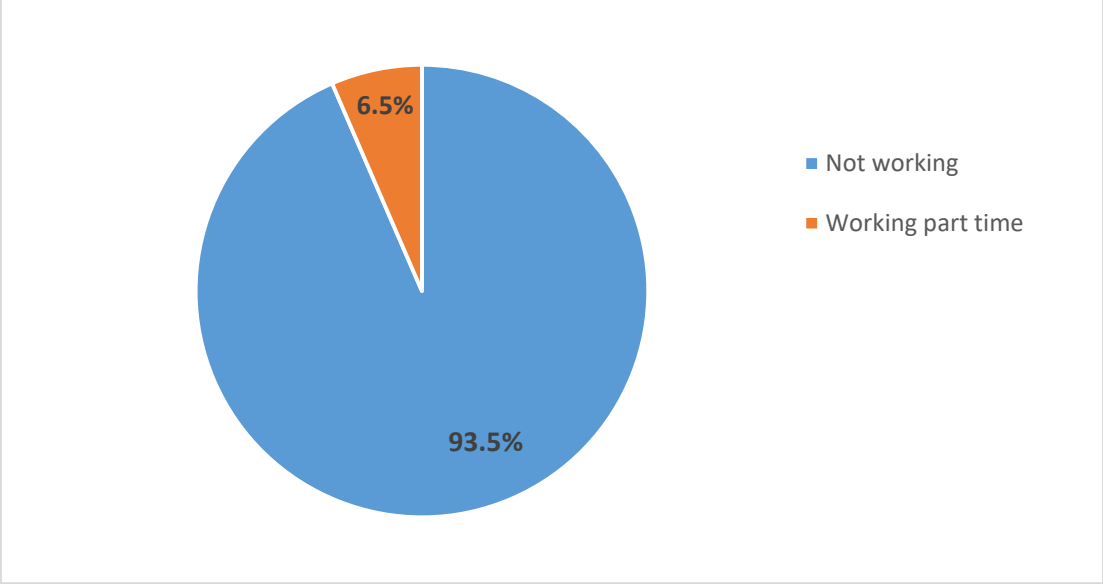


Figure (4.2): Distribution of study' school children by student employment status

Figure 4.2 shows that the distribution of the study' school children according to student employment status, 6.5% of the study' school children were working part-time from the students' point of view. While, when asked them about the nature of their work, 5.42% of them who work to help their parents and this work not compulsory but can be considered it as assistance and this is confirmed by the mothers in FGDs, while 1.08% of working children were forced to work due to poor conditions.

The revealed figure is somewhat less than what has been reported by the PCBS (2018) statistics which indicate that around 1.7% of children were working in the total number of children (paid/unpaid) in the age group 10-17 years in 2017. For children who were working, the type their work was help their fathers in daily work in the building, market, the shop, clean the shop, carpenter, selling, sell chicken. They work minimum one hour and maximum 8 hours with mean of 3.48 hours. They work minimum one day and maximum 7 days with mean of 3.33 days. There remuneration received by day earn

maximum 20 NIS, with a mean of 3.88 NIS/Day. They used the wage as a pocket money, save it to buy a bicycle, save it to buy clothes.

Most mothers through the qualitative part did not agree with the idea of working children especially at this age of their lives, even if they were helping their parents. On the other hand, few women supported this idea, but by helping their parents in little times, not at the expense of their studies and also not compulsory then we can call it help not work .

One mother said, "*I do not like that my child works but the circumstances forced him to work because of his father's illness and his work is the source of income for the family*". *"Poor are not noticed only because the walls of their houses are there, without good cloths, food, and do not afford giving a pocket money to their children",* as mentioned by other mother during the FGDs. Unemployment and poverty are the most prominent challenges in any community. In Gaza, the unemployment rate was 43.9% and according to recent statistics, 53% of Palestinians live below the poverty line in Gaza (PCBS, 2018). The effects of poverty on children's lives are numerous: their schooling often remains incomplete because they leave school at a very early age, usually to work and provide for the needs of their families, where the child labor rate was 1.7% among Gaza children.

- **Characteristics of the students parents:**

As illustrated in **Table 4.2,** regarding the guardian of the study' school children, the guardian of most of the study' school children was their father (89%), and 0.5% their guardian was the big sister, mother in low, grandfather or their uncle. While 10.5% of them their guardian was their mothers; slightly higher than the PCBS reported figure 9.4% as suggested in PCBS (2018). The majority of students (90.5%) were living in their own family house; this figure is higher than to the PCBS figure of 83.2% in 2018, because the sample was cover small area.

Table (4.2): Distribution of responses' parents by demographic characteristics (N=370)

Demographic Data		Frequency	Percent%
Guardian of the student	Mother	39	10.5
	Father	329	89
	Other	2	0.5
Home ownership	Own	335	90.5
	Rented	35	9.5
Family size	6 members and less	166	44.9
	From 7 to 9 members	164	44.3
	10 members and above	40	10.8
(Mean= 6.52 members, SD= 1.97)			
Father education	Less than 12 years	84	22.7
	12 years to 16 years	215	58.1
	More than 16 years	71	19.2
(Mean= 14.03 years, SD= 4.13)			
Mother education	Less than 12 years	79	21.3
	12 years to 16 years	256	69.2
	More than 16 years	35	9.5
(Mean= 13.62 years, SD= 3.03)			
Father work	Unemployed	35	9.5
	Retired	8	2.2
	Employed, handicraft	55	14.9
	Employed, private work	28	7.6
	Employed, regular salary	190	51.4
	Employed, irregularly salary	42	11.4
	Employed, with Family	8	2.2
	Don't Know	4	1.1
Mother work	Unemployed	279	75.4
	Employed, handicraft	7	1.9
	Employed, regular salary	68	18.4
	Employed, irregularly salary	6	1.6
	Employed, With Family	9	2.4
	Don't Know	1	0.3
Monthly income	1800 NIS* and less	183	49.5
	From 1801 to 2100 NIS	42	11.4
	From 2101 to 3999 NIS	84	22.7
	> = 4000 NIS	61	16.4
(Mean= 2207.70 NIS, SD= 1626.02)			

*New Israeli Shekel

The average family size of the study sample was 6.5 members; slightly higher than the PCBS reported figure 5.6 as suggested in (PCBS, 2018). In regards to the level of education for the parent, as Palestinian people are generally educated, both parents in this study showed high percentage of high education, where mothers surpassed fathers as 8.7% and 77.3% respectively. As show in **Table 4.2,** about 87.8% of children' fathers work and

only 24.3% of the children' mothers are working; slightly higher than the PCBS reported figure 21.8% as suggested in PCBS (2018).

Gross monthly income about half of the surveyed children families hardly reached less than 1800 NIS. The overall mean household income of the study participants was 2207.7 NIS, with (SD=1626.02). This part directly affects if the children have pocket money or not as was confirmed through FGD with the students' mothers, as well as effects on others parts.

4.1.2 BMI Z-score characteristics

Table (4.3): Distribution of study' school children by BMI Z-score

Gender		BMI Z-score				Total
		Under weight	Normal weight	Overweight	Obese	
Boys	**N**	4	137	31	28	**200**
	%	2.0%	68.5%	15.5%	14.0%	**100**
Girls	**N**	4	140	20	6	**170**
	%	2.4%	82.4%	11.8%	3.5%	**100**
Total	**N**	8	277	51	34	**370**
	%	2.2%	74.9%	13.8%	9.2%	**100**
(Mean=0.21, SD=1.51)						

Regarding the BMI Z-score, the overall mean of study' school children BMI Z-score was 0.21, with (SD=1.51). As shown in **Table 4.3**, 2.2% of study' school children were underweight, and the percentage of girls was higher (2.4%) than boys (2.0%). For further details, 13.8% of them were overweight, boys were higher than girls 15.5% and 11.8% respectively. Within the same context, 9.2% were obese and the boys showed higher obesity rates than girls as 14.0% and 3.5% respectively, reminding that the ones with normal weight constituted (74.9%). This high body mass was consistently negatively associated with physical activity, where the boys in this study have more sedentary and low activity compared to girls.

In the qualitative part with mothers in FGD, some of them mentioned that they have obese girls and other of them have boys, in contrast, some of the mothers reported that they have girls who were underweight and other of them have boys. One mother in FGD said, "*Unfortunately my daughter is obese and she is still young, while her sister is thin*".

Additionally, our finding found that the percentage of obesity and overweight (23%) among study' school children are more than the percentage of underweight (2.2%). The findings agreed with Massad et al (2016) in the West Bank, where, more school children aged 5 to 16 years are obese and overweigh (18%) than underweight (3%). However, the results disagree with NCD Risk Factor Collaboration (NCD-RisC) (2017) were they found the mean BMI and prevalence of obesity increased worldwide in children and adolescents aged 5–19 years from 1975 to 2016. Despite this rise, more children and adolescents worldwide are moderately or severely underweight than obese. Where the global age-standardized prevalence of obesity increased from 0·7% in 1975 to 5·6% in 2016 in girls, and from 0·9% in 1975 to 7·8% in 2016 in boys; the prevalence of moderate and severe underweight decreased from 9·2% in 1975 to 8·4% in 2016 in girls and from 14·8% in 1975 to 12·4% in 2016 in boys (NCD-RisC, 2017).

The present study was consistent with most local studies, in the Gaza strip, where the high body mass was more prevalent among the boys than the girls aged 11- 15 years (Haug et al, 2009; Dapi et al, 2009). Also, the findings were consistent with Hales et al, (2017) where the prevalence of obesity among U.S. school children aged 6–11 years was 18.4% in 2015–2016. Where, the prevalence of obesity among boys (20.4%) was higher than among girls (16.3%). By contrast, more girls are high body mass than boys 35% and 22.8%, respectively. (AbuDayya et al, 2009; Kanoa et al, 2009; Abu Nada, 2010; Wahidi et al, 2016; Massad et al, 2016). Also, these results are inconsistent with the Palestinian micronutrient survey, which reported that the prevalence of overweight and obesity of

female adolescents in the Gaza Strip were 16% and 4.3% respectively. Overweight and obesity amongst male adolescents were 11% and 6.1% respectively, while 76.2% of them has normal body weight (Elmadfa et al., 2013).

This reflects a serious future problem could face the children and adolescents in Gaza strip where may be susceptible to obesity and its complications like hypertension, type 2 diabetes, and heart diseases. However, the high body mass was more prevalent among the boys than the girls in the Gaza city, where the boys have a trend to be more sedentary lifestyle. This is may due to the customs and traditions in our society where the girls do all the housework in return for boys spending their time in front of television, playing or social media.

4.1.3 Life style characteristics

4.1.3.1 Dietary habits characteristics

Table (4.4) shows that the majority of study' schoolchildren (92.2%) received health education about nutrition, where (51.6%) and (25.2%) of them received it from home and school, respectively. Moreover, (23.2%) received it from other resources like media, doctor, internet, hospital and mosque. The National Center for Education Statistics (NCES) declared that (99%) of public schools conduct some type of nutrition education. Topics taught in a most all of the schools are the relationship between diet and health, finding and choosing healthy foods, nutrients and their food sources. Also, NCES affirmed that, overall, schools focus on increasing students' knowledge about what is meant by good nutrition, with less emphasis on influencing students' motivation, attitudes, and eating behaviors. Moreover, it is found that, four of the five topics covered by more than 90 % of all schools are related to knowledge. With the exception of finding and choosing healthy foods, less than one-third of schools provide thorough coverage of topics related to

motivation, attitudes, and eating behaviors. Not often are there teachers specific for nutrition. Most of the time, the nutrition content is taught by the primary teacher (Celebuski and Carpenter, 2009).

In the same contexts and according to the present study results, the qualitative questions with the mothers of the study' school children; stated that that the most health education that affects the children that they took through their family at the beginning then after they go to the kindergartens and schools they receive information about healthy food and unhealthy food. These results are compatible with what the children said in the quantitative part. One of mother in one of the focus groups said, "*There is a great interest in schools on this side; even kindergartens increased their interest in providing information about nutrition for children*".

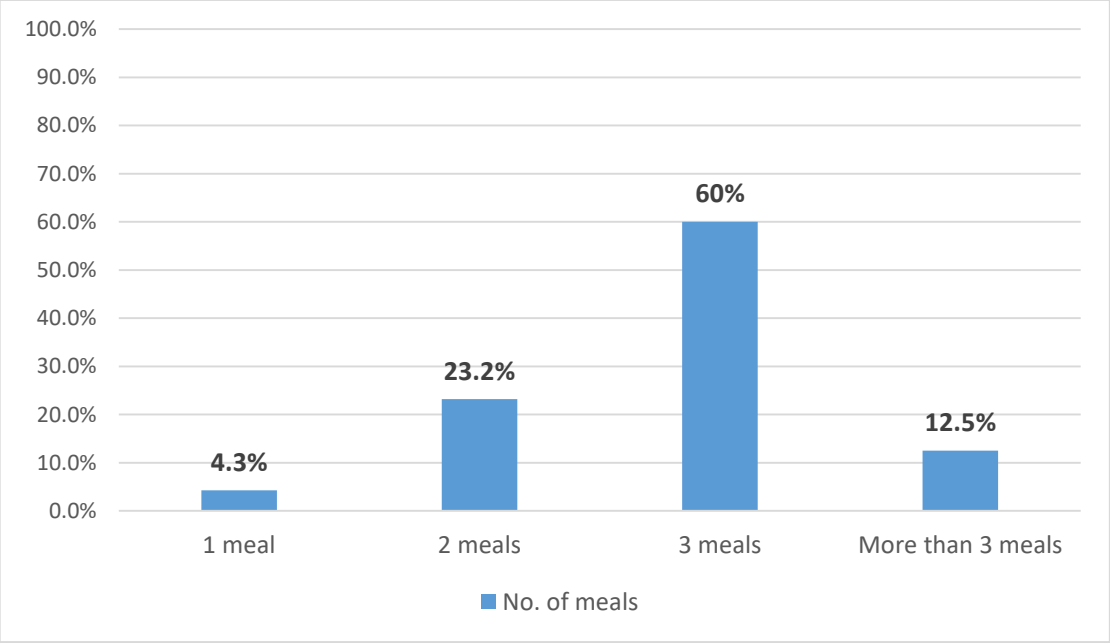


Figure (4.3): Distribution of study' school children by number of meals taken per day

Concerning the daily number of meal taken by the study' school children, **Figure 4.3** shows that around more than half (60%) of the total study' school children mentioned eating meals three times a day. The lowest percentage (4.3%) was among study' school children who eat one meal only per day. The mothers from the focus group discussion agreed with

the study finding regarding daily number of meal taken, that they seek to provide the main meals for their children at least three meals per day. One mother stated, "*My child is eating more than three meals because he does not eat a whole meal every time*". Other mother said, "*The responsibility falls entirely on the family at this stage because the child cannot distinguish what is in his interest*", "*The children encourage to eat when they eat with the family, consequently they get enough meals and time*".

Table 4.4 illustrates that around half (55.9%) of the study' school children have a breakfast on daily basis and 35.7% of them have a breakfast irregularly. Of the total number of the study' schoolchildren who always or sometimes have a breakfast, more than two-thirds 91.4% of the study' schoolchildren had their breakfast at home compared to 4.2% who had it at school, and 4.4% of the study' schoolchildren had their breakfast sometime at home and sometime at school. Most of the mothers during the qualitative part mentioned that their children take breakfast at home before going to school but on holidays, there is no control due to disturbance in their sleep and wake up style. On other hand, only few mothers said that they already do not take breakfast themselves and similarly their sons and daughters do the same. On the opposite side, some mothers declared that their children prefer to skip breakfast at home and prefer to buy it from the school's canteen. One of the mother mentioned, "*I am keen to ensure they take breakfast to son before going to school because skipping breakfast makes him not active in school*". Another one commented, "*Some time when my daughter gets up late, I prepare sandwiches for her to take it at school*".

When compared with others' findings, these results are lower than a local study on adolescents aged 15-18 years skipping their breakfast. It reported that 60.8% of students is skipping breakfast and 71.2 % of students were eating only 1–2 meals/day (Jalambo, Hamad, & Abed, 2013).

Table (4.4): Summary of dietary habits of the study' school children

Variable		Frequency	Percent%
Health education about nutrition	Yes	341	92.2
	No	29	7.8
If yes, where?	School	86	25.2
	Home	176	51.6
	Media	1	0.3
	Other	78	22.9
Having breakfast	Always	207	55.9
	Sometimes	132	35.7
	Never	31	8.4
Eat breakfast during the last 7 days	1 Day	9	2.7
	2 Days	9	2.7
	3 Days	35	10.3
	4 Days	35	10.3
	5 Days	13	3.8
	6 Days	31	9.1
	7 Days	207	61.1
Having breakfast at	At home	310	91.4
	At school	14	4.2
	At school & home	15	4.4
Take enough time while eating	Always	271	73.3
	Sometimes	86	23.2
	Never	13	3.5
Eat between meals	Always	212	57.3
	Sometimes	145	39.2
	Never	13	3.5
Bring your Sandwich to school	Always	96	25.9
	Sometimes	142	38.4
	Never	132	35.7
Drink carbonated soft drinks/ beverages in school	Always	8	2.2
	Sometimes	47	12.7
	Never	315	85.1
Drink carbonated soft drinks/ beverages in home	Always	19	5.1
	Sometimes	264	71.4
	Never	87	23.5
Eat with your family	Always	139	37.6
	Sometimes	228	61.6
	Never	3	0.8
If yes, how often days?	7 or 6 days/week	139	37.9
	5-2 days/week	199	54.2
	Less than 2 days	29	7.9
Take meals while watching TV or playing	Always	38	10.2
	Sometimes	139	37.6
	Never	193	52.2

In a study on women at reproductive age (Nour, 2013), the findings demonstrated that 48.1% of them have regular meal habits as three times daily, while only 5.2% used to eat one meal only per day, and 47.2% confirmed that they usually skip breakfast. Out of those women 58.9% attributed skipping breakfast to loss of appetite. Meanwhile, 12.2% owed skipping breakfast to be on diet, whilst 28.9% attributed it to shortness of time. Thus, it could be concluded that skipping breakfast is a common bad habit between mothers, and not only amongst children.

Globally, (Murphy, 2007) emphasized that skipping breakfast is relatively common among children in the U.S. and other industrialized nations and is associated with quantifiable negative consequences for academic, cognitive, health, and mental health functioning.

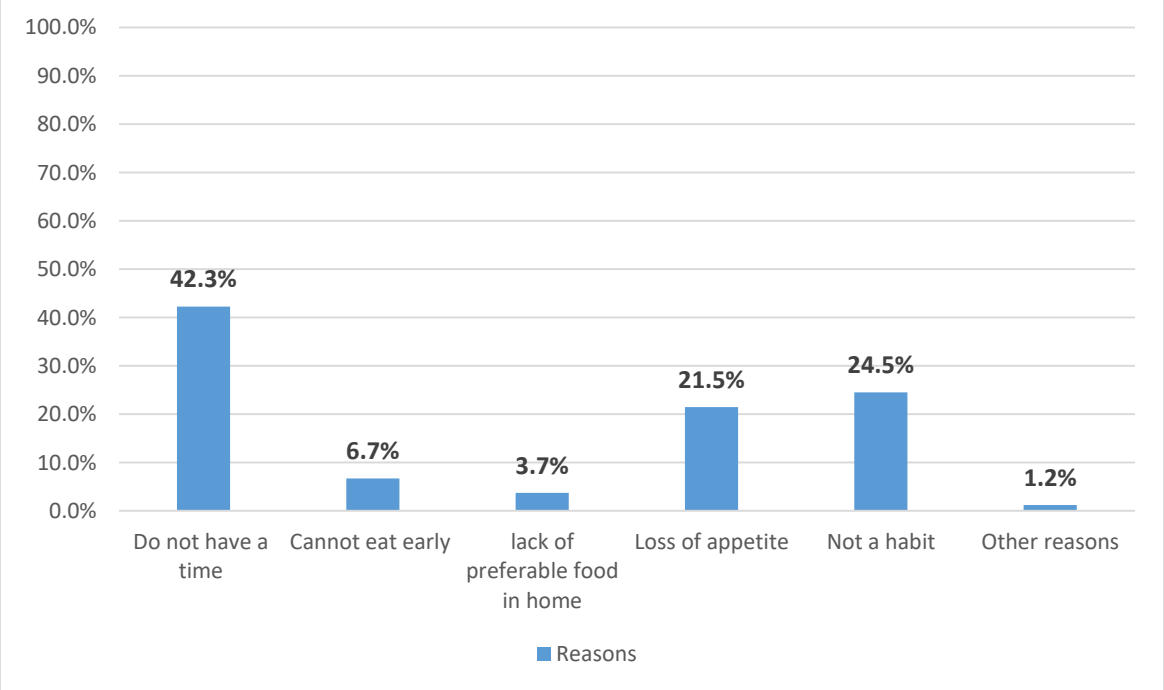


Figure (4.4): Distribution of study' schoolchildren by reason for skipping meal

Regarding the skipping the breakfast meals, about 8.4% of study' school children were skipping breakfast all the times. The major cause of always or sometimes skipping was not having enough time for breakfast as reported by 42.3% of the study' school children. Within the same context, 24.5% of the study' schoolchildren have mentioned that having a

breakfast is not a habit for them. Additionally, about 21.5% skip the meals due to not having appetite and 6.7% of the study' school children indicated that they skip the breakfast as they are cannot eat early in the morning. Also 3.7% of the study' schoolchildren say that they have not taken it because there was lack food in their home and 1.2% of them have not taken it because their mothers or stepmothers do not make breakfast. Contrarily, the study results were inconsistent with the FGD where most of mothers emphasized that skipping breakfast is relatively common among mothers before the children. In addition the main reason to skip the breakfast is cannot eat early in the morning.

Table 4.4 illustrates that about more half of the study' school children (73.3%) always spend enough time during eating, in addition to 23.2% of them who sometimes spend enough time during eating. In this study' qualitative part with mothers in FGD, all mothers agreed with the previous results that children take enough time to eat unless there is a reason to eat quickly such as go on a television or to go to play.

By asking the study' school children if they eat between meals, about half (57.3%) of the study' schoolchildren indicated that they always eat between meals, while, 3.5% of them never eat between meals, as shown in **Table 4.4**. The results of the FGD show that most children eat between meals whether they eat healthy food such as fruits or vegetables or unhealthy food such as chips and sweets. "*Children need food at any time because they are in a building phase and move a lot so they do not observe a specific time or number of meals a day*", said one mother.

Unfortunately, 64.3% of study' school children always and sometimes take sandwich to school. The mothers in FGD agreed on the importance that the child should have sandwiches with him/ her to eat it at school. Especially if the child goes to school in the morning, where most of the time of these children do not have enough to take their

breakfast before going to school. One of the mothers mentioned, "*My son buys the sandwich from school's canteen; where he does not agree for me to prepare it for him at home*", "*My daughter also refuses to take a sandwich to school because she is embarrassed from her friends*", a mother of the FGD echoed. While another mother of the FGD said, "*I give sandwiches to my son because sometimes he does not take money*". In the same context another mother added, "*I make sandwiches for my child but he does not eat it at school and returns it back with him*", "*Most children at this stage do not want to take sandwiches with them, mainly boys*". Additionally, a mother of children commented, "*My child tells me he does not want to take sandwiches from home but wants to buy it from school's canteen*".

Regarding drink carbonated soft drinks / beverages, **Table 4.4** shows that the majority of children who participated in the study (85.1%) never drink carbonated soft drinks / beverages at school compared to 23.5% of them who never had it at home. Followed by 12.7% who asserted that they sometimes drink carbonated soft drinks / beverages at school while 71.4% of them sometimes drink it at home. Whereas, 2.2% of them always drink-carbonated soft drinks / beverages at school, there were 5.1% who always drink it at home. The results of the study' qualitative part as mentioned by participated mothers in the FGD reported that healthy eating was not important for the children. In other words, children at this stage are unable to distinguish between healthy and unhealthy food. Contrarily, a few mothers reported that healthy food is important and interested for their children. Nevertheless, all of them agreed on the full responsibility lies with the parents. They also asserted that drinking soft drinks among children has become widespread. If the child does not drink a soft drink at home, he or she will buy it from the school or any shop next to the school; mothers in the FGD confirm this. Sometimes the mother prevents her child from drinking but the father when he brings it home, the child drinks it and the mother does not

control this situation. One mother commented, "*I do not prevent the cola completely, my child can drink it but rationally because anything forbidden is desirable*". "*Cola or any soft drink are prohibited inside home, but they may buy it outside*", one of the mothers reported.

Regarding eat with family**,** as shown in **Table 4.4**, about 37.6% of the study' schoolchildren always eat with their family, compared to 0.8% only of them never eat with their family. The majority of study' school children (61.6%) sometimes eat with their family. 37.9%, 54.2% from those who always and sometimes eat with their families, eat with them from 7 or 6 days per week and 2-5 days per week, respectively. In addition, 7.9% of the study' schoolchildren eat with their family less than 2 days. The majority of mothers in the qualitative part in the FGD supported the important eating meals with family members, but there were circumstances that could make a child eat a meal alone or with their brothers. The main reasons were the presence of the father or mother or both at work during the mealtime for the child. One mother said, "*On Friday, all family eat together all meals*". One of the mothers speaks proudly, "*I always eat all the meals with my family members and do my efforts to share my husband in eating with my family members*".

Regarding take meals while watching TV or playing, about half of the study' schoolchildren (52.2%) indicated that they never eat food while watching TV or playing and 37.6% of the study' school children have indicated that they sometime eat food while watching TV or playing. While 10.2% of the study' schoolchildren indicated that they always had food while watching TV or playing, as shown in **Table 4.4**. In the qualitative part with mothers in the FGD, some of them agreed that the ideal thing is not to eat in front of the television, but children want and like to eat in front of the television, so there must be a system in the family not to put food in front of the television. Another mother

commented, "*My husband always eats food in front of the television and the children sit with him*". One of them added, "*Children do not always sit in front of TV because of the continuous cutting of electricity for most of the day*".

4.1.3.1.1 Daily consumption of food groups

Annex 15 illustrates the percentage of daily consumption of food among study' school children for; fruit, white tubers and root, oil and fats, legumes/ cereal, nuts, seeds, egg, red meat, chicken, liver, kidney, fish, shawerma, fast food, chinese noodles and chilly food, vegetables, milk a dairy products and cereals. It is worth mentioning that both boys and girls almost the same in consumption of the food whether it is healthy food or unhealthy food. **Annex 15** illustrated that about 70% of the study' school children have drink milk three times and more weekly, and around half (55.9%) of them have eat egg three times and more weekly, both genders consumed egg frequently nearly equal. This result reflected better percentage among children at Gaza; when compared this result with findings of another local study (Abu Nada, 2010) which pointed out that 86.2%, but better than (Wahaidi, 2016) 84% of drank milk, and less than the two studies 58% and 64% of ate egg. Consumption of meat and its products were higher among the boys than the girls. Moreover, the percentages of respondents consume fish products three times and more weekly were 1.5% for boys and 0.6% for girls. While the percentage of the girls 45.9% among respondents who eat fish rarely or never were more than the percentage of boys (41%). Moreover, both genders consume chicken and liver frequently nearly equal. Consumption of fruit three times and more weekly were higher among the boys (54%) than the girls (51%). While, the percentages of respondents consume vegetable three times and more weekly higher among the girls (70.6%) than the boys (52.5%). It is worth mentioning that children eat unhealthy food with high frequency as fast and salty food such as chips (73.5%), sweets (88.6%), chilly foods (56.8%) and Chinese noodles “Endomy” (84.4%).

These results correspond to most of the elements of food order in the food pyramid where the most consumption among children was the grains, the grains at that base in the food pyramid and grains are the foundation of healthy diet. However, the fats, oils, and sweets at the top of the pyramid, where it should be eaten in a very little amount, but in the study results, the consumption of these foods among children was high. Referring to what reported by the children mothers who participated in the focus groups discussion, most of the mothers mentioned that there is variation in food intake between girls and boys, especially the healthy food, but girls are better than boys in concerning with food intake. Except few mothers said that their boys concern with food intake more than their girls.

This result contradicts with the results of the qualitative part in this study where, the result between boys and girls were nearly the same. One of the mothers reported that, "*Girls are more concerned with their healthy food more than boys*", "*The children are aware about the importance of eating healthy food, but in practice they do not like most of healthy food*", as reported by a mothers from the FGD. Additionally, the results of the qualitative part of FGD agreed with and support our results and they appeared the same worry about the Chinese noodles "Endomy" intake. Most the mothers said that their children are addicted on the "Endomy", while few of them mentioned that recently, there is decreasing in this addiction even they still like it. Additionally, the Endomy has been sold in front of school doors and there is no restriction for it. "*My sons like the Endomy and the fast food, I cannot control them*", one of the mothers reported. Also, the mothers sometimes forced to do some types of food according to their children' request especially the fried food. One of the FGD members spoke insistently, "*My daughter is insurgent and moody. She likes fried food very much mainly fried potato and eggplant and she refuse to eat if I did not make it even at breakfast*". Another one comments in different way and said, "*The parents in all cases are responsible for the food of their children if they were a fruit or vegetables the*

children will eat it". She added that, "*Sometimes the poor economic conditions are control the nature of food such as meat, fish and chicken to be on certain days of the month especially fruits are associated with salary*".

In general, the parents are responsible for planting healthy eating habits in their children, because they are now children, but these children will grow up and become responsible for their own families. "*Mother is the main person who has more aware about and effects on the life habits of their children*", mother reported.

A national study was conducted on Palestinian adolescents with regard to food habits and physical activity. It showed noticeable differences between the West Bank and the Gaza Strip, where adolescents of the Gaza Strip eat less fruits, sweets, soft drinks, meat and chicken compared to West Bank. Researchers attributed those differences to the lower socio-economic status in the Gaza Strip where more poverty, reduced accessibility and less availability of several food kinds that are not locally grown or produced. In addition, the study found that girls are more likely to report healthier food choices, with a higher consumption of fruits and vegetables (Al Sabbah et al., 2007).

The Palestinian micronutrient survey carried out by UNICEF and Palestinian MOH revealed that fruits and vegetables are consumed less often by adolescent boys and girls than by the other age groups. It showed also that adolescent boys were higher than girls in consumption of the foods of animal sources that might contribute to the higher prevalence of anemia in female adolescents and youth. Fish consumption amongst people was higher in the Gaza Strip than in the West Bank which is an attribute for geographical location. Adolescents of both sexes consumed crisps and soft drinks rather regularly (Elmadfa, et al 2013).

Table (4.5): Food Consumption Score

FCS	Frequency	Percent %
Poor food consumption	3	0.8
Borderline food consumption	16	4.3
Acceptable food consumption	351	94.9
Total	**370**	**100%**

In general, the Food Consumption Score (FCS) for food groups were presented in **Table 4.5**. As clearly appeared in the table above, a large percentage (94.9%) of study' school children have acceptable food consumption and a very small percent (0.8%) of study' school children have poor food consumption. This is logical where the most children have eaten milk and pulses/starches as a base diet, as well introducing vegetables, meat, fats, and other foods. A high score of FCS can be achieved through several different dietary patterns; this means an increase in the dietary diversity and/or frequency of consumption of one or more food groups particularly those groups with larger weights. Those with very low scores tend to be heavily affected by an increase in food frequency only. In general, once the base diet is achieved, an increase in diversity allows for an increased score. Therefore, we recommend to pay attention to introduce new food groups in children diet to have an increase score.

4.1.3.2 Physical activity and sedentary behaviors characteristics

By asking the study' school children how to go to school, **Table (4.6)** shows that more than half of the study' school children (58.6%) go to school by foot. While, 34.9% of them take transportation to go to school. The students who walk to school need in average 17.8 minutes to arrive to school. Regarding the using stairs at home, as shown in **Table 4.6**, 76.5% of the study' school children use stairs in their homes, among study' school children who use stairs, 59% go up 3-5 floors. They use stairs for 4.2 times on average per day. While, 36.4% of the study' schoolchildren go up less than three floors.

Table (4.6): Summary of physical activity characteristics of study' school children

Variables		Frequency	Percent%
Go to School	Walking	217	58.6
	Transportation	129	34.9
	Both	24	6.5
Needed minutes to arrive to school	**(Mean= 17.8, SD=13.20)**		
Using stairs at home	Yes	283	76.5
	No	87	23.5
Number of floors	Less than 3	103	36.4
	3-5	167	59.0
	6-8	10	3.5
	9 or more	3	1.1
Times use stairs per day	**(Mean= 4.20, SD=2.36)**		
Daily hours of paling	0-2 hours	235	63.5
	3-6 hours	135	36.5
	(Mean= 2.23, SD=2.36)		
Studying while	Moving from place to place	85	23.0
	Sitting on the desk	188	50.8
	Sitting in the bed	97	26.2
Daily hours of studying	0-2 hours	278	75.1
	3-5 hours	92	24.9
	(Mean= 1.90, SD=1.06)		
Family have rules about time you spend watching TV or using computer	Yes	207	55.9
	No	163	44.1

The results also show that the study' schoolchildren spend time in playing for 2.23 hours on average per a day. About 50.8% of the study' schoolchildren while sitting on the desk, 26.2% of them study while they are sitting on the bed and 23% of the study' schoolchildren while moving from place to place. The study' school children for about 1.9 hours daily in average. In addition, 55.9% of the study' school children mentioned that their families have rules about time they spend in watching TV or using computer, as demonstrated in **Table 4.6.**

Table (4.7): level of Physical activity among study' school children

Category		Boys		Girls		Total	
		No.	%	No.	%	No.	%
Physical activity	Sedentary	23	11.5	10	5.9	33	8.9
	Low active	47	23.5	60	35.3	107	28.9
	Active	72	36	72	42.3	144	38.9
	Very active	58	29	28	16.5	86	23.3
Total		**200**	**100**	**170**	**100**	**370**	**100**

As illustrated in **Table 4.7,** more than half of study' schoolchildren (62.2%) were live active and very active life; boys were (56%) higher than girls (44%). While 28.9% of study' schoolchildren were low active; boys with (56%) of them were higher than girls (44%), and only 8.9% of study' schoolchildren were live sedentary life; boys were (69.6%) higher than girls (30.4%). Based on the results from the Global School-based Student Health Surveys (GSHS) 2010-2011 showed that the prevalence of physical inactivity (75.8) among children aged 13-15 years in the Gaza Strip exercising for a total of at least 60 minutes per day over the past week of the data collection. This result is the highest score of Lebanon (65.4) and UAE (72.5), At the same time less than a lot of Arab countries such as Morocco (82.6), Qatar (85), Sudan (89), Syria (84.9), Egypt (90.6) and Jordan (85.6) (Sharara et al, 2018).

During FGD, there was a large debate about that, where some of the mothers agreed that there is a problem in practicing physical activity among children, while the other opposed it. Most of mothers said that their children practice physical activity such as, running, playing football or other any sport only at school. Also most the children go to school by walking or by riding bicycles. Other mothers commented that boys concern with physical activities more than girls where the boys play most the time in the street and the girls spend most of their time at home and most of her time is spent studying. Few of mothers reported that boys go to gymnasium but the girls playing Debka especially in holiday. On the other side, the mothers mentioned that their children do not practice physical activity even at the

school only if they give to their parents anything in the market. A mother from the FGD echoed, "*My son is obese, he eats a lot, does not like to play any sport, and he wants only watch to TV or play with his mobile*". "*I have a daughter, she likes to ride a horse and playing Debka*", a mother said. Another mother said, "*Boys concern with physical activities more than girls, where the boys always play football in street or in the playground with their peers*".

This study revealed that more than one third of the study' schoolchildren followed sedentary and low activity lifestyle, while the prevalence of the sedentary and low activity lifestyle was higher among girls. These results were consistent with results illustrated by Abu nada (2010) and Al-Sabbah H. et al study (2007), where it found that the boys are more active than the girls. Additionally, these results were more than the result mentioned by AbuDayya A. et al. (2007). Fan and Cao (2017) indicate that increasing the low active in general among chines children with a higher percentage of boys than girls (Fan and Cao, 2017). As well, Sharara et al, (2018) study results revealed that the prevalence of inactivity among adults and children/adolescents is high across Arab countries, and is higher among women. This is due to specific aspects of the cultural context of the region seem particularly discouraging of physical activity.

Globally, 81% of adolescents aged 11-17 years were insufficiently physically active, that adolescent girls were less active than adolescent boys, with 84% versus 78% and not meeting WHO recommendations (WHO, 2015). Besides, only one in five children in EU countries undertakes moderate-to-vigorous exercise regularly, where results from the Health Behaviour in School-aged Children - HBSC (2016) indicated that among 11-year-olds Italy (13 %), Denmark (15 %) and Greece (16 %) had the lowest prevalence of children meeting recommended physical activity levels, while Finland (41 %), Ireland (38 %) and Bulgaria (36 %) had the highest prevalence (Inchley et al, 2016). According

Verloigne and college (2012), showed children aged 10 to 12 years in Belgium, Greece, Hungary, the Netherlands, Norway, Slovenia and Spain are spent more time sedentary, where the girls spent significantly more time sedentary (500 minutes/day) than boys (474 minutes/day) (Verloigne et al, 2012). On other hand, Van Hecke and college (2016) show that in most European countries, less than 50% of children and adolescents complied with the recommended levels of physical activity, regardless of the measurement method. and the boys and children were more active than girls and adolescents in general (Van Hecke et al, 2016).

These finding can be justified by the chance for boys to practice physical activity outside freely, while most girls are not allowed to go out and do the same by their families. Females in general, do their physical activity inside their homes and mostly like domestic cleaning and few minutes of physical exercise. This can be explained that the girls stay longer time inside their houses than boys and spend most of their time in using computer, watching TV and reading. On the other hand, the boys play football, rid bicycle, and practice running exercise. In general, physical activity is not common among Palestinian community in the Gaza strip. This may due to lack of public area for practicing physical activity or bad economic situation affects negatively on practice physical activity, and this restricted to some people mainly of high level economic status who have chance to go to gymnasium or let their children to ride horses in horses club. Finally, the most important is the lack of awareness of the community toward the importance and the benefits of physical activity for their health status.

4.1.3.3 Sleeping pattern characteristics

Table (4.8): Summary of sleeping pattern characteristics of study' school children

Variables		Frequency	Percent%
Go to bed at	6:00-9:30	249	67.3
	10:00 and after	121	32.7
	(Mean = 9.02, SD=1.23)		
Wake up in the morning at	Before 8:00 am	306	82.7
	8:00- before 10	54	14.6
	10 and after	10	2.7
	(Mean = 6.42, SD=1.25)		
Number of hours of sleep at night on average	Less than 9 hours	95	25.7
	From 9 to 12 hours	275	74.3
	(Mean = 9.41, SD=1.26)		
Number of hours of sleep at daytime on average	Not sleep	276	74.6
	From 0.5 to 2 hours	92	24.9
	More than 2 hours	2	0.5
	(Mean = 0.32, SD=0.62)		
Sleep latency	**(Mean = 8.46, SD=11.34)**		
Nocturnal awakenings	None	105	28.4
	1-3 times	257	69.5
	4 times or more	8	2.1
	(Mean = 1.12, SD=1.01)		
Worried and not sleep at night	Always	39	10.5
	Sometimes	194	52.5
	Never	137	37.0
Have TV, computer or mobile at your bed room	Yes	90	24.3
	No	280	75.7

By asking the study' school children when do they usually go to bed, **Table 4.8** shows that more than half of the study' schoolchildren (67.3%) go to bed between 6:00 o'clock and 9:30 o'clock. While, 32.7% go to bed after 9:30 o'clock. The mean of the o'clock to go to bed was 9.02, with SD=4.3. Also, the highest percent of the study' school children 82.7% were get up in the morning before 8:00 o'clock. However, only 2.7% of the study' school children get up in the morning after than 10 o'clock. The mean of the o'clock to get up was 6.42 o'clock, with SD=1.25. Approximately, 25.4% of the study' school children sleep less than 9 hours daily in the night. In contrast, 74.3% of the study' school children sleep from 9 to12 hours daily. The mean number of sleeping hours at night per day was 9.41 hours, with SD=1.26.

The findings correspond to AASM, wherein this study most children sleep more than eight hours daily. According to AASM, children from 6 to 12 years of age should sleep from 9 to 12 hours per 24 hours on a regular basis to promote optimal health. Additionally, 74.6% of the study' school children do not sleep at the daytime, 24.9% of the participants do sleep from half to two hours daily, and only, 0.5% of the study' school children sleep more than 2 hours daily. The mean number of sleeping hours at the daytime per day was 0.32 hour, with SD=0.62.

Concerning the nocturnal awakenings, as shown in **Table 4.8**, 69.5% of the study' school children get up between one to three times at night, 28.4% of the study' school children do not get up at night, and finally, 2.1% of the study' school children get up more than four times at night. The mean number of nocturnal awakenings was 1.12 times, with SD=1.01.

By asking the study' school children if they have or not TV, computer or mobile at their bed room, where, **Table 4.8** shows that more than half of the study' schoolchildren (75.7%) have never TV, computer or mobile at their bed room. While, 24.3% of them have TV, computer or mobile at their bedroom. Many studies show that the children with a TV in their bedroom were significantly more likely to be overweight and reduces sleep quality compared to those without a TV in their bedroom. After controlling for socio demographics, physical activity, frequency of TV or movie watching and internet use (Dennison et al, 2002; Adachi-Mejia et al, 2007; Brockmann et al, 2016; Heilmann et al, 2017). Our results in FGDs revealed the mothers showed positive attitudes toward media, to the extent that they believed media exposure to be vital to children’s development and most of them encouraged to provide TV or computer in children bedrooms and many disagreed with recommendations from expert sources regarding age-appropriate screen time.

In addition, the mothers in FGD results confirmed and support our results that the children go to sleep early due to they wake up early in the morning but in holidays there is no control due to the disturbance in their sleep and wake up style. Also, children may wake up at night to drink water or go to the bathroom but increased after the war or when children hear that a war will happen. In addition, the mothers agreed that few children slept during the day. One mother said, "*My son wakes up more than once at night, especially after the war*". Another mother said, "*My daughter is afraid to sleep alone and refuses to sleep in her own bed*". "*My children go to bed early because they wake up early, but they may delay in sleeping on the holiday days*", mother reported. Another mother said, "*Definitely they have been changed after the war, they became more afraid of anything mainly girls*".

4.1.3.4 Hygiene practices characteristics

The findings in **Table 4.9** shows that most study' school children (88%) practice proper hygiene practices. 98.7% of study' school children 'always' and 'very often' clean their hair, and take care of it weekly. 98.1% of study' school children reported that they 'always' and 'very often' bath with warm water and soap weekly, 98.4% 'always', 'very often' and quiet 'often' wash their face after getting up from sleep, about 97% 'always' and 'very often' wash their hands with water and soap after using the toilet. It is worth to mention that dental hygiene practices got the lowest score.

Also during the FGD, all mothers in the qualitative study asserted on the importance of teaching children hygiene practices because they need initially follow-up from parents to become a habit in children afterward. In addition, the mother controls the practices of her children at home more than school, where at schools there may be different practices for the lack of parental control of a child or the child could be affected by his peers and imitate his behavior.

Table (4.9): Summary of Hygiene practices characteristics of study' school children

Variable	Never	Seldom	Quite often	Very often	Always	Mean	%
Clean or brush your teeth when getting up bed.							
N	118	28	72	38	114	3.01	60%
%	31.8	7.6	19.5	10.3	30.8		
Clean or brush your teeth before going to bed.							
N	155	30	75	27	83	2.60	52%
%	41.9	8.1	20.3	7.3	22.4		
Clean or brush your teeth after eating.							
N	247	40	48	12	23	1.71	34%
%	66.8	10.8	13.0	3.2	6.2		
Use soap when washing your hands.							
N	-	-	15	34	321	4.83	97%
%	-	-	4.1	9.2	86.8		
Wash your hands with water and soap before eating.							
N	14	7	27	36	286	4.55	91%
%	3.8	1.9	7.3	9.7	77.3		
Wash your hands with water and soap after eating.							
N	-	-	11	28	331	4.86	97%
%	-	-	3.0	7.5	89.5		
Wash your hands with water and soap after using the toilet.							
N	-	-	11	24	335	4.88	98%
%	-	-	3.0	6.5	90.5		
Wash your hands with water and soap after playing.							
N	38	11	54	70	197	4.02	80%
%	10.3	3.0	14.6	18.9	53.2		
Wash your hands with water and soap after touching animals.							
N	46	10	57	61	196	3.95	79%
%	12.4	2.7	15.4	16.5	53.0		
Wash your face after getting up from sleep.							
N	3	3	5	16	343	4.87	97%
%	0.8	0.8	1.4	4.3	92.7		
Clip and clean your fingernails.							
N	1	1	36	69	263	4.60	92%
%	0.3	0.3	9.7	18.6	71.1		
Bath with warm water and soap weekly.							
N	-	-	7	35	328	4.87	97%
%	-	-	1.9	9.5	88.6		
Clean your hair and take care of it weekly.							
N	-	-	5	17	348	4.93	99%
%	-	-	1.3	4.6	94.1		
Total				**SD=0.46**		**4.13**	**83%**

The mothers reported on this aspect that they observe their children's practices in all time at home but when they go out of the house like going to school they are unsure of their

children's practices. Also during the FGD, all mothers in the qualitative study asserted on the importance of teaching children hygiene practices because they need initially follow-up from parents to become a habit in children afterward. In addition, the mother controls the practices of her children at home more than school, where at schools there may be different practices for the lack of parental control of a child or the child could be affected by his peers and imitate his behavior. The mothers reported on this aspect that they observe their children's practices in all time at home but when they go out of the house like going to school they are unsure of their children's practices.

Also, the mothers explained that children respond positively in most cases for advices related to their personal hygiene, even though a regular follow is highly recommended. Another one comment in a different way and said, "*Children do not need to follow up where they practice what they learn at home if they are at home or outside the home*". One mother said, "*Sometimes my son does not wash his hands due to rush to play*".

Most mothers agreed that the educated mothers have an essential role in promoting hygienic practices for their children more than the no educated mothers. On another hand, some of them reject this idea and one of them comments, "*Our mothers in the past were illiterate even though my mother used to inspect us and keep following on our personal hygiene*". Few of mothers reported on the other side that the poor economic status is the cause of the poor hygienic practices, not to lack of hygiene knowledge. "*I have the knowledge about proper hygiene practices but I cannot provide to bring all related cleaning materials of hygienic*", reported mother.

On the other aspect, mothers reported that the dental hygiene is the most missing daily practice and thus mothers keep reminding their children to take care of brushing their teeth. Other mother said, "*It is important for me that my children wash their teeth even if the way*

is incorrect". Additionally, most of the mothers confirmed that their daughters are more practicing personal hygiene than the boys and they talk with them about this topic in open approach while it is not the same for the boys, as some mothers said that their boys feel embarrassed to talk with them freely. One mother reported, "*Briefly the girls' proper hygienic practice is a mirror for their mothers*".

4.1.4 Quality of Life Domain

The following tables illustrate the findings of the subjective quality of life of children aged 10-12 years by KIDSCREEN scale; the scales have been transformed to a range of 0-100. These results allow for the interpretation of children' perception of their health and well-being during the past week were presented across 10 dimensions of health.

4.1.4.1 Children' perspectives about their quality of life

Table (4.10): Total score QOL by domains

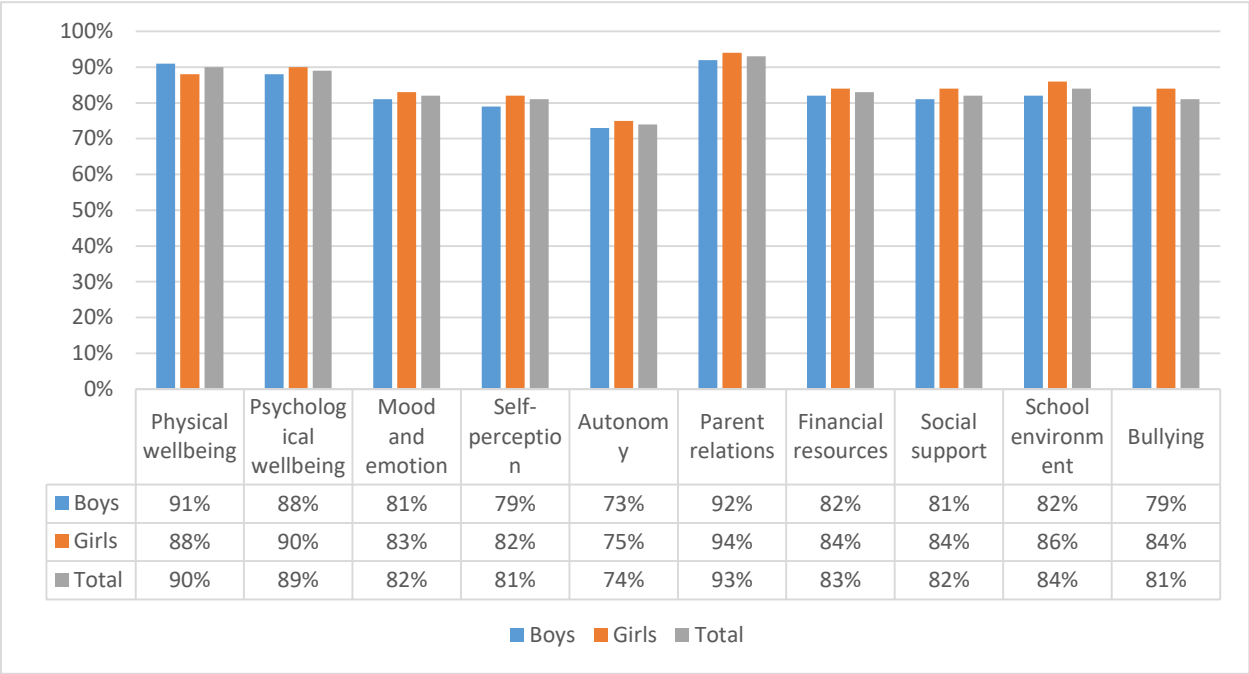
Variable	No. of Items	SD	% Mean
Physical wellbeing	4	0.59	90%
Psychological wellbeing	6	0.70	89%
Mood and emotion	7	0.81	82%
Self-perception	5	0.85	81%
Autonomy	5	0.71	74%
Parent relations	6	0.51	93%
Financial resources	3	0.99	83%
Social support	5	0.73	82%
School environment	6	0.71	84%
Bullying	3	1.05	81%
Total Kidscreen-52 domains	**50**	**0.47**	**84%**

Table 4.10 and Figure 4.5 show that the mean percentage score for the kidscreen-52 subscales ranged from 93% for parent relations and home life dimension to 38% for the autonomy of children dimension.

The results showed that the lowest domain was autonomy with the mean percentage of 74%; with 73% boys and 75% girls and the best domain score was parent relations and home life with a mean percentage of 93%; with 92% boys and 94% girls. Additionally, the results revealed that the physical wellbeing domain was 90%; with 91% boys and 88% girls which considered the second-best domain score.

Moreover, the results showed that the psychological wellbeing domain was 89%; with 88% boys and 90% girls. While, the school environment domain was 84%; with 82% boys and 86% girls and the financial resources domain was 83%; with 82% boys and 84% girls. Additionally, the social support domain was 83%; with 81% boys and 84% girls, and the mood and emotion domain was 82%; with 81% boys and 83% girls. Finally, the self-perception domain was 81%; with 79% boys and 82% girls and the bullying domain was 81%; with 79% boys and 84% girls.

The total Kidscreen-52 finding showed the overall percentage score of 84%; with 83% boys and 85% girls with SD = 0.74 which describe that most of the participant had a high level of QOL whether they were boys or girls. Girls perceived their life better than boys as indicated with 85% and 83% for girls and boys respectively. It agreed with Japanese study where girls reported significantly more social support than boys and boys more physical fitness than girls (Chen et al., 2005).



	Physical wellbeing	Psychological wellbeing	Mood and emotion	Self-perception	Autonomy	Parent relations	Financial resources	Social support	School environment	Bullying
Boys	91%	88%	81%	79%	73%	92%	82%	81%	82%	79%
Girls	88%	90%	83%	82%	75%	94%	84%	84%	86%	84%
Total	90%	89%	82%	81%	74%	93%	83%	82%	84%	81%

Figure (4.5) Total score QOL by domains according to gender

Children ranked parent relations as their highest rated dimension; this only domain was similar to the Ireland study. However, the lowest rated dimension in the present study was autonomy, corresponding to the Ireland study was the school environment domain. The other dimensions vary in order. Additionally, most of the adolescents in a cross sectional survey at British Columbia and Canada 82.3% agreed or strongly agreed to being satisfied with their QOL (Sawatzky et al., 2010).

Table (4.11): Summary of health characteristics of study' schoolchildren

Variables	Frequency	Percent %
Do you have a long-term disability, illness or medical condition?		
Yes	10	2.7
No	360	97.3
In general, how would you say about your health?		
Excellent	222	60.0
Very good	109	29.5
Good	32	8.6
Poor	7	1.9
Total	**370**	**100.0**

As shown in the **Table 4.11**, 90% of study' schoolchildren did not have a long-term disability, illness or medical condition. Of the 2.7% who did, asthma was most study' schoolchildren reported 1.4%, followed by eye problems 0.5%, heart disease 0.5% and diabetes 0.3%.

Regarding a question was about asked how would his/her say about their health, 60% of the study' schoolchildren felt that their health was excellent, while, 29.5% of the study' schoolchildren felt that their health was very good. Followed by 8.6% of the study' schoolchildren felt that their health was good and 1.9% of the study' schoolchildren felt that their health was poor. In the qualitative part with mothers in FGD, the mothers said that the most children are exposed at this age fractures, especially in boys. The result was close to an Irish study on perceived general health, where 96% of all respondents felt their health was ‘excellent’, ‘very good’ and ‘good’ (Keenaghan and Kilroe, 2008). This similarity between children from a developing country such as Palestinian children compared to a developed country adolescent is justified by the overwhelming global usage of internet by adolescents over the entire planet.

4.1.4.2 Physical well-being

Table (4.12): Summary of physical wellbeing characteristics of study' schoolchildren

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you felt fit and well?							
N	-	1	25	103	241	4.58	92%
%	-	0.3	6.8	27.8	65.1		
Have you been physically active (e.g. running, climbing and biking)?							
N	2	3	55	127	183	4.31	86%
%	0.5	0.8	14.9	34.3	49.5		
Have you been able to run well?							
N	-	1	39	119	211	4.46	89%
%	-	0.3	10.5	32.2	57.0		
Have you felt full of energy?							
N	1	1	18	120	230	4.56	91%
%	0.3	0.3	4.9	32.4	62.2		
(Mean= 4.48, SD= 0.59)							

Physical wellbeing dimension explores the level of physical activity of the children in terms of their energy and fitness. The level of physical activity is examined with reference to their ability to walk, and to play or do physically demanding activities (e.g. running, climbing and biking).

As shown in the **Table 4.12,** 92.9% of study' school children stated that ‘very often’ or ‘always’ they have felt ‘fit and well within the last weeks prior to completing the questionnaire. In response to the question about their ability to get around and walk or do physically demanding activities, 83.8% reported that they have been ‘very often’ or ‘always’ physically active. Also, 79.2% indicated that they have ‘very often’ or ‘always’ physically active to run well. Addition, 83.8% stated that they have ‘very often’ or ‘always’ felt full of energy and 14.9% of them stated that the have quite often felt full of energy. The mean percentage of physical wellbeing dimension was 90% with SD 0.59.

Referring to a comparative study between Portuguese and Spanish adolescents" quality of life, the researchers reported that Portuguese girls only scored significantly lower than boys in the Physical Wellbeing dimension. Moreover, a significant difference between boys and girls on the quality of life dimensions in Spanish adolescents was found when compared to Portuguese. Also, Spanish girls scored significantly lower results than Spanish boys in the Physical Wellbeing dimension (Lima-Serrano, Lemos, and Nunes, 2013).

The result was close to an Irish study on perceived general health, where 81% of all respondents felt their health was good, very good or excellent (Keenaghan and Kilroe, 2008). In the qualitative part with mothers in FGD, the mothers said the children in their nature are active and spend most of their time playing unless they are sick.

4.1.4.3 Psychological well-being

Psychological wellbeing dimension examines the positive emotions and satisfaction with life of the children. It specifically reveals the positive perceptions and emotions experienced by the individual. The questions look at to what extent children experiences positive feelings, such as happiness, joy and cheerfulness.

Table (4.13): Summary of psychological wellbeing characteristics of study' schoolchildren

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Has your life been enjoyable?							
N	5	1	35	95	234	4.49	90%
%	1.4	0.3	9.5	25.7	63.3		
Have you felt pleased that you are alive?							
N	8	-	45	90	227	4.43	89%
%	2.1	-	12.2	24.3	61.4		
Have you felt satisfied with your life?							
N	10	4	63	79	214	4.31	86%
%	2.7	1.1	17.0	21.4	57.8		
Have you been in a good mood?							
N	1	6	54	114	195	4.34	87%
%	0.3	1.6	14.6	30.8	52.7		
Have you felt cheerful?							
N	1	10	50	114	195	4.33	87%
%	0.3	2.7	13.5	30.8	52.7		
Have you had fun?							
N	1	3	30	44	292	4.64	94%
%	0.3	0.8	8.1	11.9	78.9		
(Mean= 4.43, SD= 0.70)							

Results depicted in **Table 4.1)** show the study' school children replies to the asked six questions about their psychological well-being as experienced in the last weeks prior to completing the questionnaire. The results across this dimension indicate that 89% of study' school children felt that their life had been ‘very often’ or ‘always’ enjoyable. Overall, 85.7% of study' school children perceived that they have felt ‘very often’ or ‘always’ pleased, and 90.8% reported that they have ‘very often’ or ‘always’ had fun. At the other extreme, only 1.9% mentioned that they have ‘never’ or ‘seldom’ been in a good mood, 3% stated that they have ‘never’ or ‘seldom’ felt cheerful, and only 3.8% revealed that they

have ‘never’ or ‘seldom’ felt satisfied with their life. The mean percentage of psychological wellbeing dimension was 89% with SD 0.70.

In an Irish study, 84% of all respondents felt that their lives have often or always been enjoyable. 90% perceived that they are very often or extremely pleased to be alive and 87% often or always had fun. At the other extreme, 5% have never or seldom felt cheerful and 9% have not at all or slightly felt satisfied with their life (Keenaghan and Kilroe, 2008), this result corresponds to the study finding in the same dimension.

In the qualitative part in the present study with mothers in FGD. It is worth mentioning, mothers pointed out their frustration, but, they explicated optimism about the future without defining solid reasons for this feeling. Generally, mothers agreed that children's lives are happy because parents do everything to please their children. Another mother said, "*I am sure that my child is dissatisfied with his life because he goes to school and then to work and back to the house at night*". One of mother said, “*It brings me lots of proudness to be live in Palestine with my family, even when I compare between our lives and lives of my family -My father and mother- in other countries, I dream to have what they have, but I still so proud*”.

4.1.4.4 Mood and emotion

Mood and emotion dimension covers how much the children experiences depressive moods and emotions, and stressful feelings. It specifically reveals feelings such as loneliness, sadness, sufficiency/insufficiency and resignation.

Respondents were asked seven questions relating to their mood as experienced in the last weeks prior to completing the questionnaire.

Table (4.14): Summary of mood and emotion characteristics of study' school children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you felt that you do everything badly?							
N	210	45	87	21	7	4.16	83%
%	56.8	12.2	23.5	5.7	1.8		
Have you felt sad?							
N	124	65	138	32	11	3.70	74%
%	33.5	17.6	37.3	8.6	3.0		
Have you felt so bad that you did not want to do anything?							
N	218	54	74	16	8	4.24	85%
%	58.9	14.6	20.0	4.3	2.2		
Have you felt that everything in your life goes wrong?							
N	244	51	58	11	6	4.39	88%
%	65.9	13.8	15.7	3.0	1.6		
Have you felt fed up?							
N	111	55	136	55	13	3.53	71%
%	30.0	14.9	36.8	14.9	3.4		
Have you felt lonely?							
N	230	48	49	28	15	4.22	84%
%	62.2	13.0	13.2	7.6	4.1		
Have you felt under pressure?							
N	238	53	48	17	14	4.31	86%
%	64.3	14.3	13.0	4.6	3.8		
(Mean= 4.08, SD= 0.81)							

Table 4.14 shows that 79.7% of study' school children reported that they have ‘never’ or ‘seldom’ felt everything in their life goes wrong. About 78.6% of study' school children stated that they have ‘never’ or ‘seldom’ felt under pressure. Addition, 69% of study' school children perceived that they have ‘never’ or ‘seldom’ felt that they do everything badly. About 73.5% reported that they have ‘never’ or ‘seldom’ felt so bad that they didn’t want to do anything. At the other extreme, 11.6% of study' school children stated that they have ‘very often’ or ‘always’ felt sad. Within the same context, 11.7% revealed that they have ‘very often’ or ‘always’ felt lonely, 18.3% indicated that they have ‘very often’ or ‘always’ felt fed up. The mean percentage of psychological wellbeing dimension was 38% with SD 0.81.

According to report published by UNICEF, the psychosocial situation among adolescents worsened during the past five years of conflict. Children and adolescents are suffering from emotional problems such as headaches, sleeping disorders, violent acts, loss of appetite (UNICEF, 2003). In a recent study by the Queen Elizabeth Medical Centre in Western Australia, out of 400 children aged 9 - 12 years. Only 4% were found to be clinically depressed, and 28% were assessed and classified as being vulnerable to future depression. The depressed children believed that happiness is achieved through the acquisition of fame, money and beauty. Happier children tended to believe that feeling good comes from healthy attitudes and pursuing worthwhile goals (Tyrrell and Elliott, 2016).

To some extent, these results is near to that of the Irish study, which shows that 74% of children reported that they have never or seldom felt that they do everything badly. 72% stated that they have never or seldom felt sad and 80% perceived that they have never or seldom felt so bad that they did not want to do anything. At the other extreme, 11% revealed that they have very often or always felt under pressure, 10% indicated that they have very often or always felt fed up, and 11% reported that they have very often or always felt that they do everything badly (Keenaghan and Kilroe, 2008).

Contrarily, these results are inconsistent with the FGD. Where the mothers agreed that children of this age would not be aware of such a meaning (under pressure, lonely and sad) and when the child is punished he/she realizes that he/she made a mistake. By contrast, some mothers said that because the poor economic conditions, parents preferred to provide the basics for children without going out for a walk. One mother comments, "Children these days say: I feel sad and worry likes an adult". Also another mothers said, "Every week I walk with my children and they do not feel bored".

4.1.4.5 Self-perception

Self-perception dimension of the children includes whether the appearance of the body is viewed positively or negatively. Body image is explored by questions concerning satisfaction with looks as well as with clothes and other personal accessories. The dimension examines how secure and satisfied children feel about themselves, as well as their appearance.

Table (4.15): Summary of self-perception characteristics of study' school children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you been happy with the way you are?							
N	5	3	33	92	237	4.49	90%
%	1.4	0.8	8.9	24.9	64.1		
Have you been happy with your general appearance (clothes)?							
N	3	5	33	94	235	4.49	90%
%	0.8	1.4	8.9	25.4	63.5		
Have you been worried about the way you look?							
N	159	57	92	40	22	3.79	76%
%	43.0	15.4	24.9	10.8	5.9		
Have you felt jealous of the way other girls and boys look?							
N	179	50	86	38	17	3.91	78%
%	48.4	13.5	23.2	10.3	4.6		
Would you like to change something about your body?							
N	137	35	84	86	28	3.45	69%
%	37.0	9.5	22.7	23.2	7.6		
(Mean= 4.03, SD= 0.85)							

Respondents were asked to respond to five questions relating to their self-perception as experienced in the 2 week prior to completing the questionnaire. **Table 4.15** indicates that 89% of study' school children reported that they have ‘very often’ or ‘always’ been happy with the way they are. 88.9% of study' school children stated that they have ‘very often’ or ‘always’ been happy with general appearance. About 58.4% perceived that they have ‘never’ or ‘seldom’ been worried about the way they look, whilst only 14.9% revealed that they would ‘very often’ or ‘always’ like to change something about their body. As well

61.9% indicated that they ‘never’ or ‘seldom’ felt jealous of the way other colleagues look. The mean percentage of self-perception dimension was 63% with SD 0.60.

These results are near to the Irish study results in this domain indicating that 80% of children reported that they have ‘very often’ or ‘always’ been happy with the way they are. 86% stated that they have ‘very often’ or ‘always’ been happy with their clothes. About 75% perceived that they have ‘never’ or ‘seldom’ been worried about the way they look, while 13% revealed that they ‘very often’ or ‘always’ have been worried. 81% indicated that they would ‘never’ or ‘seldom’ like to change something about their body, while 13% reported that they would like to change something about their body ‘very often’ or ‘always’. (Keenaghan and Kilroe, 2008).

The results of the qualitative part in the FGD support the previously mentioned result; they agreed on the important of the economic situation plays an important role in this regard, where the biggest role is for parents to provide for their children, especially among girls.

4.1.4.6 Autonomy

Autonomy dimension looks at the opportunity given to children to create his / her own social and leisure time. It examines the person’s level of autonomy, seen as an important developmental issue for creating an individual identity. This refers to the children freedom of choice, self-sufficiency and independence. In particular, the extent to which they feel able to shape their own lives, as well as being able to make decisions about day-to-day activities, will be considered. The dimension also examines if the children feels sufficiently provided with opportunities to participate in social activities, particularly in leisure activities and pastimes.

Table (4.16): Summary of autonomy characteristics of study' school children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you had enough time for yourself?							
N	8	3	60	150	149	4.16	83%
%	2.2	0.8	16.2	40.5	40.3		
Have you been able to do the things that you want to do in your free time?							
N	10	11	51	162	136	4.09	82%
%	2.7	3.0	13.8	43.8	36.8		
Have you had enough opportunity to be outside?							
N	133	50	117	56	14	2.37	47%
%	35.9	13.5	31.6	15.1	3.8		
Have you had enough time to meet friends?							
N	15	30	79	132	114	3.81	76%
%	4.1	8.1	21.4	35.7	30.8		
Have you been able to choose what to do in your free time?							
N	8	13	59	165	125	4.04	81%
%	2.2	3.5	15.9	44.6	33.8		
(Mean= 3.70, SD= 0.71)							

Respondents were asked five questions relating to their social and leisure time. **Table 4.16** indicates that 80.8% of study' school children reported that they have ‘very often’ or ‘always’ had enough time for themselves. Only 18.9% stated that they have ‘very often’ or ‘always’ had enough opportunity to be outside. Addition, 66.5% perceived that they have ‘very often’ or ‘always’ had enough time to meet friends, while 5.7% indicated that they have ‘never’ or ‘seldom’ been able to do the things that they want to do in their free time. The mean percentage of autonomy dimension was 74% with SD 0.71.

In this domain, the Irish study indicates that 72% of all respondents reported that they have ‘very often’ or ‘always’ had enough time for themselves. 80% stated that they have ‘very often’ or ‘always’ had enough opportunity to be outside. 68% perceived that they have ‘very often’ or ‘always’ had enough time to meet friends, while 13% revealed that they have ‘never’ or ‘seldom’ had such time. 11% indicated that they have ‘never’ or ‘seldom’ been able to do the things that they want to do in their free time (Keenaghan and Kilroe, 2008).

There was a difference if the children had enough opportunity to be outside domain; where in this study, the result pointed out 18.6% of children have ‘very often’ or ‘always’ had enough opportunity to be outside. on the other hand 80% stated that they have ‘very often’ or ‘always’ had enough opportunity to be outside in Irish study.

The results of the qualitative part in the FGD support the previously mentioned result. Most mothers supported children to do what they wanted in their free time. But few mothers said they were setting out for their children the things to do in their free time. On the other hand, mothers opposed the exit of children to walk, especially the exit of girls.

4.1.4.7 Parent relations and home life

Parent relations and home life dimension examines the relationship of the children with their parents and the atmosphere in the home. It explores the quality of the interaction between the child and the parents, as well as the feelings of the child towards the parents. Particular importance is attached to whether the child feels loved and supported by the family, whether the atmosphere at home is comfortable or otherwise, and whether the child feels fairly treated.

Respondents were asked six questions relating to parent relations. **Table 4.17** illustrated that 89.7% of study' school children reported that their parents have ‘very often’ or ‘always’ understood them. 97.1% stated that they have felt ‘very often’ or ‘always’ loved by their parents and 96.4% perceived that they have ‘very often’ or ‘always’ been happy at home. 83.2% indicated that their parents have ‘very often’ or ‘always’ had enough time for them and treated them fairly 94%. At the other end of the scale, 3% revealed that their parents have ‘never’ or ‘seldom’ had enough time for them, while 1.9% perceived that their parents have ‘never’ or ‘seldom’ treated them fairly. The mean percentage of parent relations and home life dimension was 93% with SD 0.51.

Table (4.17): Summary of parent relations and home life characteristics of study' children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have your parent(s) understood you?							
N	1	-	37	24	308	4.72	94%
%	0.3	-	10.0	6.5	83.2		
Have you felt loved by your parent(s)?							
N	2	2	7	17	342	4.88	98%
%	0.5	0.5	1.9	4.6	92.5		
Have you been happy at home?							
N	1	1	11	27	330	4.85	97%
%	0.3	0.3	3.0	7.2	89.2		
Have your parent(s) had enough time for you?							
N	-	7	55	108	200	4.35	87%
%	-	1.9	14.9	29.1	54.1		
Have your parent(s) treated you fairly?							
N	1	6	15	33	315	4.77	95%
%	0.3	1.6	4.1	8.9	85.1		
Have you been able talk to your parent(s) when you wanted to?							
N	-	11	63	117	179	4.25	85%
%	-	3.0	17.0	31.6	48.4		
(Mean= 4.64, SD= 0.51)							

As noticed from the result of this domain, there is a good relationship between children and their parents. In contrast, the results of our study were higher than the result of Irish study, which indicates that 81% of children reported that their parents have ‘very’ or ‘extremely’ understood them. About 92% of them stated that they have felt ‘very’ or ‘extremely’ loved by their parents and 86% perceived that they have ‘very often’ or ‘always’ been happy at home. There were 76% of them indicated that their parents have ‘very often’ or ‘always’ had enough time for them and treated them fairly 83%. At the other end of the scale, 7% revealed that their parents have ‘never’ or ‘seldom’ had enough time for them, while 7% perceived that their parents have ‘never’ or ‘seldom’ treated them fairly. (Keenaghan and Kilroe, 2008).

The results of the qualitative part of the present study in FGD support the previously mentioned result. All mothers stressed that the home is the safest place for the child and the parents always love their children.

4.1.4.8 Financial resources

Financial resources dimension deals with money matters and assesses the perceived quality by the child. It explores whether the child feels that they have enough financial resources to allow them to live a lifestyle that is comparable to other children and to provide them with the opportunity to do things together with their peers.

Table (4.18): Summary of financial resources characteristics of study' school children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you had enough money to do the same things as your friends?							
N	3	17	48	83	219	4.35	87%
%	0.8	4.6	13.0	22.4	59.2		
Have you had enough money for your expenses?							
N	8	22	78	84	178	4.09	82%
%	2.2	5.9	21.1	22.7	48.1		
Do you have enough money to do things with your friends?							
N	12	24	87	78	169	3.99	80%
%	3.2	6.5	23.5	21.1	45.7		
(Mean= 4.14, SD= 0.99)							

Respondents were asked three questions relating to their financial resources. **Table 4.18** shows that, 81.6% of study' school children ‘very often’ or ‘always’ had enough money to do the same things as their friends, and 70.8% of them ‘very often’ or ‘always’ had enough money for their own expenses. Addition, 66.8% indicated that they do (‘very often’ or ‘always’) have enough money to do things with their friends. At the other end of the scale, 13% of study' school children revealed that they have ‘never’ or ‘seldom’ had enough money to do the same things as their friends. 9.7% reported that they did not (‘never’ or ‘seldom’) have enough money to do things with their friends. The mean percentage of financial resources dimension was 83% with SD 0.99.

These results were higher than the Irish study results showing that, overall, 70% of children reported that they have ‘very often’ or ‘always’ had enough money to do the same things as their friends. 65% stated that they have ‘very often’ or ‘always’ had enough money for their expenses and 67% indicated that they do (‘very’ or ‘extremely’) have

enough money to do things with their friends. At the other end of the scale, 16% of children revealed that they have ‘never’ or ‘seldom’ had enough money to do the same things as their friends. 14% reported that they did not (‘not at all’ or ‘slightly’) have enough money to do things with their friends. (Keenaghan and Kilroe, 2008).

During the FGD, there was some debate about that but finally, they became convinced that the problem is due to the economic factors, wherein a good economic situation the parents can provide all things necessary for their children and the vice versa right. However, it is worth mentioning that longstanding access restrictions imposed by Israel have undermined the Gaza Strip economy resulting in high levels of unemployment, food insecurity and aid dependence (OCHA, 2016). This justifies that children in Gaza used to live in a low economic situation and suffered from insufficient amount of money to cover their daily life needs; they then have to cope with the poor economic status of their family and trying to show more sympathy with their families and to be satisfied despite the necessity and poverty.

4.1.4.9 Social support and peers scale

Social support and peers dimension examines the nature of the children relationships with other children and considers the social relations with friends and peers. The dimension explores the quality of the interaction between the children and peers, as well as their perceived support. The questions examine the extent to which the children feel accepted and supported by friends and their ability to form and maintain friendships. In particular, aspects concerning communication with others are considered. Also explored is the extent to which the person experiences positive group feelings and how much he or she feels part of a group and respected by peers and friends.

Table (4.19): Summary of social support and peers characteristics of study' children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you spent time with your friends?							
N	2	5	30	97	236	4.51	90%
%	0.5	1.4	8.1	26.2	63.8		
Have you had fun with your friends?							
N	2	3	28	93	244	4.55	91%
%	0.5	0.8	7.6	25.1	65.9		
Have you and your friends helped each other?							
N	2	5	41	90	232	4.47	89%
%	0.5	1.4	11.1	24.3	62.7		
Have you been able to talk about everything with your friends?							
N	21	39	130	92	88	3.51	70%
%	5.7	10.5	35.1	24.9	23.8		
Have you been able to rely on your friends?							
N	23	40	115	91	101	3.56	71%
%	6.2	10.8	31.1	24.6	27.3		
(Mean= 4.12, SD= 0.73)							

Respondents were asked five questions relating to their financial resources. **Table 4.19** indicates that 90% of study' school children reported that they have ‘very often’ or ‘always’ spent time with their friends, and 91% indicated that they have ‘very often’ or ‘always’ had fun with their friends. Also, 87% reported that they and their friends have ‘very often’ or ‘always’ helped each other and 48.7% perceived that they have ‘very often’ or ‘always’ been able to talk about everything with their friends. Additionally, 51.9% stated that they have ‘very often’ or ‘always’ been able to rely on their friends. At the other extreme, 16.2% revealed that they have ‘never’ or ‘seldom’ been able to talk about everything with their friends. The mean percentage of social support and peers dimension was 82% with SD 0.73.

The Irish study indicates that 81% of children reported that they have ‘very often’ or ‘always’ spent time with their friends and 89% indicated that they have ‘very often’ or ‘always’ had fun with their friends. 75% reported that they and their friends have ‘very often’ or ‘always’ helped each other and 59% perceived that they have ‘very often’ or ‘always’ been able to talk about everything with their friends. 75% stated that they have

‘very often’ or ‘always’ been able to rely on their friends. At the other end of the scale, 17% revealed that they have ‘never’ or ‘seldom’ been able to talk about everything with their friends. (Keenaghan and Kilroe, 2008).

The results of the qualitative part of the present study in the FGD support the previously mentioned result. All mothers stressed that the children in this stage love their friends and they are able to hold any things to their friends even sometimes they did not say it to their parents; also, they help each other a lot.

4.1.4.10 School environment and learning

School environment and learning dimension explore the perception of the child about their cognitive capacity, learning and concentration, and their feelings about school. It includes their satisfaction with their ability and performance at school. General feelings about school are also considered and view of their relationship with their teachers.

Table (4.20): Summary of school environment characteristics of study' children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you been happy at school?							
N	7	3	52	94	214	4.36	87%
%	1.9	0.8	14.1	25.4	57.8		
Have you got on well at school?							
N	2	5	46	99	218	4.42	88%
%	0.5	1.4	12.4	26.8	58.9		
Have you been satisfied with your teachers?							
N	3	6	76	110	175	4.21	84%
%	0.8	1.6	20.6	29.7	47.3		
Have you been able to pay attention at school?							
N	16	28	96	82	148	3.86	77%
%	4.3	7.6	25.9	22.2	40.0		
Have you enjoyed going to school?							
N	7	16	77	106	164	4.09	82%
%	1.9	4.3	20.8	28.6	44.3		
Have you got along well with your teachers?							
N	5	1	65	129	170	4.24	85%
%	1.4	0.3	17.5	34.9	45.9		
(Mean= 4.20, SD= 0.71)							

Respondents were asked six questions relating to their financial resources. **Table 4.20** indicates that 83.2% of study' school children reported that they have been ‘very often’ or ‘always’ happy at school. Addition, 85.7% stated that they have got on ‘very often’ or ‘always’ well at school and 77% indicated that they have been ‘very’ or ‘extremely’ satisfied with their teachers. Also, 62.2% perceived that they have ‘very often’ or ‘always’ been able to pay attention. Additionally, 72.9% reported that they have ‘very often’ or ‘always’ enjoyed going to school and 80.8% stated that they have ‘very often’ or ‘always’ got along well with their teachers. At the other end of the scale, only 8.9% revealed that they have ‘never’ or ‘seldom’ enjoyed and happy going to school and 2.4% indicated that they have been ‘never’ or ‘seldom’ satisfied with their teachers. Also, 11.9% perceived that they have ‘never’ or ‘seldom’ been able to pay attention. The mean percentage of school environment dimension was 84% with SD 0.71.

The Ireland study indicates that 62% of children reported that they have been ‘very’ or ‘extremely’ happy at school. 75% stated that they have got on ‘very’ or ‘extremely’ well at school and 66% indicated that they have been ‘very’ or ‘extremely’ satisfied with their teachers. 72% perceived that they have ‘very often’ or ‘always’ been able to pay attention. 53% reported that they have ‘very often’ or ‘always’ enjoyed going to school and 68% stated that they have ‘very often’ or ‘always’ got along well with their teachers. At the other end of the scale, 26% revealed that they have ‘never’ or ‘seldom’ enjoyed going to school and 19% indicated that they have been ‘not at all’ or ‘slightly’ satisfied with their teachers (Keenaghan the Kilroe, 2008).

The results of the qualitative part in the FGD support the previously mentioned result. All mothers stressed that the children of this age loved the school but some factors that promote this behavior, such as student love for the teacher, this is a very important factor affect to the children may be the students refuses to go to school if the treatment of a

particular teacher badly. Regarding for ability to pay attention at school, not all children can attract attention some of them can attract attention by their intelligence and excellence and the other them can attract attention by a problem.

4.1.4.11 Social Acceptance/ Bullying

Social Acceptance/ Bullying dimension covers the aspect of feeling rejected by peers in school. It explores both the feeling of being rejected by others as well as the feeling of anxiety towards peers. '*We say a student is being bullied when another student or a group of students say or do nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she does not like. But it is not bullying when two students of about the same strength quarrel or fight'*. This dimension shows a high score in QOL if these negative feelings are rare.

Table (4.21): Summary of bullying characteristics of study' school children

Variables	Never	Seldom	Quite often	Very often	Always	Mean	%
Have you been afraid of other students?							
N	211	39	60	45	15	4.04	81%
%	57.0	10.5	16.2	12.2	4.1		
Have other students made fun of you?							
N	193	42	75	48	12	3.96	79%
%	52.2	11.4	20.3	13.0	3.2		
Have other students bullied you?							
N	225	49	55	27	14	4.20	84%
%	60.8	13.2	14.9	7.3	3.8		
(Mean= 4.07, SD= 1.05)							

Respondents were asked three questions relating to their financial resources. **Table (4.21)** indicates that 67.5% of study' school children reported that they have 'never' or 'seldom' been afraid of other students. Additionally, 63.6% stated that other students have 'never' or 'seldom' made fun of them and 74% perceived that other students have 'never' or 'seldom' bullied them. At the other end of the scale, 16.3% of study' school children revealed that

other students have ‘very often’ or ‘always’ made fun of them. The mean percentage of bullying dimension was 81% with SD 1.05.

The Ireland study indicates that 89% of children reported that they have ‘never’ or ‘seldom’ been afraid of other students. 80% stated that other students have ‘never’ or ‘seldom’ made fun of them and 85% perceived that other students have ‘never’ or ‘seldom’ bullied them. At the other end of the scale, 11% of children revealed that other students have ‘very often’ or ‘always’ made fun of them (Keenaghan and Kilroe, 2008).

The results of the qualitative part in the present study in the FGD support the previously mentioned result. All mothers stressed that the fighting between school students is normal. This reflects that bullying exists as a phenomenon among boys. Also, most mothers asserted that school environment has effect on their children behavior, whether positively or negatively. In addition, the mothers asserted that peers affect each other positively or negatively. On the other hand, it is possible that the bullying, whether physical or verbal, affects the child negatively, such as refusing to go to school because of fear of some students this happened out said the school. But few mothers asserted that there is bullying at school.

4.2 Inferential analysis

This part discusses the relationship between the dependent and independent variables well providing an explanation and opinion regarding the findings of this study. The statistical tests such as t. test, ANOVA and Chi-square have been applied. The dependent variable for the study was quality of life domains to explore the perception of children in Gaza city, the independents variables were demographical data and lifestyle patterns. Results of certain findings were grouped, presented based on its significant and compared with other studies' findings. Moreover, explanation and interpretation of these findings are presented. The researcher preferred to present the overall result of each scale with these characteristics in order to be more clear and easy to compare it with other similar studies within and outside the Gaza strip.

4.2.1 Differences in QOL in reference to demographic characteristics:

Table (4.22): Differences in overall QOL in relation to demographic characteristics

Independent Variables		N	Mean	SD	Factor	Value	Sig.
Governorate	East Gaza	136	4.14	0.51	t	-1.90	0.058
	West Gaza	234	4.23	0.45			
Gender	Boys	136	1.43	0.50	t	-0.97	0.333
	Girls	234	1.48	0.50			
Age	10	126	4.16	0.50	F	0.53	0.588
	11	122	4.22	0.46			
	12	122	4.21	0.46			
Number of family members	6 members and less	166	4.26	0.45	t	2.29*	0.023
	From 7 and more	204	4.15	0.49			
Father's years of schooling	Less than 12 years	84	3.97	0.61	F	14.37*	0.000
	12 years to 16 years	215	4.25	0.41			
	More than 16 years	71	4.30	0.37			
Mother's years of schooling	Less than 12 years	79	3.61	0.38	F	14.86*	0.001
	12 years to 16 years	256	3.73	0.28			
	More than 16 years	35	3.82	0.31			

Family size has been regrouped into two groups; families consisting of 6 members or less and families consisting of 7 members or more. The overall QOL was then tested in relation to family size using t-test. Results from **Table 4.22** show that there was a statistically significant difference between the two groups (p = 0.02), where members of smaller families reported higher levels of satisfaction about their lives (mean = 4.26) than members of larger families (mean = 4.15). In addition to lower impact of economic hardships when the family size is smaller, members of small families could feel more satisfied because the breadwinners of smaller families may be less overwhelmed by family obligations and need whether it is food or other obligations. In simple words, smaller families can be seen as easier to manage from all sides.

The same findings listed in **Table 4.22** illustrate that the level of education and overall QOL are positively associated. Results show that parents (father and mother) who attained more education reported higher QOL (mean = 4.30, 3.82 respectively). Parents with less education (Less than 12 years) were seen to be the least satisfied group (mean = 3.97, 3.61 respectively). According to LSD test **(Annex, 8)**, the statistical significant variances were noticed between the least educated (Less than 12 years) and those who attained the diploma, university or higher education after university. The study results in relation to QOL and education relationship are consistent with the global findings (Helliwell and Putnam, 2004; Diener, 2009) and with the local studies (Al Bayoumi, 2014; Hannoun, 2012; Elyyan, 2007). Furthermore, FGDs participants confirmed that the greater the attained education gets the higher QOL. They attributed this to cultural preferences and referred to the historical appreciation Palestinian people bears to education as a source for security and assurance. In addition, education is the affordable means to secure a job at least and traditionally it is seen as it gives a higher social status and a higher self-satisfaction.

In addition, **Table 4.22** shows no statistically significant variance between boys and girls (P value=0.333). Also, there was no statistically significant variance among age of children (P value=0.588). A possible explanation of there no differences between age and their QOL; as people get older, they could probably feel more concerned about their future and livelihood more than children. Traditionally, parents assume responsibilities about children. Eventually, the first explanation which comes to mind of the higher satisfaction of children could be attributed to being less concerned about the socioeconomic reality. Also, they are relatively socially and financially dependent on parents in the family, and they therefore feel more ease than parents.

4.2.2 Differences in QOL in reference to socio-economic aspects:

Table (4.23): Differences in overall QOL in relation to socio-economic characteristics

Independent Variables		N	Mean	SD	F	Value	Sig.
Income by NIS	1000 or less	121	3.96	0.55	F	22.01*	0.000
	1001-1600	50	4.13	0.50			
	1601-3000	129	4.35	0.33			
	> 3001	70	4.38	0.34			
Employment father	Full employment	331	4.24	0.44	t	3.57*	0.001
	Un/under employment	39	3.87	0.62			
Employment mother	Full employment	90	4.34	0.37	t	-3.76*	0.000
	Un/under employment	280	4.15	0.49			
Pocket money	Yes	317	4.28	0.39	F	37.79*	0.000
	often	45	3.79	0.63			
	No	8	3.43	0.52			
Enough pocket money	Yes, enough	197	4.28	0.42	F	9.47*	0.000
	Yes, enough sometimes	66	4.23	0.39			
	Not enough sometimes	76	4.11	0.53			
	Not enough always	31	3.84	0.63			

The study findings as listed in **Table 4.23** indicate positive association between income and satisfaction about the QOL. The family whose income was less than NIS 1000 were less satisfied (mean = 3.96) and those with higher income were more satisfied (mean = 4.38). At a certain point though, the relationship showed a very limited ascending pattern. For instance, when income reached (NIS 3000) and when it exceeded this amount, the

mean moved by 0.03 only. ANOVA test indicated a statistically significant variance between respondents in reference to their family income (P value = 0.000). The LSD test **(Annex, 8)** indicates statistically significant variance between groups whose income is less than NIS 1000 and the rest of the groups. As aforementioned, a substantial correlation was concluded between the average per capita and average QOL indicating that wealthier nations are happier. In that sense, income positively correlates to wellbeing (Diener, 2009). Obviously, in our social context, economic factors are heavily connected to livelihood.

Similarly, the QOL of employed and unemployed showed statistically significant differences according to t-test. Respondents were grouped in accordance to their employment status into two groups. t-test indicates that parents whether father or mother with regular employment showed higher satisfaction about the QOL at a statistically significant variance (P-value, 0.000). Employed (mean = 4.24, 4.34 respectively) were better off than irregular or underemployed (mean = 3.87, 4.15 respectively). This significant relationship could be explained by the assumption that working father or mothers may enjoy better economic situation and also, they might be more exposed or oriented to appropriate healthy life style that reflected on the QOL. Beyond income, employed were often reported during the FGDs as a reason to enjoy dynamic lives and better social status. An interesting observation about employment status and poverty was noticed during the FGDs. Some participants referred to a sort of reclassification of poor and better off people after the closure and blockade of the Gaza strip. One of mother participant in FGDs said "*One decade ago, my husband was work in the Israeli market and we used to send meat and fruits to our neighbors who are public employees because we were considering them poor and cannot afford quality foods. Now, employed people are the middle and even above middle and we are the poorest*". Consistently, some of the FGDs participants described the good life as the one where the family feel secure because

of having jobs. Beyond money, and as concluded from the FGDs, besides being important by itself, secured financial life replaces or at least helps bridging the insecurity people feel due to being uncovered and vulnerable due to security instability, modest social protection policies and small help – if reachable - safety networks. As aforementioned, during FGDs, some mothers reported valuing money over other dimensions where they mentioned the money can bring them happiness for all family special their children.

Likewise, ANOVA test indicates that children who always take pocket money showed higher satisfaction about the QOL at a statistically significant variance (P-value, 0.000). Children who always take pocket money (mean = 4.28) were better off than children who sometimes take pocket money (mean = 3.79) and both were better off than children who never take pocket money (mean= 3.43). There are statistically significant differences occurred between the three groups as depicted by the LSD test **Annex 8**. Poverty influences QOL thought to reflect both economic hardships and associated psychological despair (World Bank, 2011).

4.2.3 Differences in QOL in reference to health related aspects:

4.2.3.1 BMI Z-score correlation with overall QOL:

The correlation test showed no correlation between BMI Z-score and overall QOL as indicated from table (4.5) (r = -0.026). This is normal at this age. Where, the increase in weight gain is not significantly affected by the quality of life of children at this stage. These results inconsistent with Japanese study which shows that there were significant associations between lifestyle factors and all domains of QOL measurement.

Also, it was noted that obese children and adolescents reported significantly lower health-related QOL in physical, psychosocial, emotional, and social functioning (Chen et al., 2005).

4.2.3.2 Differences in the overall QOL in relation dietary behavior characteristics

Table (4.24): Differences in the overall QOL in relation dietary behavior

Independent Variables		N	Mean	SD	Factor	Value	Sig.
Health education about nutrition	Yes	341	4.23	0.44	t	3.18*	0.003
	No	29	3.82	0.69			
having breakfast	Always	207	4.35	0.34	F	41.21*	0.000
	Sometimes	132	4.09	0.47			
	Never	31	3.66	0.70			
Having breakfast at	At school	310	4.24	0.40	F	3.04*	0.049
	At home	14	4.14	0.71			
	At school & home	15	4.49	0.30			
Number of meals have per day	1 meal	16	3.52	0.50	F	22.30*	0.000
	2 meals	86	4.02	0.61			
	3 meals	222	4.30	0.34			
	More than 3	46	4.29	0.44			
Take enough time while eating	Always	271	4.25	0.44	F	7.51*	0.001
	Sometimes	86	4.07	0.51			
	Never	13	3.92	0.67			
Eat between meals	Always	212	4.26	0.41	F	4.11*	0.017
	Sometimes	145	4.13	0.51			
	Never	13	4.01	0.83			
Drink carbonated soft drinks/ beverages	Always	8	4.05	0.65	F	1.92	0.148
	Sometimes	47	4.31	0.32			
	Never	315	4.18	0.49			
Eat with family	Always	139	4.34	0.42	F	17.07*	0.000
	Sometimes	228	4.13	0.46			
	Never	3	3.18	1.30			
Take meals while watching TV or playing	Always	38	4.13	0.45	F	1.31	0.272
	Sometimes	139	4.16	0.45			
	Never	193	4.24	0.49			

Similar to economic variables, the statistical analysis suggested that almost all life style dimensions are associated with the QOL status. In this study, the finding of the study referred to statistically significant variances in reported QOL and reported dietary behavior as indicated in **Table 4.24**. Children who reported having health education were better than those who did not ($t = 3.18$; $p = 0.003$). Similarly, there were substantial difference in overall QOL and children who had breakfast or not in ANOVA test ($p = 0.000$). The LSD test **(Annex, 8)** points out that the statistically significant difference occurred between the three groups listed in **Table 4.24** above. Where children who always had breakfast (mean =

4.35) were better off than children who sometimes had breakfast (mean = 4.09) and both were better off than children who never had breakfast (mean= 3.66).

Similarly, a statistically significant difference in QOL was attributed to the number of meals children have per day. The LSD test **(Annex, 8)** shows that the statistically significant difference occurred among all groups, but the children who have three meals or more per day were better off than children who have one or two meals per day.

As **Table 4.24** indicates, children who take enough time while eating and eating between meals resulted in statistically significant variance in the overall QOL (p = 0.001, 0.017 respectively) as indicated by ANOVA test. Children who always take enough time while eating and eating between meals (mean = 4.25, 4.05 respectively) reported better satisfaction over children who sometimes take enough time while eating and eating between meals (mean = 4.07, 4.13 respectively) who in turn reported higher satisfaction than children who never take enough time while eating and eating between meals (mean = 3.92, 4.01 respectively).

The same findings listed in **Table 4.24** illustrate that the children who eat with your family and overall QOL are positively associated. Results show that children who always eat with your family reported higher QOL (mean = 4.34). Children who never eat with your family were seen to be the least satisfied group (mean = 3.18). The LSD test indicates that the statistically significant differences occurred between the three groups. This is an acceptable result, where if the parents are present with the children, especially on the food side that will give the child support to eat the full meal and they will learn the correct eating habits. Also, this affects the child psychologically and increases the bond between the family members.

Table (4.25): Differences in the overall QOL in relation food intake

Variable		N	Mean	SD	F	Sig.
FCS	Poor	3	3.11	0.47	29.63*	0.000
	Borderline	16	3.52	0.66		
	Acceptable	351	4.24	0.43		

* P value < 0.05–is statistically significant

Table 4.25 illustrates that the QOL of children who acceptable, borderline and poor food consumption showed statistically significant differences according to ANOVA test. ANOVA test indicates that children who acceptable food consumption showed higher satisfaction about the QOL at a statistically significant variance (P-value, 0.000). Children who acceptable food consumption (mean = 4.24) were better off than children who borderline food consumption (mean = 3.52) and both were better off than children who poor food consumption (mean= 3.11). The LSD test indicates that the statistically significant differences occurred between the three groups. This is confirmed by mothers in the FGDs, where the children when eating meals in a full and balanced, this affects all aspects of their lives, where food provides them with energy to study and do any physical activity, and other aspects. In general, Chen et al (2005) showed that the predominant factors for poor QOL were irregular eating habits, inactive lifestyle (including low frequency of physical activity and long television watching), and late bedtime during the school nights. In other words, our results show that desirable lifestyles are associated with good QOL, independently of sex, BMI, social backgrounds, and somatic symptoms.

4.2.3.3 Differences in overall QOL in relation to physical activity level

It is worth to mention that despite children considered their lifestyle as healthier reported higher QOL, data show no statistically significant variance due to physical activity as derived from the ANOVA test (**Table 4.26**).

Table (4.26): Differences in overall QOL in relation to physical activity level

Independent Variables		N	Mean	SD	Factor	Value	Sig.
Level of physical activity	Sedentary	33	4.11	0.47	F	0.62	0.601
	Low active	107	4.19	0.44			
	Active	144	4.23	0.48			
	Very active	86	4.19	0.49			

These results were opposed to the Japanese study, where the children who participated in inactive lifestyle (including low frequency of physical activity and long television watching) had poor QOL when compared with their active children meaning there was significant association between the physical activity and QOL (Chen et al, 2005).

4.2.3.4 Differences in overall QOL in relation to sleeping characteristics

Table (4.27): Differences in overall QOL in relation to sleeping characteristics

Independent Variables		N	Mean	SD	F	Value	Sig.
Go to bed at	6:00-9:00	238	4.27	0.50	t	12.72*	0.003
	10:00 and after	121	4.11	0.43			
Wake up in the morning at	Before 8:00 am	306	4.19	0.46	t	-1.02	0.309
	8:00 am and after	64	4.25	0.41			
Number of hours of sleep at night	Less than 9 hours	95	4.14	0.47	t	3.47*	0.032
	From 9 to 12 hours	275	4.22	0.43			
Number of hours of sleep at daytime	Not sleep	276	4.14	0.47	F	3.70*	0.026
	From 0.5 to 2 hours	92	4.22	0.46			
	More than 2 hours	2	3.43	0.72			
Worried and not sleep at night	Always	39	3.85	0.64	F	13.36*	0.000
	Sometimes	194	4.21	0.45			
	Never	137	4.28	0.41			
Have TV, computer or mobile at your bed room	Yes	90	4.22	0.38	t	0.52	0.603
	No	280	4.19	0.50			

In this study, the finding referred to statistically significant variances in reported QOL and some of the sleeping patterns as indicated in **Table 4.27**. Substantial difference in QOL was thought to be attributed to the not able to sleep at night due to worries about something as fear of war in ANOVA test ($p = 0.000$). The LSD test **(Annex 8)** points out that the statistically significant difference occurred between the three groups listed in **Table 4.27.** Similarly, children who go to bed early were better than those who go to bed late ($t = 12.72$; $p = 0.003$). Similarity, where children who sleep at daytime higher QOL (mean =

4.22) compared with children who not sleep (mean =4.14). LSD test shows that the statistically significant variance occurred between the three groups. Additionally, children who sleep more than 9 hour were better than those who sleep less (t = 3.47; p = 0.032). It is worth to mention, data show no statistically significant variance due to if the children have a computer in the bedroom.

4.2.3.5 Correlation between overall QOL and hygiene practices

Table (4.28): Correlation between overall QOL and hygiene practices

QQL	R	Sig.
Hygiene	**0.206***	**0.000**

*sig. at 0.05 level.

Similar to nutrition and sleep variables, the statistical analysis suggested that almost all health related dimensions are associated with the QOL. As we mentioned earlier in a Japanese study, there were significant associations between lifestyle factors and all domains of QOL measurement. Hygiene practices are one of the important factors affecting health and one domain of lifestyle, so it affects the quality of life. These results may support the mothers' opinions where the life style of children at this stage is under the supervision of parents more than the behavior of children alone.

According to the whole result package, an argument that the socioeconomic effect on QOL could pass through the health related pathway can evolve. This argument is further supported with research results which suggest that social, economic and psychological circumstances can lead to long term stress, where insecurity and anxiety have powerful influence on health. The results at large are also consistent with the explanations of the relationships between health and wellbeing by different scholars and experts (WHO, 2013; UK Department of Health, 2014). The study suggests that the economic and social factors which children and their mothers reported as more important to their QOL, while some life style patterns were linked with the QOL correlates by them. In different wording, the

relationship between QOL and life style or health is reciprocal, and therefore, health should be seen in its social rather than medical context as demonstrated by the national health strategy as well (MOH, 2014a).

- **Summary**

The findings of the study have revealed that above half (74.9%) of the study' school children had normal BMI, where only 2.2% of the study' school children were considered underweight. Additionally, the findings of the study have also revealed that 13.8% of the study's study' school were overweight while 9.2% were obese.

In addition, the majority of study' school children were get a daily pocket money and only 2.2% of them did not get a daily pocket money. Also, only 6.5% of study' school children were working part-time as clear in quantitative part, however, the students' mothers in FGD confirmed that the work of the children is a help for the parents and not work in its true sense.

Interestingly, the findings of the study show that the majority of study' school children received health education about nutrition. Also, the findings show that more half of study' school children have a breakfast on daily basis or irregularly and have three meals per day. Regarding food consumption score for food groups, the findings of this study have revealed that a large percentage (94.9%) of study' school children have acceptable food consumption, while 4.3% of them have borderline food consumption. However, only 0.8% of them have poor food consumption. Regarding physical activity, the findings of the study have revealed more than half of study' school children were live active and very active life and only 8.9% of study' school children were live sedentary life. Regarding sleeping patterns, the findings of this study have revealed the study' school children sleep more than 8 hours daily, but more than of the study' school children get up between one to three times at night (nocturnal awakenings).

The findings of this study have revealed some of the hygiene practices done by children. however, all mothers in the qualitative part asserted on the importance of teaching children hygiene practices because they need initially follow-up from parents to become a habit in children afterward because the children usually do not do these practices on their own.

Additionally, the total Kidscreen-52 finding showed that most of the study' schoolchildren had a medium level of QOL whether they were boys or girls. Also, the best domain score was parent relations and home life among study' schoolchildren and the lowest domain was autonomy.

In the present study, children with a frequent to take pocket money were more likely to have high QOL compared with children who never take pocket money. Additionally, children with a frequent to habit of take habit breakfast were more likely to have high QOL compared with children who skipping breakfast. Moreover, children with a frequent to habit of take three meals per days were more likely to have high QOL compared with children who take one or two meals per day. Children with eating while television viewing were more likely to have low QOL. Also, there are no relationships between the physical activities and the overall of QOL. Children not able to sleep at night, due to worries about something as fear of war were more likely to have low QOL. In summary, most the lifestyle patterns and socio demographic factors of this study are effects on the overall of QOL of children positively or negatively.

Overall, both descriptive and inferential analysis of the main findings in addition to the discussions and comparisons made in this study are offering an ample room for constructive conclusions and thoughts. Part of these conclusions and recommendations is presented in the next chapter.

Chapter Five

Conclusion and recommendations

5.1 Conclusion

Childhood is a period of rapid physical, social, cognitive and behavioral change. Optimal lifestyle during childhood is essential for the maintenance of growth and good health. Namely, improving the lifestyle is the key to achieving better quality of life. The study built its conclusion and suggestions to be presented in this chapter on the findings and results of assessing the study QOL of children and the relationship with their lifestyles. The Kidscreen-52 ten domains tool and questionnaire of lifestyles was administered by the researcher used to obtain quantitative results, which then have been validated and explained with children' mothers in FGDs. Special focus was drawn towards assessing the life style and the QOL of children. The used tools assessed children perception in ten domains to reflect the range of life aspects thought to constitute or indicate the overall QOL.

This study has proven that the lifestyle has broad effects on QOL of children in the most field of their lives. It is noteworthy to report that there were no significant differences between the responses of boys and girls in most aspects, whether in their lifestyle or QOL. Based on the study results regarding anthropometric measurements, 74.5% of children presented with normal weight for age, 4.5% of children were underweight with higher prevalence amongst boys (2.4%) than girls (2.1%). Furthermore, 21% were obese and overweight, girls showed higher obesity rates than in boys (12.1%) and (8.9%) respectively.

The study findings revealed that the children consumed daily servings of vegetables, fruits, milk and dairy products less than the recommended servings of each food group per

day. Furthermore, the children consumed daily servings of carbohydrates and protein within the recommended servings of each food group per day. On the other hand, they consumed daily servings of sweets, fats and fast food more than the recommended servings of each food group per day. During discussions in the focus groups, most of the mothers mentioned that the parents are responsible for the lifestyle changes in their sons and daughters in general and planting healthy eating habits in their children especially, because they are now children, but these children will grow up and become responsible for their own families. They mentioned also that although children know what is healthy food, its contents and importance; but, yet they do not pay attention it always importantly.

It's worth to mention that, more than half of children (62.2%) were living active and very active life, of the boys were (35.2%) higher than girls (27%). Differently, 36.8% of children were sedentary and low active, where the boys equal girls at this point. Mothers' perceptions about their children physical activity according to gender were consistent with the results of the questionnaire with children, which revealed that boys practice physical activities more than girls.

The findings regarding sleeping habits correspond with the children questionnaire and focus groups and AASM, wherein this study most children sleep more than eight hours daily. According to AASM, children from 6 to 12 years of age should sleep from 9 to 12 hours per 24 hours on a regular basis to promote optimal health. Regarding the hygiene practices, the majority of children indicated high percent in most point of hygiene practices.

Main results indicate that the overall QOL status of the study population (aged 10, 11 and 12 years) elicited the high level of life satisfaction. The findings of the study have shown that the QOL among girls was higher than boys in most domains of QOL. The parent

relations elicited the highest domain and the physical wellbeing domain elicited the second highest. In between, psychological wellbeing, mood and emotion, self-perception, financial resources, social support, school environment and bullying domains elicited convergent levels of satisfaction. It is noteworthy that autonomy was the domain with the least satisfaction. Results suggest that children enjoy high satisfaction about their parent relations and home life domain than many other countries. Due to that children at this stage depend on their parents significantly. Generally speaking, the study population elicited higher scores than many other countries in physical, psychological, moods and emotions, parent relations and home life, social, and school environment domains when they were compared to the average scores obtained from Ireland study (Keenaghan and Kilroe, 2008). It is noteworthy that level of self-perception, autonomy, financial resources and bullying domains were lower to other countries.

Other socio-demographic aspects such as family size, level of education, income, employment states for parent and the pocket money of children were associated with over all of QOL in different directions. Family size and years of education showed positive correlation. Moreover, results suggest that children family' at the bottom of the economic ladder are worse off. Wellbeing status of the poor and very poor reported to be much lower than people who considered themselves as moderate are relatively better off, and rich families were better for those perceived themselves as moderate families.

The QOL of children whose family income is less than NIS 1000 reported the least level of QOL. Overall of QOL increased with income where respondents with income around NIS 1600 were a little bit better off and those with income ranged from NIS 1601 to 3000 were much better and reported much higher satisfaction. When family income was higher than NIS 3000, respondents reported a very slight increased satisfaction then the preceded

group. Thus, strong argument around association between income and QOL is suggested. Fully employed were better off than unemployed and underemployed people.

Dietary behavior is suggested to be one of the potential predictors of the QOL between the life style patterns. It is thought to contribute to wellbeing the highest among other selected variables in this study as indicated from ANOVA test. Children with better dietary behavior (such as; have breakfast, have three meals per day, take enough time while eating, eat between meals, eat with family) were better off compared to those who practiced poor dietary behavior. Similarly, about the hygiene practices where the children who reported bad practices more lower of QOL status when compared to those who reported good hygiene practices. Moreover, the findings of the study showed that the physical activity and the BMI Z-score were not associated with the overall of QOL. There are many recent arguments about the reciprocal relationship between health and QOL. Greater consensus is being built around the mutual pathways through which both QOL and health are influencing each another.

Finally, the study concluded that there is a strong correlation between the overall of QOL and the lifestyle for children. As per the study results, it could be considered as one of unprecedented reference data to be available in the Gaza Strip. They can be used for the purposes of addressing the children needs and help to solve their lifestyle problems, a matter that would undoubtedly improve their quality of life. Also the qualitative results asserted on the importance of enhancing the lifestyle for children to improving their QOL.

5.2 Recommendation

5.2.1: General recommendations

1. Based on the study analysis, findings and conclusions, the researcher proposes the following recommendations:
2. Although wellbeing is an integral part of the broader definition of health, so far, it has not been given adequately considered in Gaza Strip. Policy makers need to exercise proactive efforts to promote the conceptualization of health as a social rather than a medical concept and to monitor the QOL level in Gaza Strip. As a society, we need to develop our understanding of children's lives whence their lifestyle and quality of life.
3. In planning, policy-making and delivering services relating to child health, we should be involving the children in it by research. Where we need to pay attention to our research methods with children, and to match methods to settings in a way that maximizes their voices.
4. A further prospective investigation of the effect of lifestyles on QOL among children and adolescents would be needed.
5. Intervention programs contract to change lifestyles will be important to improve QOL in school children. Such as, the fostering of active lifestyles in school settings may help to establish enduring positive health habits, and physical activity at school is an important component of overall exercise behavior.
6. Starting with children, a screening program for anthropometric measures to be conducted aiming at achieving preventive early case detection such as obesity.
7. Children need to learn how to link knowledge (like healthy food and practice sport) with good practices for the purpose of sustainability (through family and school).
8. Schools should play an integral part to reduce unhealthy lifestyle patterns by conducting school-based prevention programs that encourage children to eat better, be

more active, and achieve healthier weights. Where the schools are the best place to access the large numbers of children

9. Schools in cooperation with School Health Departments should launch more activities related to physical activity, dietary habits, sleeping patterns and hygiene practices related activates using modern approaches such as role play and discussion group to adopt right health concepts and practices in their daily life. Also, the students' families mainly mothers in order to communicate any arising issues or observations in terms of their children's lifestyle at school such as physical activity, dietary habits, and hygiene practices.

5.2.3 Recommendation for further research

1. The study appraises the QOL of children in reference to ten internationally recognized domains that constitute a framework for policy makers and stakeholders who are concerned about the QOL concept. The study findings could constitute a baseline for future interventions, monitoring and evaluation.
2. Parent relations and home life domain elicited high scores, and efforts to maintain them as strong contributors to higher QOL are needed especially at the next stage, Adolescence.
3. Conduct more research including both qualitative and quantitative methods to deeply explore the associated factors with quality of life and lifestyle among larger samples representing all schools students in the Gaza Strip to be more representative and to generalize data.
4. Conduct more community-based studies on quality of life among preschoolers, schoolchildren, and adolescents using standardized age ranges and standardized tools for measuring the quality of life.

5. Conduct more studies to deeply explore the gender variation in determinants of lifestyle and quality of life among children.
6. Conduct more studies to explore the temporal association between quality of life and one style of lifestyle patterns such as the association between the quality of life and physical activity.
7. Conduct studies to assess the economic costs each of lifestyle or quality of life.

References

Abd El-Kader, M. & Mohammad, F. (2013). The Relationship between Lifestyle, General Health & Academic Scores of Nursing Students. *Public Health Research,* 3 (3), 54-70.

Abudayya, A. Thoresen, M. Abed, Y. & Holmboe-Ottesen, G. (2007). Overweight, stunting and anemia are public health problems among low socioeconomic groups in school adolescents (12–15y) in the North Gaza Strip. *Nutrition Research,* 27 (12), 762–71.

Abu Nada, O. Jalambo, M. Ramadan, M. & Zabut, B. (2013). Nutritional assessment of zinc among adolescents in the Gaza Strip-Palestine. *Open Journal of Epidemiology,* 3, 105-110.

Aiello, A. & Larson, E. (2002). What is the evidence for a causal link between hygiene and infections?. *Lancet Infectious Diseases,* 2, 103–110.

Al-Attiyah, A. & Nasser, R.(2016). Gender and age differences in life satisfaction within a sex-segregated society: sampling youth in Qatar. *International Journal of Adolescence and Youth,* 21 (1), 84-95.

Al-Hazzaa, H. Abahussain, N. Al-Sobayel, H. Qahwaji, D. & Musaiger, A. (2011). Physical activity, sedentary behaviors and dietary habits among Saudi adolescents relative to age, gender and region. *International Journal of Behavioral Nutrition and Physical Activity* 8, 140.

Almarshad, S. (2015). A Measurement Scale for Evaluating Quality of Work Life: Conceptualization and Empirical Validation. *Trends in Applied Sciences Research,* 10 (3), 143-156.

Al-Muammar, M. El-Shafie, M. & Feroze, S. (2014). Association between dietary habits and body mass index of adolescent females in intermediate schools in Riyadh, Saudi Arabia. *Eastern Mediterranean Health Journal.* 20 (1), 39-45.

Al-Rethaiaa, S. Fahmy, A. & Al-Shwaiyat, M. (2010). Obesity and eating habits among college students in Saudi Arabia: A cross sectional study. *Nutrition Journal,* 9, 39.

Al-Sabbah, H. Vereecken, C. Kolsteren, P. Abdeen, Z. & Maes, L. (2007). Food Habits and Physical Activity Patterns among Palestinian Adolescents: findings from the national study of the Palestinian schoolchildren (HBSC-WBG2004). *Public Health Nutrition,* 10 (7), 739-746.

Arakawa M, Taira K, & Tanaka H, et al. (2001). A survey of junior high school students' sleep habits and lifestyle in Okinawa. *Psychiatry Clin Neurosci,* 55, 211 – 212.

Anderson, W. Hanna, J. Peng, X. & Kryscio, J. (2000). Whole grain foods and heart disease risk. *Journal of the American College of Nutrition,* 19 (3), 291S–299S.

Asada, Y. (2005). Assessment of the health of Americans: the average health-related quality of life and its inequality across individuals and groups. *Population Health Metrics,* 3 (7).

Barcaccia, B. Espositob, G. Mataresec, M. Bertolasoc, M. Elvirad M. & De Marinisc, M. (2013). Defining Quality of Life: A Wild-Goose Chase?. *Europe's Journal of Psychology*, 9 (1).

Bawazeer, M. Al-Daghri, M. Valsamakis, G. Al-Rubeaan, A. Sabico, S. Huang, K. Mastorakos, G. & Kumar, S. (2009). Sleep duration and quality associated with obesity among Arab children. *Obesity*, 17 (12), 2251–2253.

Bazzano, A. He, J. Ogden, G. Loria, M. Vupputuri, S. Myers, L. & Whelton, K. (2002). Fruit and vegetable intake and risk of cardiovascular disease in US adults: the first National Health and Nutrition Examination Survey epidemiologic follow-up. *Am Journal Clinic Nutrition*, 76, 93-99.

Berg, J. et al (2016). Associations of total amount and patterns of sedentary behaviour with type 2 diabetes and the metabolic syndrome: *The Maastricht Study Diabetologia journal*, 59 (4), 709–718. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26831300 retrieved on 1/8/2018

Bethesda, D. (2017). *Brain Basics: Understanding Sleep*. Office of Communications and Public Liaison, National Institute of Neurological Disorders and Stroke, US National Institutes of Health. Available at: https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Understanding-Sleep retrieved on 1/8/2018

Bhat, A. & Qureshi, A. (2013). Significance of personal hygiene from Islamic perspective. *IOSR Journal of Humanities And Social Science*, 10 (5), 35-39.

Bielderman, A. de-Greef, M. Krijnen, W. van der Schans, CP. (2015). Relationship between socioeconomic status and quality of life in older adults: a path analysis. *Quality of Life Research.* 24 (7), 1697-1705.

Bin Zaal, A. Musaiger, O. D'Souza, R. (2009). Dietary habits associated with obesity among adolescents in Dubai, United Arab Emirates. *Nutricion Hospitalaria Journals*, 24 (4), 437-444.

Bloomfield, F. Aiello, A. Cookson, B. O'Boyle, C. & Larson, EL. (2007). The effectiveness of hand hygiene procedures, including hand washing and alcohol-based hand sanitizers, in reducing the risks of infections in home and community settings. *International Scientific Forum on Home Hygiene*.

Bloomfield, F. Smith, R. & Rook, A. (2012). *The hygiene hypothesis and its implications for home hygiene, lifestyle and public health*. International Scientific Forum on Home Hygiene (IFH).

Boixados, M. Pousada, M. Bueno, J. & Valiente, L. (2009). Quality of Life Questionnaire: Psychometric Properties and Relationships to Healthy Behavioral Patterns. *The Open Psychology Journal*, 2, 49-57.

Bolton, K. Kremer, P. Rossthorn, N. Moodie, M. Gibbs, L. Waters, E. Swinburn، B. & Silva, A. (2014). The effect of gender and age on the association between weight status and health-related quality of life in Australian adolescents. *BMC Public*

Health, 14, 898. Available at: http://www.biomedcentral.com/1471-2458/14/898 retrieved on 1/8/2018

Boschi-Pinto, C., Velebit, L., & Shibuyac, K. (2008). Estimating child mortality due to diarrhoea in developing countries. *Bulletin of the World Health Organization*, 86, 710–717.

Bowling, A. (2001). Measuring disease. Areview of disease-specific quality of life measurement scales. 2nd ed. UK, Open University Press.

Brains, C. Willnat, L. Manheim, J. & Rich, R. (2011). *Empirical Political Analysis 8th edition.* Boston, MA: Longman p. 105

Breslow, L. (1972). A quantitative approach to the World Health Organization definition of health: physical, mental and social well-being. *International Journal of Epidemiology*, 1 (4), 347 –355.

Brown, R. & Ogden, J. (2004). Children's eating attitudes and behavior: a study of the modelling and control theories of parental influence. *Health education research,* 19(3), 261-271.

Burkhalter, T. & Hillman, C. (2011). A Narrative Review of Physical Activity, Nutrition, and Obesity to Cognition and Scholastic Performance across the Human Lifespan. *Advances in Nutrition an International Journal.* 2 (2), 201S-206S.

Burns, N. & Grove, SK. (2001). *The practice of nursing research: Conduct, critique &utilization*. (4th edition). Philadelphia: WB Saunders Company.

Cairncross, S. & Valdmanis, V. (2006). Water supply, sanitation, and hygiene promotion. In D. Jamison, J. Breman, A. Measham, G. Alleyne, M. Claeson, D. Evans, P. Jha, A. Mills, & P. Musgrove. (2nd Ed.), *Disease control priorities in developing countries*. (pp. 771- 792). The International Bank for Reconstruction and Development/ The World Bank Group: Washington (DC).

Calamaro, J. Park, S. Mason, T. Marcus, L. Weaver, E. Pack, A. & Ratcliffe, J. (2010). Shortened sleep duration does not predict obesity in adolescents. *Journal of Sleep Research*, 19, 559–566.

Campbell, K. & Crawford, D. (2001). Family food environments as determinants of preschool-aged children is eating behaviors. *Australian Journal of Nutrition and Dietetics,* 58 (1), 19–25.

Cardinal B. (2011). Study: Physical activity impacts overall quality of sleep. *National sleep foundation*.

Carson, T. & Hidalgo, B. (2014). Dietary interventions and quality of life: a systematic review of the literature. *Journal Nutrition Education Behavior,* 46 (2), 90-101.

Cash, S. Beresford, S. Henderson, J. McTiernan, A. Xiao, L. Wang, C. & Patrick, D. (2012). Dietary and physical activity behaviors related to obesity-specific quality of life and work productivity. *British Journal of Nutrition.* 108 (6), 1134-42

Cataldo, B. DeBruyne, K. & Whitney, N. (2003). *Nutrition and Diet Therapy*. Belmore, California, USA: Peter Marshall, 6.

Celebuski, C. & Carpenter, J. (1996). Nutrition Education in Public Elementary and Secondary Schools, Survey Report. *National center for education statistics.* Available at: https://nces.ed.gov/pubs/96852.pdf

Centers for Disease Control and Prevention, CDC (2012). *Competitive foods and beverages in U.S. Schools: A state policy analysis.* Atlanta: U.S. Department of Health and Human Services. [Online] Available at: http:// www.cdc.gov.

Center for Disease Control and Prevention, CDC (2015). *Healthy Weight about Child and Teen BMI.* Retrieved May 15, 2015. [Online] Available at: https://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html retrieved on 1/8/2018

Center for Disease Control and Prevention, CDC (2017). *Chronic Disease Overview*. [Online] Available at: https://www.cdc.gov/chronicdisease/overview/index.htm retrieved on 1/8/2018

Center for Nutrition Policy and Promotion, CNPP (2017). *United States Department of Agriculture*. [Online] Available at: https://www.choosemyplate.gov/.

Chen, X. Sekine, M. Hamanishi, S. Yamagami T. & Kagamimori S. (2005). Associations of lifestyle factors with quality of life (QOL) in Japanese children: a 3-year follow-up of the Toyama Birth Cohort Study. *Child Care Health and Development*, 40 (2005), 668–678.

Ciccone, A. (2016). Official Sleep Recommendations for Children, Adolescents. *Journal of Clinical Sleep Medicine.* [Online] Available at: https://aasm.org/recharge-with-sleep-pediatric-sleep-recommendations-promoting-optimal-health/

Clarke, P. (2015). *Take Control Now: Your Health Is Your Responsibility*. First edition. Victoria: Canada.

Cleveland, E. Moshfegh, J. Albertson, M. & Goldman, D. (2000). Dietary intake of whole grains. *The Journal of the American College of Nutrition*, 19, 331S-338S.

Columbus public health, (2009). *Teaching Hand washing in School*. [Online] Available at: ww.publichealth.columbus.gov

Cozby, C. (2001). *Measurement Concepts*. Methods in Behavioral Research (7th ed.). California: Mayfield Publishing Company.

Crombie, A. Ilich, J. Dutton, G. Panton, L. & Abood, D. (2009). The freshman weight gain phenomenon revisited. *Nutrition Reviews*, 67 (2), 83–94.

Dapi, N. Janlert, U. Nouedoui, C. Stenlund, H. & Haglin, L. (2009). Socioeconomic and gender differences in adolescents' nutritional status in urban Cameroon, Africa. *Nutrition Research*, 29 (5), 313-9.

Daradkeh, G. Muhannadi, A. Chandra, P. Fadlalla, A. & Hajr, MA. (2015). Dietary Habits and Intakes Associated with Obesity and Overweight among Adolescents in the State of Qatar. *Journal of Nutritional Disorders and Therapy,* 10 (4).

De Vries J. (2001). In: Vingerhoets AJJM (ed.) Assessment in Behavioural Medicine. Brunner-Routledge, Hove, UK, 353–370.

De Vries J. & Drent M. (2006). In Baughman RP (ed.) Sarcoidosis Taylor & Francis, New York, 463–478.

Department of Health and Children (2000). Our Children - Their Lives: The National Children's Strategy. Dublin: The Stationery Office.

Dijkers, M. (2005). Quality of life of individuals with spinal cord injury: A review of conceptualization, measurement, and research findings. J*ournal of Rehabilitation Research and Development,* 42 (3), 87-102.

Eckersley, R. (2011). "How We Feel and Why It Matters" in Well & Good: Morality, meaning and happiness. Melbourne, Text Publishing, 59-76.

El Qudah, J. Al Omran, H. Abu Alsoud, B. Al Shek Yousef, T. (2012). Nutritional status among a sample of Saudi college students. *Current Research Journal of Biological Sciences*, 4 (5), 557-562.

Ejemot, I. Ehiri, E. Meremikwu, M. & Critchley, A. (2009). Hand washing for preventing diarrhea. *JohnWiley and Sons, Ltd,* 3.

Emerson, L. Fox, S. & Smith, CH. (2015). Good Beginnings: Getting it right in the early years. *The Lowitja Institute.*

Erkal, S. & Sahin, H. (2011). An Application on Determining Hygiene Behaviors of University Students. *International Journal of Business and Social Science,* 2 (8), 170-176.

European Union, EU & Association of Southeast Asian Nations, ASEAN (2005). *Guidelines on HACCP, GMP and GHP for ASEAN Food SMEs.* EC-Asia.

Fischman, S. (2000). The history of oral hygiene products: how far have we come in 6000 years?. *Munksgaard*, 15, 7-14.

Fellows, R. & Liu, A. (2007). *Research methods for construction*. Blackwell Science Ltd., Osney Mead, Oxford OX2 OEL, UK.

Forward, S. (2003). State of the art report on Life Quality assessment in the field of transport and mobility. *Swedish National Road and Transport Research Institute.*

Franco, E. Meleleo, C. Serino, L. Sorbara, D. & Zaratti, L. (2012). Hepatitis A: Epidemiology and prevention in developing countries. *World Journal of Hepatology*, 4 (3), 68-73.

Giannakopoulos, G. Dimitrakaki, Ch. Pedeli, X. Kolaitis, G. Rotsika, V. Ravens-Sieberer, U. & Tountas, Y. (2009). Adolescents' wellbeing and functioning: relationships with

parents' subjective general physical and mental health. *Health Quality of Life Outcomes,* 7, 100.

Goon, Sh. & Islam, S. (2014). Breakfast Skipping and Obesity Risk among Urban Adults in Bangladesh. *International Journal of Public Health Science,* 3 (1), 15-22.

Guthold, R. Cowan, M. Autenrieth, Ch. & Riley, L. (2010). Physical Activity and Sedentary Behavior Among Schoolchildren: A 34-Country Comparison. *The Journal of Pediatrics*. 157 (1), 43-49.

Guyatt, G. Ferrans, C. Halyard, M. Revicki, D. Symonds, T. Varricchio, C. Kotzeva, A. Valderas, J. & Alonso, J. (2007). Exploration of the value of health-related quality-of-life information from clinical research and into clinical practice. *Clinical Significance Consensus Meeting Group*. 82 (10), 1229-1239.

Hamad, B. & Pavanello, S. (2012): *Transforming Cash Transfers: Beneficiary and community perspectives on the Palestinian National Cash Transfer Programme*, Overseas Development Institute, UK.

Haskell, L. Lee, M. Pate, R. Powell, E. Blair, N. Franklin, A. Macera, A. Heath, W. Thompson, D. Bauman, A. (2007). Physical activity and public health: Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Medicine and Science in Sports and Exercise journal,* 39, 1423–1434.

Hassan, AR. (2012), Importance of Personal Hygiene. *Pharmaceutica Analytica Acta journal,* 3 (8), 125-126.

Haug, E. Rasmussen, M. Samdal, O. Iannotti, R. Kelly, C. Borraccino, A.Vereecken, C. Melkevik, O. Lazzeri, G. Giacchi, M. Ercan, O. Due, P. Ravens- Sieberer, U. Currie, C. Morgan, A. and Ahluwalia, N. (2009). Overweight in school-aged children and its relationship with demographic and lifestyle factors: results from the WHO-Collaborative Health Behaviour in School-aged Children (HBSC) study. *International Journal Public Health,* 2,167-79.

Health Unit Collaboration, HUC (2007). *Hand washing at School*. Nutrition Tools for School. Ontario: Canada.

Henson, J. et al (2013). Associations of objectively measured sedentary behavior and physical activity with markers of cardio metabolic health. *Diabetologia journal,* 56 (5), 1012-1020.

Hershner, Sh. & Chervin, R. (2014). Causes and consequences of sleepiness among college students. *Nature and Science of Sleep Journal,* 6, 73–84.

Hopkins, D. (2003). *A Teacher's Guide to Classroom Research,* 3rd Edition. Philadelphia: Open University Press.

Hoyland, A. Dye, L. & Lawton, C. (2009). A systematic review of the effect of breakfast on the cognitive performance of children and adolescents. *Nutrition Research Reviews,* 22 (2), 220-243.

Hruby, A. and Hu, B. (2016). The Epidemiology of Obesity: A Big Picture. *Pharmacoeconomics,* 33 (7), 673–689

Hu, B. (2003). Sedentary lifestyle and risk of obesity and type 2 diabetes. *Lipids,* 38 (2), 103–108.

Huang, T. Harris, J. Lee, E. Nazir, N. Born, W. & Kaur, H. (2002) Assessing overweight, obesity, diet, and physical activity in college students. *Journal of American College Health,* 52, 83-86.

Huesmann, R. (2007). The Impact of Electronic Media Violence: Scientific Theory and Research. *Journal of Adolescent Health,* 41(6), S6–13.

Huitt, W. (2011). *A holistic view of education and schooling: Guiding students to develop capacities, acquire virtues, and provide service.* Paper presented at the 12th Annual International Conference Sponsored. Athens Institute for Education and Research (ATINER), May 24-27, Athens, Greece.

Husseini, A. Abu-Rmeileh, E., Mikki, N. Ramahi, M. Abu Ghosh, H. Barghuthi, N. Khalili, M. Bjertness, E. Holmboe-Ottesen, G. & Jervell, J . (2009). Cardiovascular diseases, diabetes mellitus, and cancer in the occupied Palestinian territory. *Lancet,* 373, 1041–1049.

Huuhtanen, S., & Laukkanen, A. (2006). A guide for sanitation and hygiene for those working in developing countries. *University of Applied Sciences Publications*.

Iannotti, J. Janssen, I. Haug, E. Kololo, H. Annaheim, B. Borraccino, A. (2009) Interrelationships of adolescent physical activity, screen-based sedentary behavior and social and psychological health. *International Journal of Public Health,* 54 (2), 191–198.

International Scientific Forum on Home Hygiene, IFH (2002). *Guidelines for prevention of infection and cross infection in the domestic environment: Focus on home hygiene in developing countries. Intramed Communications*. Milan, Italy.

International Scientific Forum on Home Hygiene, IFH (2009). *Use of ash and mud for hand washing in low income communities*. October 2009. Available at: www.IFH-homehygiene.org

International Scientific Forum on Home Hygiene, IFH (2012). *The hygiene hypothesis and its implications for home hygiene, lifestyle and public health: Summary*. [Online] Available at: www.IFH-homehygiene.org retrieved on 1/8/2018

International Water and Sanitation Centre, IRC & United Nations for Children's Fund, UNICEF (2004). *Life Skills-Based Hygiene Education: A guidance document on concepts, development and experiences with life skills-based hygiene education in school sanitation and hygiene education programmes.* Delft, Netherlands.

Jabareen, Y. (2009). Building a Conceptual Framework: Philosophy, Definitions, and Procedure. *International Journal of Qualitative Methods,* 8 (4).

Jadad, R. & O'Grady, L. (2008). How should health be defined?. *British Medical Journal,* 10, 337.

Janssen, I. & Leblanc G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, 7, 40.

Johnson, B. Onwuegbuzie, J. & Turner, A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Researc*h, 1, 112.

Kanoa, J. Abu-Nada, S. and Zabut, M. (2009). Nutritional status correlated with sociodemographic and economic factors among preparatory school-aged children in the Gaza Strip. *Journal of Public Health.* 17 (2), 113-19.

Keenaghan, C. & Kilroe, J. (2008). Health Service Executive and the KIDSCREEN Group Europe (February 2008). A Study on the Quality of Life Tool KIDSCREEN for children and adolescents in Ireland Results of the KIDSCREEN National Survey 2005.

Kimberlin & Winterstein (2008). Validity and reliability of measurement instruments used in research. *American Journal of Health-System Pharmacy*, 65, 2276-2284.

Kimm, S. Glynn, N. Kriska, A. Barton, B. Kronsberg, S. Daniels, S. Crawford, P. Sabry, Z. & Liu, K. (2002). Decline in physical activity in black girls and white girls during adolescence. *New England Journal of Medicine*, 347 (10), 709-715.

Kimura, T. Ogushi, Y. Haruki, Y. & Okada, Y. (2000). Is interest in art effective in health-related quality of life?-results of a cross-sectional survey on lifestyles and health promotion. *The Tokai Journal of Experimental and Clinical Medicine*, 25(3), 141-149.

Kishore, J. (2014). National health programs of India: national policies and legislations related to health. Century Publications: New Delhi.

Koh-Banerjee, P. & Rimm, B. (2003). Whole grain consumption and weight gain: a review of the epidemiological evidence, potential mechanisms and opportunities for future research. *Proceedings of the Nutrition Society Journal*, 62, 9-25.

Kohl, W. Craig, L. Lambert, V. Inoue, S. Alkandari, R. Leetongin, G. & Kahlmeier, S. (2012). The pandemic of physical inactivity: Global action for public health. *Lancet*, 380, 294–305.

Kontogianni, M., Farmaki, A., Vidra, N., Sofrona, Sk., Magkanar,i F. and Yannakoulia, M. (2010). Associations between Lifestyle Patterns and Body Mass Index in a Sample of Greek Children and Adolescents. *Journal of the American Dietetic Association*, 110 (2), 215–221.

Krebs, F. Himes, H. Jacobson, D. Nicklas, A. Guilday, P. & Styne D. (2007). Assessment of child and adolescent overweight and obesity. *Pediatrics*, 120 (4), S193 - S228.

Laberge, L. Petit, D. Simard, C. Vitar, F. & Tremblay, R. (2001). Development of sleep patterns in early adolescence. *Journal of Sleep Research*, 10 (1), 59-67.

Larrea, C. & Kawachi, I. (2005). Does economic inequality affect child malnutrition؟ The case of Ecuador. *Social Science Med*, 60(1), 165-78.

Liu, S. Willett, C. Manson, E. Hu, B. Rosner, B. & Colditz, G. (2003). Relation between changes in intakes of dietary fiber and grain products and changes in weight and development of obesity among middle-aged women. *American Journal of Clinical Nutrition,* 78, 920-927.

Lobstein, T. Baur, L. & Uauy, R. (2004). Obesity in children and young people: a crisis in public health. *IASO International Obesity Task Force, Obesity Reviews.* 5 (1), 4-85.

London School of Hygiene and Tropical Medicine, LSHTM, International Water and Sanitation Centre, IWSC and the International Centre for Diarrhoeal Disease Research, ICDDR (2012). *Background Paper on Measuring WASH and Food Hygiene Practices – Definition of Goals to be Tackled Post 2015 by the Joint Monitoring Programme. May 2012*. Bangladesh.

Lumeng, C. Somashekar, D. Appugliese, D. Kaciroti, N. Corwyn, F. & Bradley, H. (2007). Shorter sleep duration is associated with increased risk for being overweight at ages 9 to 12 years. *Pediatrics,* 120, 1020–1029.

Lytle, A. Murray, M. Laska, N. Pasch, E. Anderson, E. & Farbakhsh, K. (2012). Examining the longitudinal relationship between change in sleep and obesity risk in adolescents. *Health Education and Behavior*, 40 (3).

Macera, C. (2010). Promoting Healthy Eating and Physical Activity for a Heather Nation. *Centers for Disease Control and Prevention.*

Maeda, K. Ohta, T. Haga, H. Ishikawa, K. and Osada, H. (2002). The effects of daily physical activity on QOL in the elderly (Japanese). *Japanese Journal of Public Health,* 49(6), 497–506.

Mahon, N., Yarcheski, A. and Yarcheski, T. (2004). Social Support and Positive Health Practices in Early Adolescents. Clinical Nursing Research. 13(3), 216-236

Massad, S. Deckelbaum, RJ. Gebre-Medhin, M. Holleran, S. Dary, O. Obeidi, M. Bordelois, P. & Khammash, U. (2016). Double Burden of Under nutrition and Obesity in Palestinian Schoolchildren: A Cross-Sectional Study. *SAGE Journals*, 37 (2), 144-52.

Matthews, K. Hall, M. & Dahl, R. (2014). Sleep in Healthy Black and White Adolescents. *Pediatrics*, 133 (5), e1189–e1196.

McIsaac, J. Kirk, S. and Kuhle, S. (2015a). The Association between Health Behaviours and Academic Performance in Canadian Elementary School Students: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health,* 12.

McIsaac, J. Chu, Y. Blanchard, Ch. Rossiter, M. Williams, P. Raine, K. Kirk, S. & Veugelers, P. (2015b). The impact of school policies and practices on students' diets, physical activity levels and body weights: A province-wide practice based evaluation. *Canadian Journal of Public Health*, 106 (2), 43-51.

McKeown, NM., Meigs, JB., Liu, S., Wilson, PW., Jacques, PF. (2002).Whole-grain intake is favorably associated with metabolic risk factors for type 2 diabetes and cardiovascular disease in the Framingham Offspring Study. *American Journal of Clinical Nutrition,* 76, 390-398.

Miller, D. (2010). Psychological determinants and outcomes of sedentary and physical activity behaviors. *International Journal of Behavioral Medicine,* 17 (4), 243–245.

Mindell, A. Owens, J. Alves, R. Bruni, O. Goh, Y. Hiscock, H. Kohyama, J. & Sadeh, A. (2011). Give children and adolescents the gift of a good night's sleep: a call to action. *Sleep Medicine,* 12, 203-204.

Ministry of Education and Higher Education, MOEHE (2012). *Annual Educational Statistics 2011-2012.* Palestinian Educational Year. January, 2012. State of Palestine.

Ministry of Education and High Education, MOHE (2016). *Statistical report annual of education in the provinces of Gaza.* [Online] Available at: https://www.mohe.ps retrieved on 1/8/2018

Ministry of Health, MOH (2013). *Palestinian National Health Strategy*. Ministry of Health, Palestine.

Moksnes, U., Løhre, A., & Espnes, G. (2013). The association between sense of coherence and life satisfaction in adolescents. *Quality of Life Research,* 22 (6), 1331-1338.

Molassiotis, A. Callaghan, F. & Twinn, W. (2001). Correlates of quality of life in symptomatic HIV patients living in Hong Kong. *AIDS Care*, 13(3), 319-334.

Mondal, A. (2015). A Study on the Awareness about Therte Act, 2009 Among Teachers of Elementary School in West Bengal. *GHG Journal of Sixth Thought,* 2 (1).

Musaiger, A. Takruri, H. Hassanm A. & Abu-Tarboush, H. (2011). Food consumption patterns in Eastern Mediterranean Countries. Manama, Bahrain: *Arab Center for Nutrition.* 2012: 10.

Must, A. & Tybor, J. (2005). Physical activity and sedentary behavior: a review of longitudinal studies of weight and adiposity in youth. *International Journal of Obesity*, 29, S84–96.

Naoum, G., (2012). *Dissertation Research and Writing for Construction Students*. Routledge; third edition.

National Institute of Diabetes and Digestive and Kidney Diseases, NIDDK (2015). Health Risks of Being Overweight. [Online] Available at: https://www.niddk.nih.gov/health-information/weight-management/health-risks-overweight retrieved on 1/8/2018

National Physical Activity Plan Alliance, NPAP (2016). *2016 US report card on physical activity for children and youth.* Columbia, SC.

Okada, Ch. Tabuchi, T. & Iso, H. (2018). Association between skipping breakfast in parents and children and childhood overweight/obesity among children. *International Journal of Obesity*, 10 (1).

Oppenheim, N. (2003). *Questionnaire Design, Interviewing and Attitude Measurement*. New Edition. London: Continuum.

Owen, N. Healy, N. Matthews, E. Dunstan, W. (2010). Too much sitting: the population health science of sedentary behavior. *Exercise and Sport Sciences Reviews*, 38 (3), 105–113.

Palestinian Academic Society for the Study of International Affairs, PASSI (2009). [Online] Available at: http://www.passia.org, retrieved on 1/8/2018

Palestinian Center Bureau of Statistic– PCBS (2008). *The Population, Housing and Establishment Census-2007- Press Conference on the Finding*. Ramallah, Palestine.

Palestinian Center Bureau of Statistic, PCBS (2015a). *Palestinian in number 2014*. Ramallah, Palestine.

Palestinian Center Bureau of Statistic, PCBS (2015b). *The Status of the Rights of* Palestinian Children 2014. Ramallah, Palestine.

Palestinian Central Bureau of Statistics, PCBS (2016a). *Palestine in Figures 2015*, Palestine: Palestinian national authority. [Online] Available at: http://www.pcbs.gov.ps/Downloads/ book2188.pdf. retrieved on 1/8/2018

Palestinian Center Bureau of Statistic, PCBS (2016b). *Palestinian in number 2015*. Ramallah, Palestine. [Online] Available at: http://www.pcbs.gov.ps retrieved on 1/8/2018

Palestinian Central Bureau of Statistics. (2017). *Statistical Yearbook of Palestine.*

Ramallah: PCBS.

Palestinian Central Bureau of Statistics. (2018a). *Preliminary Results of the Population,*

Housing and Establishments Census, 2017. Ramallah: PCBS.

Palestinian Central Bureau of Statistics. (2018b). *The Palestinian Expenditure and*

Consumption Survey (October 2016 – September 2017). Ramallah: PCBS.

Palestinian Non-Governmental Organization Network, PNGO (2009). *Workshop: Priorities and Needs of Health Sector in Gaza Governorates:* Consequences of the Long Siege and the Last War on Gaza. Gaza. February 2009.

Pappa E., Kontod N., Niakas D. (2009). Assessing the socio-economic and demographic impact on health-related quality of life. *International Journal of Public Health,* 54 (4), 241–249.

Paruthi, S. et al (2016). Consensus Statement of the American Academy of Sleep Medicine on the Recommended Amount of Sleep for Healthy Children:

Methodology and Discussion. *Journal of Clinical Sleep Medicine,* 12 (11), 1549-1561.

Patel, S. (2006). Quality of life in patients with chronic kidney disease: Focus on end-stage renal disease treated with hemodialysis. *Seminars in Nephrology*, 26 (1), 68-79.

Patel, A. (2011). An indirect method of assessment of hand hygiene: Simple, easy and fairly predictive. *JAPI*, 59, 545- 546.

Rathnayaka, T. & Wang, J. (2012). Prevalence and effect of personal hygiene on transmission of heleminthes infection among primary school children living in Slums. *International Journal of Multidisciplinary Research,* 2 (7), 1-13.

Pennacchini, M. Bertolaso, M. Elvira, M. & De Marinis, M. (2011). A brief history of the Quality of Life: its use in medicine and in philosophy. *La Clinica Terapeutica,* 162 (3), e99-e103

Petersen PE. (2003). The World Oral Health Report 2003: continuous improvement of oral health in the 21st century – the approach of the WHO Global Oral Health Programme. *Community Dentistry and Oral Epidemiology*, 32 (l), 3-24.

Petry, C. Pereira, U. Pitrez, C. Jones, H. & Stein, T. (2008). The prevalence of symptoms of sleep-disordered breathing in Brazilian schoolchildren. *Journal de Pediatric*, 84, 123-129.

Phongsavan, P. Merom, D. Marshall, L. & Bauman A. (2004). Estimating physical activity level: the role of domestic activities. *Journal of Epidemiology and Community Health*, 58 (6), 466-467.

Quality of Life Research Unit (2015). *Quality of Life Model*. [Online] Available at: http://sites.utoronto.ca/qol/qol_model.htm retrieved on 1/8/2018

Post, M. (2014). Definitions of Quality of Life: What Has Happened and How to Move On. *Topics in Spinal Cord Injury Rehabilitation,* 20 (3), 167–180.

Rajmil, L. Herdman, M. Fernandez de Sanmamed, J. Detmar, S. Bruil, J. Ravens-Sieberer, U. Bullinger, M. Simeoni, C.& Auquier, P. (2004). Generic healthrelated quality of life instruments in children and adolescents: A qualitative analysis of content. *Journal of Adolescent Health*, 34 (1), 37-45.

Rama, B. Prajna, S. Menezez, B. & Shetty, P. (2011). Antimicrobial activities of soap and detergents. *Advances International Bioresearch*, 2(2), 52- 62.

Ravens-Sieberer, U. Gosch, A. Abel, T. Auquier, P., Bellach, B.-M. Dur, W. & Rajmil, L. (2001). Quality of life in children and adolescents: A European public health perspective. *Social and Preventive Medicine*, 46, 297-302.

Ravens-Sieberer, U. (2014). How to assess quality of life in child and adolescent psychiatry. *Dialogues in Clinical Neuroscience*, 16 (2), 147–158.

Reilly, J. & Wilson, D. (2006). ABC of obesity: Childhood Obesity. *British Medical Journal,* 333 (7580), 1207-1210.

Rey-López, P. Vicente-Rodríguez, G. Biosca, M. & Moreno, A. (2008). Sedentary behavior and obesity development in children and adolescents. *Nutrition, metabolism and cardiovasculer diseases*, 18 (3), 242-251.

Rolfes, R. Pinna, K. & Whitney, E. (2006). *Understanding normal and clinical nutrition* seven edition. USA: Thomson Wadsworth, chapter 13, 438-447.

Rosen, C. Palermo, T. Larkin, E. & Redline, S. (2002). Health-related quality of life and sleep-disordered breathing in children. *Sleep Journal,* 25 (6), 657-666.

Rueden, U. Gosch, A. Rajmil, L. Bisegger, L. & Ravens-Sieberer, U. (2006). Socioeconomic determinants of health related quality of life in childhood and adolescence: results from a European study. *Journal of Epidemiology and Community Health,* 60 (2), 130–135

Russell,V. & Barker, M. (2005). Young people's health: The need for action. *British Medical Journal,* 330, 901-903.

Salmon, J. Timperio, A. Telford, A. Carver, A. David Crawford. A. (2005). Association of family environment with children's television viewing and with low level of physical activity. *Obesity Research,* 13, 1939 –1951.

Santos, T. Gaspar de Matos, M. Marques, A. Simões, C. Leal, I. & Céu Machado M. (2016). Adolescent's subjective perceptions of chronic disease and related psychosocial factors: highlights from an outpatient context study. *BMC Pediatrics,* 16, 211.

Sawatzky, R., Ratner, P., Johnson, J., Kopec, J., & Zumbo, B. (2010). Self-reported physical and mental health status and quality of life in adolescents: a latent variable mediation model. *Health and Quality of Life Outcomes,* 8 (1), 17.

Sawyer, M. Spurrier, N. Whaites, L. Kennedy, D. Martin, A. Baghurst, & P. (2001). The relationship between asthma severity, family functioning and the health-related quality of life of children with asthma. *Quality Life Research*, 9 (10), 1105-1115.

Schwimmer, B. Burwinkle, M. & Varni, J. (2003). W. Health-related quality of life of severely obese children and adolescents. *Journal of American Medical Association,* 289, 1813–1819.

Sekaran, U. (2000). *Research Methods for Business:* A skill-building approach, 3rd edition. New York: John Wiley. Chapters 1 and 2.

Shammi, M. & Morshed, M. (2013). Assessment of practices of sanitation and hygiene comparison of a declared sanitation area to a non-area of Irajganj District, Bangladesh. *Jahangirnagar University Environmental Bulletin*, 2, 50-60.

Singer, M. Flannery, D. David Miller, Sh. & Leibbrandt, S. (2004). Exposure to violence, parental monitoring, and television viewing as contributors to children's psychological trauma. *Journal of community psychology,* 32(5), 489-504.

Sjoberg, A. Hallberg, L. Hoglund, D. Hulthen, L. (2003). Meal pattern, food choice, nutrient intake and lifestyle factors in the Goteborg Adolescence Study. *European Journal of Clinical Nutrition*, 57, 1569-1578.

Slingerland, M. (2014). *Physical education's contribution to levels of physical activity in children and adolescents*. Maastricht university.

Smetanina, N. Babinska, V. Karinauskiene, L. Wikland, K. Petrauskiene, A. & Verkauskiene, R. (2015). Prevalence of overweight/obesity in relation to dietary habits and lifestyle among 7-17 years old children and adolescents in Lithuania Health behavior, health promotion and society. *BMC Public Health.* 15 (1).

Smolin, A. & Grosvenor, B. (2008). American Society for Nutritional Sciences. *Journal of Nutrition*, 135, 1183-1189.

Snell, K. Adam, K. & Duncan, J. (2007). Sleep and the body mass index and overweight status of children and adolescents. *Child Development*, 78, 309–323.

Solans, M. Pane, S. Estrada, MD. Serra-Sutton, V. Berra, S. Herdman, M. Alonso, J. Rajmil, L. (2008). Health-Related Quality of Life Measurement in Children and Adolescents: A Systematic Review of Generic and Disease-Specific Instruments. *International Society for Pharmacoeconomics and Outcomes Research,* 11 (4), 742-764.

St. Leger, L. (2004). What is the place of schools in promoting health? Are we too optimistic?'. *Health Promotion International*, 19 (4), 405-408.

Stacey, A. (2009). Personal hygiene (part 1of 2): Cleanliness is half of faith. *Islam Religion*, 1-5. [Online] Available at: www.IslamReligion.com

Stea, T. & Torstveit, M. (2014). Association of lifestyle habits and academic achievement in Norwegian adolescents: a cross-sectional study. *BMC Public Health*. 14, 829.

Steffen, M. Jacobs, R. Murtaugh, A. Moran, A. Steinberger, J. Hong, P. & Sinaiko, R. (2003). Whole grain intake is associated with lower body mass and greater insulin sensitivity among adolescents. *American Journal of Epidemiology*, 58, 243-250.

Story, M. Neumark-Sztainer, D. & French, S. (2002). Individual and environmental influences on adolescent eating behaviors. *Journal of the American Dietetic Association*, 102 (3), 40-51.

Svenska Cellulosa Aktiebolaget Group, SCA (2016). The SCA Hygiene Matters Report 2016/2017.

Syahrul, S. Kimura, R. Tsuda, A. Susanto, T. Saito, R. & Ahmad F. (2016). Prevalence of underweight and overweight among school-aged children and its association with children's socio demographic and lifestyle in Indonesia. *International journal of nursing sciences*, 3(2), 169-177.

Syvaoja, J. Tammelin, H. Ahonen, T. Kankaanpaa, A. & Kantomaa, T. (2014). The associations of objectively measured physical activity and sedentary time with cognitive functions in school-aged children. *PLOS One*, 9 (7), 103-559.

Tansey, S. (2010). Hygiene in child care: NCAC factsheet for families. *NCAC,* Austria.

Taras, H. (2005). Physical Activity and Student Performance at School. *Journal of school health,* 75 (6), 214-218.

Taskar, P. Nicklas, T. O'Neil, C. Keast, D. Radcliffe, J. & Cho, S. (2010). The Relationship of Breakfast Skipping and Type of Breakfast Consumption with Nutrient Intake and Weight Status in Children and Adolescents. *Journal of the American Dietetic Association,* 110 (6), 869-878.

Taylor, S. & Marandi, A. (2008). Social determinants of health and the design of health programmes for the poor. *British Medical Journal,* 337, a290.

Teychenne, M. Ball, K. & Salmon, J. (2010). Sedentary behavior and depression among adults: a review. *International Journal of Behavioral Medicine,* 17 (4), 246–254.

Tyrrell, M., & Elliott, R. (2016). *Teenage depletion*, article, clinical depression.co.uk‹ [Online] Available at: http://www.clinical-depression.co.uk/sites/clinical-depression.co.uk/files/Depression-Learning-Path-Free.pdf retrieved on 1/8/2018

Ulijaszek J. (2007). A disorder of convenience. *Obesity Reviews,* 8 (s1), 183–187.

UK Department of Health (2014): A Compendium of Factsheets: Wellbeing Across life course. [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277568/Wellbeing_why_it_matters_to_health_summary_of_key_points.pdf, 20/03/2014 retrieved on 1/8/2018

United Nations, UN (2009). *Convention on the Rights of the Child*. Fifty-first session. Geneva: committee on the rights of the child.

United Nation. (2012). *Gaza in 2020 A liveable place? A report by the United Nations Country Team in the occupied Palestinian territory.* Jerusalem: UN.

United Nations for children's Fund, UNICEF (2003). *Youth Survey*. [Online] Available at: http://www.unicef.org/oPt/children_213.html retrieved on 1/8/2018

United Nations for children's Fund, UNICEF (2009). *Market research report on water, sanitation, and hygiene.* June 2009. Cairo, Egypt.

United Nations for children's Fund, UNICEF (2013). *Sustainable development starts and ends with safe, healthy and well-educated children.* [Online] Available at: https://www.unicef.org/socialpolicy/files/Sustainable_Development_post_2015.pdf retrieved on 1/8/2018

United Nations for children's Fund, UNICEF (2015). *UNICEF's strategy for health (2016-2030).* Report 2015. [Online] Available at: https://www.unicef.org/health/files/UNICEF_Health_Strategy_Final.pdf retrieved on 1/8/2018

United Nations Relief and Works Agency for Palestine Refugees in the Near East, UNRWA (2016). *Retrieved January 5, 2017.* [Online] Available at: https://www.unrwa.org/where-we-work/gaza-strip retrieved on 1/8/2018

US Department of Health and Human Services (2008a). *Physical Activity Guidelines Advisory Committee report*. Washington, DC: US Department of Health and Human Services.

US Department of Health and Human Services (2008b). *2008 Physical Activity Guidelines for Americans.* Washington, DC: US Department of Health and Human Services.

United Nations Office for the Coordination of Humanitarian Affairs in the occupied Palestinian territory. (2017). *Humanitarian Facts and Figures.* East Jerusalem: OCHA.

Usfar, A. Iswarawanti, D. Davelyna, D. & Dillon, D. (2010). Food and personal hygiene perspectives and practices among caregivers whose children have diarrhea: A qualitative study of urban mothers in Tangerang, Indonesia. *Journal of Nutrition Education and Behavior*, 42, 33-40.

Van Cauter, E. (2010). Role of sleep and sleep loss in hormonal release and metabolism. *Endocrine Development*, 17, 11–21.

Van Hecke, L. et al (2016). Variation in population levels of physical activity in European children and adolescents according to cross-European studies: a systematic literature review within DEDIPAC. *International Journal of Behavioral Nutrition and Physical Activity*, 13, 70-92.

Varo, J. Kearney, J. & Martínez, A. (2003). Distribution and determinants of sedentary lifestyles in the European Union. *International Journal of Epidemiology*, 32 (1), 138–146.

Veenhoven, R. (2006). *The Four Qualities of Life: Ordering Concepts and Measures of the Good Life*. Mark McGillivray and Mathew Clark: Tokyo-NewYork-Paris. P 74-100. [Online] Available at: https://personal.eur.nl/veenhoven/Pub2000s/2006f-full.pdf retrieved on 1/8/2018

Velten, J., Lavallee, K., Scholten, S., Meyer, A., Zhang, X., Schneider, S. & Margraf, J. (2014). Lifestyle choices and mental health: a representative population survey. *Licensee BioMed Central Psychology*, 2, 58.

Verstraeten, R. Leroy, J. Pieniak, Z. Aviles, A. Holdsworth, M. Verbeke, W. Maes, L. & Kolsteren, P. (2016). Individual and Environmental Factors Influencing Adolescents' Dietary Behavior in Low- and Middle-Income Settings. *PLOS journal*. [Online] Available at: https://doi.org/10.1371/journal.pone.0157744 retrieved on 1/8/2018

Vlismas, K. Stavrinos, V. & Panagiotakos, D. (2009). Socio-economic status, dietary habits and health-related outcomes in various parts of the world: a review. *Cent Eur Journal Public Health*, 17 (2), 55–63.

Vostanis, P. (2014). *Victims of war: how Gaza conflict will traumatise a generation of adolescents Posted by pt91* at Aug 06, 2014 12:06 PM, Permalink University of Leicester co-authored study explores how young people are affected by post-traumatic stress disorder and anxiety in warzones Issued by University of Leicester Press Office on 6 August 2014.

Wahaidi, A. Abed, Y. Sarsour, A. & Turban, M. (2018). The Adolescent's Quality of Life in the Gaza Strip: Nutritional and Psychological Risk Factors. *Food and Nutrition Open Access Journal*, 1(1), 105-134.

Wald, A. Muennig, P. Connell, K. and Garber, C. (2014). Associations Between Healthy Lifestyle Behaviors and Academic Performance in U.S. Undergraduates: A Secondary Analysis of the American College Health Association's National College Health Assessment II. *American Journal of Health Promotion*, 28 (5), 298-305.

Woods, H., & Scott, H. (2016). Sleepy teens: social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of adolescence*, 51, 41-49.

World Bank (2011): Coping with Conflict: *Poverty and Inclusion in the West Bank and Gaza*

World Health Organization, WHO (1995). *World Health Organization Quality of Life Assessment Tool (WHOQOL*): Position Paper from the World Health Organization. Social science and medicine, 41 (10), 1403-1409.

World Health Organization, WHO (2001). *Medical Records Manual: A Guide for Developing Countries*, March 2001, Manila, Philippines.

World Health Organization, WHO (2002). *Physical inactivity a leading cause of disease and disability, warns WHO.* [Online] Available at: http://www.who.int/mediacentre/news/releases/release23/en/ retrieved on 1/8/2018

World Health Organization, WHO (2003). *Obesity and overweight. Global strategy on diet, physical activity and health.* WHO Library Cataloguing-in-Publication Data. France

World Health Organization, WHO (2004). The importance of caregiver-child interactions for the survival and healthy development of young children: a review. *WHO Department of Child and adolescent health and development.* [Online] Available at: http://apps.who.int/iris/bitstream/handle/10665/42878/924159134X.pdf?sequence=1 retrieved on 1/8/2018

World Health Organization, WHO (2005). *Nutrition in adolescence – Issues and Challenges for the Health Sector*. Department of Nutrition for Health and Development. Geneva [Online] Available at: http://www.who.int/iris/handle/10665/43342 retrieved on 1/8/2018

World Health Organization, WHO (2006a). *Food and nutrition policy for schools*. Programme for Nutrition and Food Security WHO Regional Office for Europe.

World Health Organization, WHO (2006b). *Constitution of the world health organization1. Forty-fifth edition. Geneva.*

World Health Organization, WHO (2008). *The determinants of health.* [Online] Available at: http://www.who.int/hia/evidence/doh/en/print.html. retrieved on 1/8/2018

World Health Organization, WHO (2009). *WHO Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care is Safer Care*. WHO Library Cataloguing-in-Publication Data. France.

World Health Organization, WHO (2010). *Global recommendations on physical activity for health*. [Online] Available at: http://www.who.int/dietphysicalactivity/global-PA-recs-2010. retrieved on 1/8/2018

World Health Organization, WHO (2011a). *Designing the road to better health and well-being in Europe*. Geneva: World Health Organization.

World Health Organization, WHO (2011b). *The Health of Young People: Youth and health risks*. Geneva: World Health Organization.

World Health Organization, WHO (2012). *Social determinants of health and well-being among young people: Health Behaviour in School-Aged Children (HBSC) study: international report from the 2009/2010 survey.* Health Policy for Children and Adolescents; No. 6.

WHO (2013): *Measurement of and target setting for well-being: an initiative by the WHO Regional Office for Europe Second meeting of the expert group Paris,* France.

World Health Organization, WHO (2016a). Health topic about Dietary Habits. [Online] Available at: http://www.who.int/topics/diet/en/. retrieved on 1/8/2018

World Health Organization, WHO (2016b). Health topic about Physical activity. [Online] Available at: http://www.who.int/topics/physical_activity/en/ retrieved on 1/8/2018

World Health Organization, WHO (2017). *Global school health initiatives: achieving health and education outcomes.* Report of a meeting, Bangkok, Thailand, 23–25 November 2015. Geneva. [Online] Retrieved from: http://www.who.int/school_youth_health/gshi/en/ retrieved on 1/8/2018

World Health Organization, WHO (2018). *The Ottawa Charter for Health Promotion: First International Conference on Health Promotion,* 21 November 1986. WHO: Geneva, Switzerland. [Online] Retrieved from: http://www.who.int/healthpromotion/conferences/previous/ottawa/en/ retrieved on 1/8/2018

Yao, M. & Roberts, B. (2001). Dietary energy density and weight regulation. *Nutrition Review*, 59 (8), 247–258.

You, D. Wardlaw, T. Salama, P. & Jones, G. (2010). Levels and trends in under-5 mortality. *Lancet*, 375 (9709), 100–103.

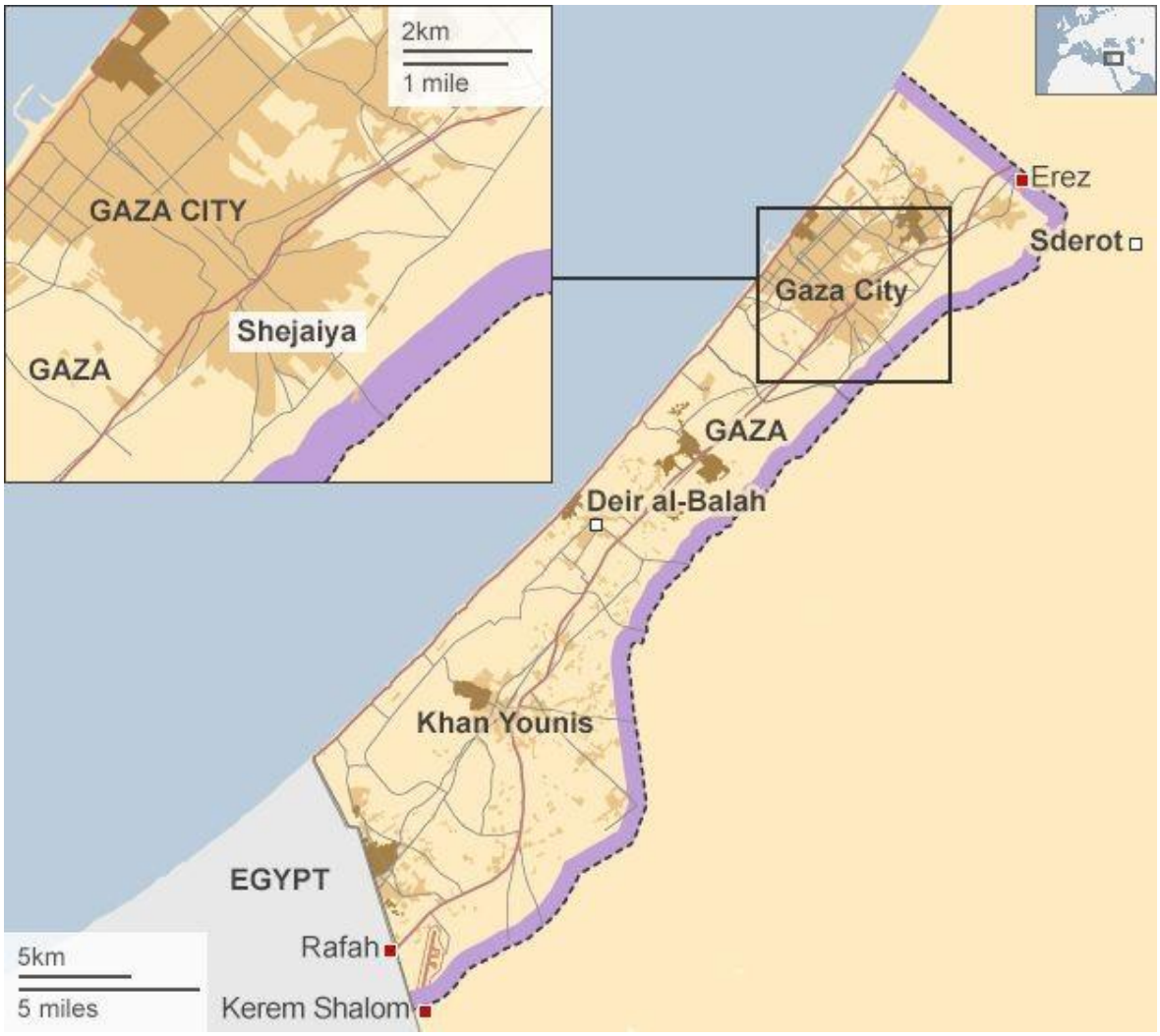
Ying Lee, J. & Lin, B. (2005). Dietary habits, demographics, and the development of overweight and obesity among children in the United States. *Food Policy*, 30 (2), 115-128.

Youngstedt, Sh. (2005). Effects of Exercise on Sleep. *Clinics in Sports Medicine*, 24 (2), 355-365.

Yunsheng, M. Bertone R. Stanek, J. Reed, W. Hebert, R. Cohen, L. Merriam, A. Ockene, S. (2003). Association between eating patterns and obesity in free-living US adult population. *American Journal of Epidemiology,* 158 (1), 85-92.

Annex

Annex (1): Gaza Strip map



(Available at: https://www.pinterest.com/pin/374854368958234654/)

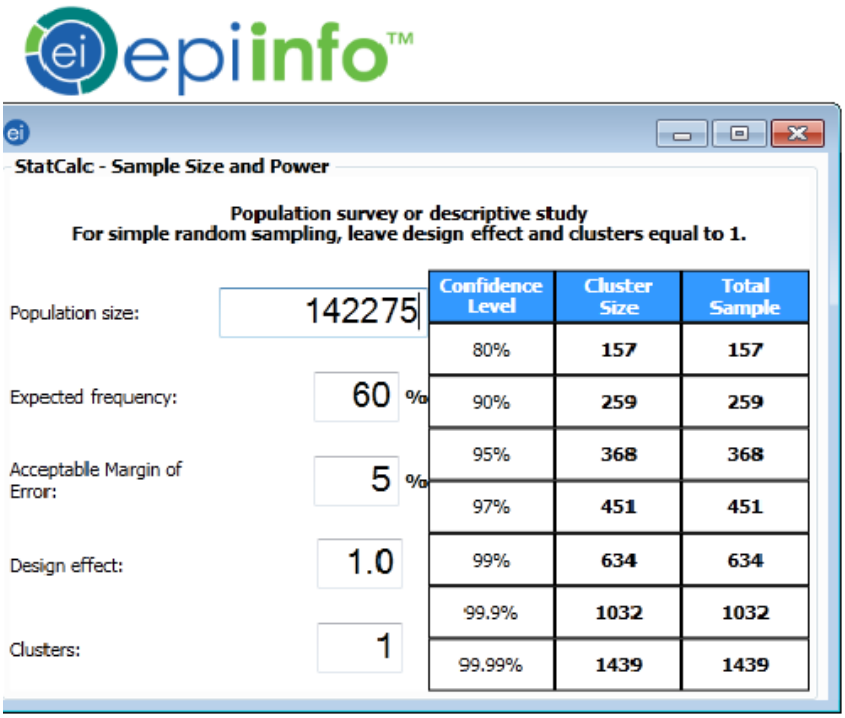
- **Gaza city map**

(Available at: https://ar.wikipedia.org/wiki/%D8%BA%D8%B2%D8%A9#/media/File:Gaza_Map.png)

Annex (2): Study population and sampling description

	Type	No. Schools		Grade	Boys	Girls	Total	Sample size
		East Gaza	West Gaza					
Gaza City	Government schools	69	53	4	7845	8169	16014	127
				5	8118	8299	16417	
				6	8257	8241	16498	
		Sub total					48,929	
	UNRWA schools	23	42	4	16413	14344	30757	227
				5	15490	14465	29955	
				6	13944	13377	27321	
		Sub total					88,033	
	Privet schools	6	10	4	1228	706	1934	46
				5	1128	651	1779	
				6	1014	586	1600	
	Sub total						5,313	
Total							142,275	400

Annex (3): Sample Size



Annex (4): Names of the schools

No.	Type of schools	Name of schools
01	UNRWA schools	Rimal Preparatory Girls
02		Gaza Elemantory Co-ed Girls "A"
03		Zaitoun Elem. Boys "B"
04		Bahrain Kingdom Prep. Boys
05		New Gaza Elem. Boys "D"
06		Zaitoun Elem. Co-ed "C"
07		Zaitoun Elem. Co-ed "B"
08		Gaza Elem. Co-ed "B"
09		Asam' ELem. Co-ed "C"
10		Mamounia Prep. Girls
11		Beach Elem. Boys "A"
12		Zaitoun Elem. Boys "C"
13	Governmental schools	Qahera Elem. Girls "A"
14		Shejaiya Elem. Girls "B"
15		Qahera Elem. Girls "B"
16		Al-Abass Ben Abed Al-Motaleb Girls "A"
17		Moeen Bessesso Elem. Boys "A"
18		Al-Aqsa Elem. Boys "A"
19	Privet schools	Al-Wehda Privet for Language
20		Al-Maged Privet
21		Hudaa Privet school

Annex (5): Parent Questionnaire (Arabic and English version)

جامعة القدس **برنامج الدراسات العليا – كلية الصحة العامة** **تخصص الإدارة الصحية**	

رقم الاستمارة		

نموذج موافقة الوالدين
لمشاركة طفلهما في تعبئة الاستبيان

السيد/ة ولي أمر الطفل

أنا خلود خالد الصيداوي، طالبة ماجستير في جامعة القدس – كلية الصحة العامة، قمت بتصميم استبيان بعنوان:

" نمط حياة الأطفال وجودة حياتهم بين أطفال المدارس في مدينة غزة "

وهو جزء من مشروع بحثي لاستكمال درجة الماجستير في الصحة العامة. يهدف مشروع بحثي إلى تقييم نمط الحياة وجودة الحياة لأطفال الصف الرابع والخامس والسادس الابتدائي، من أجل تحسين الوضع الصحي للطلاب، والذي سيتم إجرائه في مدارس الحكومة والوكالة والخاصة للأطفال بمدينة غزة على مستويات اجتماعية واقتصادية مختلفة. سأقوم بإجراء مقابلات مع الأطفال لتعبئة الاستبيان الذي يناقش أهم أشكال أنماط الحياة (مثل العادات اليومية في التغذية والنشاط البدني والنوم والنظافة) وجودة الحياة الخاصة بالأطفال. مشاركة طفلكم في الدراسة طوعية وليست إجبارية، ويمكن لابنكم/لابنتكم أن يختاروا عدم الإجابة عن بعض أو كل الأسئلة، ويمكنه أيضا الانسحاب من الدراسة في أي وقت دون ذكر أي سبب، إلا أننا سنقدّر كثيراً مشاركتهم لذا أتمنى موافقتكم على مشاركة طفلكم في تعبئة الاستبيان، حيث أن إجاباتهم مهمة جداً بالنسبة لنا.

ومن الجدير أن أحيطكم علماً بأنه تم اختيار ابنكم/ابنتكم بشكل عشوائي، كما أن أية معلومات سوف يقدمها طفلكم سوف تظل سرية للغاية، وسيتم استخدامها للهدف العلمي فقط وسيتم التخلص منها بعد الانتهاء من الدراسة، ولن يتم الكشف عن اسم الطفل وسيتم تحديد الطلاب من خلال الرموز. نؤكد مرة أخرى أن هذا أمر طوعي.

ملاحظة/ لن تكون هناك تكلفة ضمنية بالنسبة لكم نتيجة مشاركة طفلكم، كما أن المعلومات التي سنحصل عليها لن تؤثر على تعليم طفلكم، وسيتم التعامل مع البيانات بسرية تامة.

الجزء الخاص بموافقة وتوقيع ولي أمر الطفل/ة

أنا ولي أمر الطفل/ة ---------- قرأت نموذج الموافقة، وأقرّ هنا بأنني أوافق طواعية على مشاركة طفلي/تي ---------- في الدراسة.

توقيع ولي الأمر

بناء عليه أرجو التكرم بتعبئة البيانات التالية والتي سيتم استخدامها للدراسة بهدف البحث العلمي فقط، وليس هناك أي أهداف أخرى، كما أرجو تحديد الإجابة بوضع (×) عند الإجابة المطابقة لحالتكم:

- **البيانات التعريفية:**

.1	ولي أمر الطالب	☐ الأم	☐ الأب	☐ أخرى ------
.2	رقم الهاتف / الجوال	----------		
.3	تاريخ ميلاد الطفل/ة ----------	.4	العمر -------- سنة	
.5	منطقة السكن:	☐ شرق غزة		☐ غرب غزة
		☐ الصبرة		☐ الشيخ رضوان
		☐ حي الدرج		☐ النصر
		☐ الزيتون		☐ تل الهوا
		☐ التفاح		☐ الرمال
		☐ الشجاعية		
.6	المنزل الخاص بك:	☐ ملك		☐ ايجار
		☐ مع الاسرة		☐ أخري ---------- ----------
.7	عدد أفراد الأسرة الذين يعيشون بالمنزل ---------- شخص			
.8	عدد الغرف في المنزل (لا يشمل الحمام والمطبخ) ---------- غرفة			
.9	ترتيب الطالب/ة بين الأخوة والأخوات ----------			
.10	الحالة التعليمية للأب والأم (المرحلة العلمية التي انهاها):	الأب		الأم
		☐ أمي		☐ أمي
		☐ ملم		☐ ملم
		☐ ابتدائي		☐ ابتدائي
		☐ إعدادي		☐ إعدادي
		☐ ثانوي		☐ ثانوي
		☐ دبلوم متوسط		☐ دبلوم متوسط
		☐ بكالوريوس		☐ بكالوريوس
		☐ دبلوم عالي		☐ دبلوم عالي
		☐ ماجستير		☐ ماجستير
		☐ دكتوراه		☐ دكتوراه
		☐ لا أعرف		☐ لا أعرف
.11	عدد سنوات تعليم الأب الذي أنهاها ---------- سنة			
.12	عدد سنوات تعليم الأم الذي أنهاها ---------- سنة			

.13	الحالة العملية للأب والأم حاليا:	الأب	الأم
		☐ لا يعمل ☐ متقاعد ☐ يعمل، طبيعة العمل الذي يقوم به: ---------- ☐ صاحب مهنة ☐ يعمل لحسابه ☐ يعمل بأجر منتظم ☐ يعمل بأجر غير منتظم ☐ يعمل لدى الأسرة ☐ لا أعرف	☐ لا يعمل ☐ متقاعد ☐ يعمل، طبيعة العمل الذي يقوم به: ---------- ☐ صاحب مهنة ☐ يعمل لحسابه ☐ يعمل بأجر منتظم ☐ يعمل بأجر غير منتظم ☐ يعمل لدى الأسرة ☐ لا أعرف
.14	متوسط معدل الدخل الشهري للبيت من كل المصادر ---------- شيكل		
.15	هل يأخذ طفلك مصروف مدرسي كل يوم؟		
	☐ نعم، ---------- شيكل	☐ لا	☐ أحيانا
.16	إذا كانت الإجابة بنعم، هل تعتقد أن المصروف اليومي لطفلك يكفيه لتلبية الاحتياجات الخاصة به؟		
	☐ نعم يكفي	☐ نعم يكفي لكن ليس في كل الاحيان	
	☐ لا يكفي في بعض الأحيان	☐ لا يكفي على الاطلاق	

أشكركم على تعاونكم

Deanship of Graduate Studies
Al-Quds University
School of Public Health

Serial No.		

Parent Questionnaire

about

Life style Pattern and Quality of Life among school children

in Gaza City- Palestine

Salam,

I am Kholoud Khaled Al Sedawi, this questionnaire is part of a study conducted as a requirement for the Mater Degree in Public Health at Al-Quds University. The aim of this study is to investigate "Assess the association of lifestyle patterns with quality of life among school children in Gaza city", the findings and conclusions of this study may help in improving the lifestyle of school children in Gaza.

I will interview children to fill out a questionnaire that discusses the most important forms of lifestyle (such as daily habits of nutrition, physical activity, sleep, and hygiene) and quality of life for children. Your child's participation in the study is voluntary and not mandatory, and your son or daughter can choose not to answer some or all questions. He / She can also withdraw from the study at any time without mentioning any reason, but we will greatly appreciate their participation. Their answers are very important to us.

It is important to inform you that your son/daughter has been randomly selected and that any information your child will provide will be kept strictly confidential and will be used for scientific purposes only and will be discarded after completion of the study. The name of the child will not be identified. We reaffirm that this is voluntary.

Note: There will be no implicit cost for you as a result of your child's participation, and the information we receive will not affect your child's education, and the data will be treated in strict confidence.

Part of the consent and signature of the child's guardian:

I am the child's guardian ---------- I have read the consent form and hereby acknowledge that I voluntarily agree to the participation of my child ----------.

Template information

1	Student guardian	☐ Mother ☐ Father ☐ Other ----------	
2	Mobile Number	----------	
3	Date of birth of the child ----------	4	Age ----------
5	Area of residence	☐ East Gaza	☐ West Gaza
		☐ Al-Sabra ☐ Al-Daraj ☐ Al-Zaytoon ☐ Al-Tofaah ☐ Al-Shejaeaa	☐ Al-ShekhRedwaan ☐ Al-Naseer ☐ Tal El Hawa ☐ Al-Remal
6	Your home:	☐ Own	☐ Rent
		☐ With family	☐ Other ----------
7	Number of family members living at home ---------- Person		
8	Number of rooms in the home (not including bathroom and kitchen) ---------- Room		
9	Student arrangement between brothers and sisters ----------		
10	Parents education level	Father	Mother
		☐ Illiterate ☐ Primary school ☐ Preparatory school ☐ Secondary school ☐ Vocational level ☐ Diploma ☐ Bachelor's degree ☐ Master ☐ Ph.D. ☐ I do not know	☐ Illiterate ☐ Primary school ☐ Preparatory school ☐ Secondary school ☐ Vocational level ☐ Diploma ☐ Bachelor's degree ☐ Master ☐ Ph.D. ☐ I do not know
11	Number of years of education of the father who finished it ----------		
12	Number of years of education of the mother who finished it ----------		
13	The current status of the parents	Father	Mother
		☐ Unemployed ☐ Retired ☐ Employee, with ----------	☐ Unemployed ☐ Retired ☐ Employee, with ----------
14	Average monthly income of the home from all sources ---------- NIS		
15	Does your child take pocket money?		
16	☐ Yes, ------ NIS	☐ Sometimes	☐ No
17	If yes, do you think your child's pocket money is enough to meet his / her own needs.		
	☐ Yes, enough	☐ Yes, enough but not at all times	
	☐ Not enough, at sometimes	☐ Not enough at all	

Annex (6): Student Questionnaire (Arabic and English version)

Deanship of Graduate Studies
Al-Quds University
School of Public Health

Serial No.		

Children Questionnaire

about

Life style Pattern and Quality of Life among school children

in Gaza City- Palestine

Salam student,

I am Kholoud Khaled Al Sedawi, this questionnaire is part of a study conducted as a requirement for the Mater Degree in Public Health at Al-Quds University. The aim of this study is to investigate "Assess the association of lifestyle patterns with quality of life among school children in Gaza city", the findings and conclusions of this study may help in improving the lifestyle of schoolchildren in Gaza.

Please read and listen to every question carefully. What answer comes to your mind first? Choose the box that fits your answer best and cross it, you may feel that some questions are repeated; please try to answer them all. Filling this questionnaire takes about (20) minutes of your valuable time.

Remember: This is not a test so there are no wrong answers and mention that your participation in this study is voluntary and you can withdraw from the study at any time without any reason. It is worth to inform you that we assure the confidentiality of all data we collected, and these data will be used only for the research study and it will be discarded after the study completion. No name will be mentioned in the study and the students will be identified by codes.

Therefore, could you please kindly share and answer questions in this interview. Can we start the interview?

☐ Yes ☐ No

Template information

School Name/ ----------

Place of school ☐ West of Gaza ☐ East of Gaza

Date

				1	7

Children anthropometric measurement:

- Weight----------kg
- Height----------cm

Could you please answer the following questions?

Section 1: The Socio-demographic determinants

1.	Birth date: D/--------- M/--------- Y/---------
2.	Current class: ☐ 4th grade ☐ 5th grade ☐ 6th grade
3.	Gender: ☐ Boy ☐ Girl
4.	Student employment status: ☐Working part time ☐Not working 1.The nature of the work being done by: ---------- 2.The number of daily hours: ---------- 3.Number of working days per week: ---------- 4.Remuneration received by / day: --------- NIS 5.Where used wage earned by:----------

Section 2: Life style information

Part 1: Determinants of dietary behaviour:

1.	Have you received any health education about nutrition? ☐ Yes ☐ No skip 2
2.	If yes, Where? ☐ School ☐ Home ☐ Media (TV, Radio, internet) ☐ Others, specify ----------
3.	How often do you have breakfast? ☐ Always skip 6 ☐ Sometimes ☐ Never skip 4,5
4.	If yes, how many days did you eat breakfast during the past 7days? --------- days

5.	Where do you have breakfast? ☐At home ☐At school
6.	If no, what is the main reason you do not eat breakfast? ☐ I do not have time for breakfast ☐ I cannot eat early in the morning ☐ There is lack of food in my home ☐ Loss of appetite ☐ Not a habit ☐ Other reason ----------
7.	How many meals do you actually have per day? ☐ 1 meal ☐ 2 meals ☐ 3 meals ☐ More than three
8.	Do you take enough time while eating? ☐ Always ☐ Sometimes ☐ Never
9.	Do you eat between meals? ☐ Always ☐ Sometimes ☐ Never
10.	How often did you bring your Sandwich to school? ☐ Always ☐ Sometimes ☐ Never
11.	Do you drink carbonated soft drinks/ beverages in your school? ☐ Always ☐ Sometimes ☐ Never
12	Do you drink carbonated soft drinks/ beverages in your home? ☐ Always ☐ Sometimes ☐ Never
13.	Do you eat with your family? ☐ Always ☐ Sometimes ☐ Never skip 13
14.	If yes, how often days do you usually eat with your family? ☐ 7 or 6 days/week ☐ 5-2 days/week ☐ less than 2 days
15.	Do you take your meals while watching TV or playing (toys, mobile, Video games/ computer etc.)? ☐ Always ☐ Sometimes ☐ Never

In a typical week, on how many days do you eat ----------? & how many servings of ---------- -------- do you eat on one of those days?

Item		Day/ week 0 = Not eaten, 1 = 1day, 2 = 2days, 3 = 3days, 4 = 4days, 5 = 5days, 6 = 6days, 7 = 7days	Servings
16.	Fruit &Fresh fruit juice (apples, banana, orange, etc.)		
17.	Vegetables and leaves (cucumber, tomato, carrots, etc.)		
18.	White tubers and root (potato, sweet potato)		
19.	Milk and dairy products (cheese, yogurt, etc.)		
20.	Oil and fats		
21.	pulses, nuts and seeds (beans, chickpeas, etc)		
22.	Cereals (bread, pasta, wheat flour, bulgur)		
23.	Egg		
24.	Red meat or sausage products		
25.	White meat (chicken, etc.)		
26.	Organs (liver, kidney, etc.)		
27.	Sea food (fish, etc.)		
28.	Sweets (sugar, honey, jam, cakes, candy, etc)		
29.	Drink beverages		
30.	Eat grilled food such as Shawerma		
31.	Eat fast food such as Pizza, beefburger, and Kabab		
32.	Eat Chinese noodles (Endomy)		
33.	Eat salty foods such as Chips, vinegary, olives and salty biscuits		
34.	Eat chilly, spices and condiments		

Part 2: Physical Activity & Sedentary behaviours:

1.	How do you actually go to school? ☐ Walking ☐ Transportation (taxi, bus, bicycle) ☐ Both
2.	If you go walking, how many minutes do you need to arrive to school every day on average? ---------- minutes
3.	Do you use stairs at home? ☐ Yes ☐ No skip 4, 5
4.	If yes, how many floors? ----------
5.	How many times do you do this per a day on average? ---------- times
6.	How many hours do you play in a day on average? ---------- hours
7.	Do you study while? ☐ Moving from place to place ☐ Sitting on the desk ☐ Sitting in the bed
8.	How many hours do you study daily on average? ---------- hours
9.	Does your family have rules about how much time you spend watching TV or using computer? ☐ Yes ☐ No

During the past 7 days, how much time do you spend during a typical or usual day (either in or outside the school) on average …...?

Item		**Min./week**	**Min./day**
10.	Walking		
11.	Running		
12.	Cycling (leisurely)		
13.	Cycling (moderately)		
14.	Volleyball		
15	Football		
16.	Rope skipping		
17.	Sitting and watching television		
18.	Use social media (Facebook, twitter, what is up viber etc.)?		

19.	Playing computer games or use computer for something that is not school work (PlayStation, an iPad, a smartphone ….)		
20.	Use computer for homework school		
21.	Walking from house to car or bus		
22.	Taking out trash		

Part 3: Sleep Habits determinants:

1.	When do you usually go to bed? ----------
2.	When do you wake up in the morning? ----------
3.	How many hours do you sleep at night on average? ---------- hours
4.	How many hours do you sleep at daytime on average? ---------- hours
5.	How long it takes you to actually fall asleep (sleep latency) on average? ? ---------- minutes
6.	How many times do you wake up during your sleep (nocturnal awakenings) on average? ? ---------- times
7.	How often have you been so worried about something that you could not sleep at night? ☐ Always ☐ Sometimes ☐ Never
8.	How often have you been nightmares that you could not sleep well at night? ☐ Always ☐ Sometimes ☐ Never
9.	Do you have TV, computer or mobile at your bedroom? ☐ Yes ☐ No

Part 4: Hygiene practices:

How often did you usually…?

Item		Always	Very often	Quite often	Seldom	Never
1.	Clean or brush your teeth when getting up bed.					
2.	Clean or brush your teeth before going to bed.					
3.	Clean or brush your teeth after eating.					

4.	Use soap when washing your hands.					
5.	Wash your hands with water and soap before eating.					
6.	Wash your hands with water and soap after eating.					
7.	Wash your hands with water and soap after using the toilet.					
8.	Wash your hands with water and soap after playing.					
9.	Wash your hands with water and soap after touching animals.					
10.	Wash your face after getting up from sleep.					
11.	Clip and clean your fingernails.					
12.	Bath with warm water and soap weekly.					
13.	Clean your hair and take care of it weekly.					

Section 3: Quality of Life determinants:

1. Do you have a long-term disability, illness or medical condition?

☐ Yes ☐ No

Which one? ----------

1. Physical wellbeing:						
2.	In general, how would you say your health is? ☐ excellent ☐ very good ☐ good ☐ fair ☐ poor					
Thinking about the last week...		Always	Very often	Quite often	Seldom	Never
3.	Have you felt fit and well?					
4.	Have you been physically active (e.g. running, climbing and biking)?					
5.	Have you been able to run well?					
6.	Have you felt full of energy?					
2. Psychological wellbeing:						
7.	Has your life been enjoyable?					

Thinking about the last week...		Always	Very often	Quite often	Seldom	Never
8.	Have you felt pleased that you are alive?					
9.	Have you felt satisfied with your life?					
10.	Have you been in a good mood?					
11.	Have you felt cheerful?					
12.	Have you had fun?					
3. Mood and emotion:						
13.	Have you felt that you do everything badly?					
14.	Have you felt sad?					
15.	Have you felt so bad that you didn't want to do anything?					
16.	Have you felt that everything in your life goes wrong?					
17.	Have you felt fed up?					
18.	Have you felt lonely?					
19.	Have you felt under pressure?					
4. Self- perception:						
20.	Have you been happy with the way you are?					
21.	Have you been happy with your general appearance (clothes)?					
22.	Have you been worried about the way you look?					
23.	Have you felt jealous of the way other girls and boys look?					
24.	Would you like to change something about your body?					
5. Autonomy:						
25.	Have you had enough time for yourself?					
26.	Have you been able to do the things that you want to do in your free time?					

Thinking about the last week...		Always	Very often	Quite often	Seldom	Never
27.	Have you had enough opportunity to be outside?					
28.	Have you had enough time to meet friends?					
29.	Have you been able to choose what to do in your free time?					
6. Parent relations and Home Life:						
30.	Have your parent(s) understood you?					
31.	Have you felt loved by your parent(s)?					
32.	Have you been happy at home?					
33.	Have your parent(s) had enough time for you?					
34.	Have your parent(s) treated you fairly?					
35.	Have you been able talk to your parent(s) when you wanted to?					
7. Financial resources:						
36.	Have you had enough money to do the same things as your friends?					
37.	Have you had enough money for your expenses?					
38.	Do you have enough money to do things with your friends?					
8. Social support and peers scale:						
39.	Have you spent time with your friends?					
40.	Have you had fun with your friends?					
41.	Have you and your friends helped each other?					
42.	Have you been able to talk about everything with your friends?					
43.	Have you been able to rely on your friends?					
9. School Environment and Learning:						
44.	Have you been happy at school?					

Thinking about the last week...		Always	Very often	Quite often	Seldom	Never
45.	Have you got on well at school?					
46.	Have you been satisfied with your teachers?					
47.	Have you been able to pay attention at school?					
48.	Have you enjoyed going to school?					
49.	Have you got along well with your teachers?					
10. Bullying						
50.	Have you been afraid of other students?					
51.	Have other students made fun of you?					
52.	Have other students bullied you?					

Thank you for helping us!

جامعة القدس
برنامج الدراسات العليا – كلية الصحة العامة
تخصص الإدارة الصحية

رقم الاستمارة		

استبان الأطفال

عزيزي الطالب / الطالبة...

أنا خلود خالد الصيداوي، طالبة ماجستير في جامعة القدس – كلية الصحة العامة، قمت بتصميم استبيان بعنوان:

" نمط حياة الأطفال وجودة حياتهم بين أطفال المدارس في مدينة غزة "

وهو جزء من مشروع بحثي لاستكمال درجة الماجستير في الصحة العامة. يهدف مشروع بحثي إلى تقييم نمط الحياة وجودة الحياة لأطفال الصف الرابع والخامس والسادس الابتدائي، من أجل تحسين الوضع الصحي للطلاب، والذي سيتم إجرائه في مدارس الحكومة والوكالة والخاصة للأطفال بمدينة غزة على مستويات اجتماعية واقتصادية مختلفة. سأقوم بإجراء مقابلات معكم لتعبئة الاستبيان الذي يناقش أهم أشكال أنماط الحياة (مثل العادات اليومية في التغذية والنشاط البدني والنوم والنظافة) وجودة الحياة الخاصة بالأطفال. سوف أقرأ لك السؤال وأساعدك في فهمه، وتستطيع أن تختار الإجابة الذي تبادر ذهنك اولاً، قد تشعر أن بعض الأسئلة تتكرر، يرجى الإجابة على كل منهم. ملئ هذا الاستبيان يستغرق حوالي (20) دقيقة من وقتك الثمين.

تذكر: هذا ليس اختبار وليس هناك إجابات صحيحة أو خاطئة، كل ما تخبرني به عن نفسك سوف يبقى سرّياً ولن يتم ذكر أسماء أو تعريف بهويات الذين شاركوا في هذه الاستبانة. يرجى العلم أنك لست ملزماً بالمشاركة وبإمكانك الانسحاب واختيار عدم المشاركة في أي وقت خلال سير العملية.

هل يمكننا البدء بالمقابلة؟

☐ نعم ☐ لا

شكراً لتعاونك.

بيانات عامة

اسم المدرسة/ ----------

نوع المدرسة:	**☐ وكالة**	**☐ حكومة**	**☐ خاصة**
مكان المدرسة	**☐ شرق غزة**	**☐ غرب غزة**	
تاريخ تعبئة الاستبيان	------ / ------ / **2017**		

المعايير البيولوجية:

أ. الوزن: ---------- كلجم

ب. الطول: ---------- سم

من فضلك، هل يمكنك تقديم معلومات عن:

المحور الأول: معلومات عن الحالة الديموغرافية والاجتماعية:

.1	تاريخ الميلاد: ------ / ------ / ------		
.2	المرحلة الدراسية (الصف):		
	☐ الرابع الابتدائي	☐ الخامس الابتدائي	☐ السادس الابتدائي
.3	الجنس:	☐ ذكر	☐ انثى
.4	الحالة العملية للطالب/ة	☐ يعمل بشكل جزئي	☐ لا يعمل
		1.طبيعة العمل الذي يقوم به: ----------	
		2.عدد الساعات اليومية: ----------	
		3.عدد أيام العمل بالأسبوع: ----------	
		4.الأجر الذي يحصل عليه/ يوم: -------- شيكل	
		5.أين يستخدم الأجر الذي يحصل عليه: ---------	

المحور الثاني: معلومات عن أنماط الحياة:

الجزء الأول: معلومات عن العادات الغذائية:

.1	هل سبق أن أخذت أي معلومات عن التغذية؟			
	☐ نعم	☐ لا (انتقل س3)		
.2	إذا كانت الإجابة بنعم، أين؟			
	☐ المدرسة	☐ البيت	☐ وسائل الإعلام (التلفزيون، الراديو، الإنترنت)	☐ أخرى ----------
.3	هل تتناول وجبة الافطار؟			
	☐ دائماً (انتقل س4)	☐ أحياناً	☐ لا (انتقل س6)	

4.	إذا كانت الإجابة بنعم، كم يوما تناولت وجبة الإفطار خلال 7 أيام الماضية؟ ---------- أيام
5.	أين تتناول وجبة الافطار؟ ☐ في البيت ☐ في المدرسة ☐ في البيت والمدرسة
6.	إذا كانت الإجابة لا، ما هو السبب الرئيسي الذي يجعلك لا تتناول (تترك) وجبة الإفطار؟ ☐ ليس لدي الوقت لتناول الافطار ☐ لا أستطيع تناول الطعام في الصباح الباكر ☐ هناك نقص في الطعام (المفضل) في بيتي ☐ فقدان الشهية ☐ ليست عادة ☐ أسباب اخرى ----------
7.	كم وجبة تتناول في اليوم الواحد؟ ☐ وجبة ☐ وجبتان ☐ 3 وجبات ☐ 4 وجبات فأكثر
8.	هل تأخذ وقتا كافيا أثناء تناول الطعام؟ ☐ دائماً ☐ أحيانا ☐ أبدا
9.	هل تأكل بين الوجبات؟ ☐ دائماً ☐ أحيانا ☐ أبدا
10.	هل تأخذ ساندويتش إلى المدرسة؟ ☐ دائماً ☐ أحيانا ☐ أبدا
11.	هل تشتري المشروبات الغازية في مدرستك؟ ☐ دائماً ☐ أحيانا ☐ أبدا
12.	هل تشتري المشروبات الغازية في البيت؟ ☐ دائماً ☐ أحيانا ☐ أبدا
13.	هل تتناول الطعام مع العائلة؟ ☐ دائماً ☐ أحيانا ☐ أبدا (انتقل س15)
14.	إذا كانت الإجابة بنعم، كم يوما تناولت الطعام مع العائلة خلال 7 أيام الماضية؟ ☐ 7-6 يوم/ اسبوع ☐ 5-2 يوم/ اسبوع ☐ أقل من يومين
15.	هل تتناول وجبات الطعام أثناء مشاهدة التلفزيون أو استخدام الهاتف المحمول، وألعاب الفيديو /الكمبيوتر؟ ☐ دائماً ☐ أحيانا ☐ أبدا

في الأسبوع المثالي، كم عدد الأيام التي تأكل فيها -------؟ وكم عدد الحصص من ------ التي تتناولها في اليوم الواحد من تلك الأيام؟

البنود		يوم / أسبوع 0=لا أتناول، 1= يوم ، 2= يومان، 3= 3أيام، 4= 4أيام، 5= 5أيام، 6= 6أيام، 7= 7أيام	الحصص
.16	أكل الفاكهة و شرب عصير الفاكهة الطازجة (التفاح، الموز، البرتقال ..)		
.17	أكل الخضروات (الخيار والطماطم والجزر...)		
.18	البطاطا، البطاطا الحلوة (الجذور)		
.19	شرب حليب أو منتجات الألبان مثل الجبن والزبادي		
.20	الدهون والزيوت		
.21	الحبوب (المكسرات)		
.22	تناول الحبوب ومنتجاتها والخبز والمعكرونة		
.23	أكل البيض		
.24	أكل منتجات اللحوم أو النقانق		
.25	أكل لحوم الدواجن		
.26	أكل الكبد و الكلاوي ..		
.27	أكل المأكولات البحرية مثل الأسماك، الخ ...		
.28	أكل الحلو مثل الشوكولاتة، والحلوى، الآيس كريم، العسل		
.29	شرب المشروبات الغازية		
.30	أكل الوجبات السريعة مثل البيتزا، البرجر، الخ ...		
.31	تناول الطعام المشوي مثل الشاورما		
.32	أكل المعكرونة الصينية (الأندومي)		
.33	تناول الأطعمة المالحة مثل رقائق البطاطس(الشبس)، مخلل والزيتون والبسكويت المالح		
.34	تناول الطعام الحار والبهارات		

المحور الثالث: معلومات عن النشاط البدني:

.1	كيف تصل إلى مدرستك؟ ☐ مشياً ☐ مواصلات (باص، سيارة، دراجة) (انتقل س3) ☐ الاثنين معاً
.2	إذا كنت تمشي، فكم تحتاج من الوقت لتصل الى المدرسة؟ ---------- دقيقة.

.3	هل تستخدم الدرج في البيت؟ ☐ نعم ☐ لا(انتقل س6)
.4	إذا كانت الإجابة بنعم، كم عدد طوابق؟ ---------- طابق
.5	كم مرة تفعل هذا في اليوم واحد؟ ---------- مرة
.6	كم ساعة تلعب في اليوم واحد في المتوسط؟ ---------- ساعة
.7	هل تدرس بينما؟ ☐ تتحرك من مكان لأخر ☐ جالس على المكتب ☐ جالس على السرير
.8	كم ساعة تدرس في اليوم في المتوسط؟ ---------- ساعة
.9	هل لدى عائلتك قواعد حول مقدار الوقت الذي تقضيه في مشاهدة التلفزيون أو استخدام الكمبيوتر؟ ☐ نعم ☐ لا

كم من الوقت تنفق خلال اليوم العادي في ...؟

البنود		دقيقة / اسبوعياً	دقيقة / يومياً
.10	المشي		
.11	الجري		
.12	ركوب الدراجات (ترفيه)		
.13	ركوب الدراجات (مسرعا)		
.14	كرة الطائرة		
.15	كرة القدم		
.16	نط الحبل		
.17	الجلوس ومشاهدة التلفزيون		
.18	استخدام مواقع التواصل الاجتماعي (الفيس، الفايبر، ...)		
.19	لعب ألعاب الكمبيوتر أو استخدام الكمبيوتر لشيء غير الواجب المدرسي (بلاي ستيشن، آي باد، الهاتف الذكي ....)		
.20	استخدام الكمبيوتر للواجبات المدرسة		
.21	المشي على الأقدام من منزل إلى السيارة أو حافلة المدرسة؟		
.22	اخراج القمامة		

المحور الرابع: معلومات عن عادات النوم:

.1	متى تذهب إلى الفراش (النوم) عادةً؟ ----------
.2	متى تستيقظ في الصباح؟ ----------
.3	كم عدد ساعات النوم التي تحصل كل يوم عادةً في الليل؟ ---------- ساعة
.4	كم عدد ساعات النوم التي تحصل كل يوم عادةً في النهار؟ ---------- ساعة
.5	كم من الوقت تستغرق حتى تقع في النوم فعلا (الغرق في النوم)؟ ---------- ثانية
.6	كم عدد المرات التي تستيقظ فيها أثناء نومك (الاستيقاظ الليلي)؟ ---------- مرة
.7	هل تعاني من اضطرابات في النوم/ أرق؟ ☐ دائما ☐ أحيانا ☐ أبدا
.8	ها تعاني من كوابيس تجعلك لا تنام جيدا في الليل؟ ☐ دائما ☐ أحيانا ☐ أبدا
.9	هل يوجد تلفزيون أو كمبيوتر في الغرفة التي تنام فيها عادةً؟ ☐ نعم ☐ لا

الفصل الخامس: معلومات عن النظافة الشخصية للأطفال:

كم مرة عادة قمت ب ...؟

البنود		دائماً	في كثير من الأحيان	في بعض الأحيان	نادراً	اطلاقاً
.1	تنظيف أو فرشاة أسنانك عند الاستيقاظ من النوم؟					
.2	تنظيف أو فرشاة أسنانك قبل الذهاب إلى النوم؟					
.3	تنظيف أو فرشاة أسنانك بعد تناول الطعام؟					
.4	استخدام الصابون عند غسل يديك؟					
.5	غسل يديك بالماء والصابون قبل تناول الطعام؟					
.6	غسل يديك بالماء والصابون بعد الأكل؟					
.7	غسل يديك بالماء والصابون بعد استخدام المرحاض؟					
.8	غسل يديك بالماء والصابون بعد اللعب؟					
.9	غسل يديك بالماء والصابون بعد لمس الحيوانات؟					
.10	غسل وجهك بعد الاستيقاظ من النوم؟					
.11	تقليم وتنظيف أظافرك؟					
.12	الاستحمام بالماء الدافئ والصابون اسبوعيا؟					
.13	تنظيف شعرك والعناية به اسبوعيا؟					

المحور السادس: معلومات عن جودة الحياة للأطفال:

1.	**هل عانيت من مرض أو حالة مرضية لفترة زمنية طويلة؟** **☐ نعم ☐ لا** **ما نوعها؟** ----------						
1. الرفاهية المادية:							
2.	بشكل عام، كيف يمكنك أن تصف صحتك؟ ☐ ممتاز ☐ جيد جدا ☐ جيدة ☐ ضعيفة ☐ سيئة						
	التفكير في الأسبوع الماضي ...	دائماً	في كثير من الأحيان	في بعض الأحيان	نادراً	اطلاقاً	
3.	هل كنت في صحة جيدة؟						
4.	هل قمت بنشاط بدنيا (مثل الجري وركوب الدراجات)؟						
5.	هل كنت قادرا على العمل جيدا؟						
6.	هل شعرت بكامل طاقتك؟						
2. الصحة النفسية:							
7.	هل حياتك كانت ممتعة؟						
8.	هل شعرت بسرور أنك على قيد الحياة؟						
9.	هل شعرت بالارتياح/ الرضا على حياتك؟						
10.	هل كنت في مزاج جيد؟						
11.	هل شعرت بالبهجة/ الفرح؟						
12.	هل كان لديك متعة/ شيء ممتع؟						
3. المزاج والعاطفة:							
13.	هل شعرت أن تفعل كل شيء بشكل سيء؟						
14.	هل شعرت بالحزن؟						
15.	هل شعرت بسوء للغاية بحيث كنت لا تريد أن تفعل أي شيء؟						
16.	هل شعرت أن كل شيء في حياتك يذهب على نحو خاطئ؟						
17.	هل شعرت بالضجر؟						
18.	هل شعرت بالوحدة؟						
19.	هل شعرت أنك تحت الضغط؟						
4. الإدراك الذاتي:							
20.	هل كنت راضيا عن ما أنت عليه؟						

.21	هل كنت سعيدا مع المظهر العام الخاص بك (الملابس)؟					
.22	هل كنت قلقا بشأن الطريقة التي تنظر بها؟					
.23	هل شعرت بالغيرة من طريقة الفتيات والفتيان اللذين يبدو فيها (الملابس)؟					
.24	هل ترغب في تغيير شيء عن جسمك (مظهرك)؟					
5. الاستقلال الذاتي:						
.25	هل كان لديك ما يكفي من الوقت لنفسك؟					
.26	هل تمكنت أن تفعل الأشياء التي تريد القيام بها في وقت فراغك؟					
.27	هل كان لديك فرصة كافية لتكون خارجا؟					
.28	هل كان لديك ما يكفي من الوقت للقاء الأصدقاء؟					
.29	هل كنت قادرا على اختيار ما يجب القيام به في وقت فراغك؟					
6. العلاقة بالوالدين والحياة بالمنزل:						
.30	هل والديك قاموا بفهمك؟					
.31	هل شعرت أنك محبوبا من قبل والديك؟					
.32	هل كنت سعيدا في المنزل؟					
.33	هل قضى والداك وقتا كافيا معك بالنسبة لك؟					
.34	هل والديك تعاملوا معك بعدل إلى حد ما؟					
.35	هل كنت قادر بالحديث مع والديك متى أردت؟					
7. الموارد المالية:						
.36	هل كان معك ما يكفي من المال للقيام بنفس الأشياء كأصدقائك؟					
.37	هل كان معك ما يكفي من المال لتغطية النفقات الخاصة بك؟					
.38	هل لديك ما يكفي من المال لفعل أشياء مع أصدقائك (التنزه)؟					
8. الدعم الاجتماعي:						
.39	هل أمضيت بعض الوقت مع أصدقائك؟					
.40	هل تمرح مع أصدقائك /صديقاتك؟					
.41	هل تتساعدون أنت وأصدقائك /صديقاتك؟					

42.	هل كنت قادرا على التحدث عن كل شيء مع أصدقائك؟					
43.	هل كنت قادرا على الاعتماد على أصدقائك؟					
9. البيئة المدرسية والتعلم:						
44.	هل كنت سعيدا في المدرسة؟					
45.	هل أمورك على ما يرام في المدرسة؟					
46.	هل أنت راضي عن معلميك؟					
47.	هل لديك المقدرة لجذب الانتباه في المدرسة؟					
48.	هل تستمتع في الذهاب إلى المدرسة؟					
49.	هل لديك على علاقات جيدة مع معلميك؟					
10. التسلط:						
50.	هل كنت خائفا من الطلاب الآخرين في المدرسة؟					
51.	هل كان الطلاب الاخرين يستهزئون ويضحكون عليك؟					
52.	هل كنت تخاف من الطلاب الاخرين (مصدر خوف لك)؟					

شكراً لتعاونكم

Annex (7): Open-ended (semi-structured) questions for focus groups (Arabic and English version)

- **FGD schedule- English**

Introduction and explaining research purpose and the scenario of the interview.

In this FGD, we will talk about two aspects: the first concerns the lifestyle of children, and the second relates to the quality of their lives.

* How do you see your child's lifestyle?

1- Dietary habits (Have your children received any health education about nutrition? How often do your children have breakfast? Where? How many meals do your children actually have per day? Do your children eat between meals? Do your children eat with their family? Do your children take your meals while watching TV or playing?).

2- Physical Activity (How do your children actually go to school? Do your children use stairs at home? How many hours do your children play in a day on average? How many hours do your children study daily on average? How much time do your children spend during walking or running?).

3- Sleep habits (How many hours do your children sleep at night on average? How many hours do your children sleep at daytime on average? How many times do your children wake up during your sleep (nocturnal awakenings)? How often have your children been so worried about something that your children could not sleep at night?).

4- Hygiene practices (How often did your children usually brush their teeth when getting up bed or before going to bed? Wash their hands with water and soap before eating, after eating, after using the toilet, after playing, touching animals? clean your fingernails? Clean their hair?).

* With regard to the quality of life of the children

1- Have your children felt fit and well? Have your children been physically active (e.g. running, climbing and biking)? Have your children been able to run well? Have your children felt full of energy?

2- Has your children life been enjoyable? Have your children felt pleased that children are alive? Have your children felt satisfied with your life? Have your children been in a good mood? Have your children had fun?

3- Have your children felt that you do everything badly? Have your children felt sad? Have your children felt under pressure?

4- Have your children been able to do the things that children want to do in your free time? Have your children had enough opportunity to be outside to meet friends?

5- Have children' parent(s) understood children? Have your children felt loved by children' parent(s)? Have your children been happy at home? Have children' parent(s) had enough time for children? Have children' parent(s) treated you fairly? Have your children been able talk to children' parent(s) when children wanted to?

6- Have your children had enough money to do the same things as children' friends? Have your children had enough money for children' expenses? Do your children have enough money to do things with children' friends?

7- Have your children been afraid of other students? Have other students made fun of your children? Have other students bullied your children?

- **FGD schedule- Arabic**

مقدمة وشرح الغرض من البحث وسيناريو المقابلة

الموضوع: التعرف على نمط حياة الأطفال وجودة حياتهم بين أطفال المدارس (حكومة، وكالة، خاصة) في مدينة غزة.

سوف نتحدث عن جزئيين في هذا النقاش: الأول يتعلق بنمط حياة الأطفال، أما الثاني فيتعلق بجودة حياتهم

*** كيف تريين حياة طفلك فيما يتعلق بنمط حياته:**

1- التغذية (هل سبق أن أخذ الطفل معلومات عن التغذية؟، هل يتناول طفلك عادة وجبة الافطار/ أين يتناولها / إذا لا لماذا لا يتناولها؟، كم وجبة يتناول طفلك في اليوم الواحد؟ وهل يأخذ وقتا كافيا أثناء تناول الطعام؟، هل يأكل طفلك بين الوجبات؟ ماذا يتناول بينها؟، هل يأخذ طفلك ساندويتش إلى المدرسة؟، هل يتناول طفلك الطعام مع العائلة؟، هل يتناول طفلك وجبات الطعام أثناء مشاهدة التلفزيون أو استخدام الهاتف المحمول، وألعاب الفيديو /الكمبيوتر؟، ما طبيعة الطعام الذي يفضله طفلك؟).

2- النشاط البدني (كيف يذهب طفلك إلى مدرستك؟، هل يستخدم طفلك الدرج في البيت؟، كم ساعة يلعب طفلك في اليوم واحد في المتوسط؟، كم ساعة يدرس طفلك في اليوم في المتوسط؟، كم من الوقت تنفق خلال اليوم العادي في المشي أو الجري؟).

3- النوم (هل ينام طفلك في النهار عادةً؟، كم ساعة ينام طفلك في الليل عادةً ؟، هل يستيقظ طفلك أثناء نومه (الاستيقاظ الليلي)؟، هل يعاني طفلك من اضطرابات في النوم/ أرق/ كوابيس؟).

4- النظافة الشخصية (هل يقوم طفلك عادة بتنظيف اسنانه بالفرشاة عند الاستيقاظ من النوم أو قبل الذهاب للنوم أو بعد تناول الطعام؟، هل يغسل طفلك يديه بالماء والصابون قبل تناول الطعام وبعده؟ وبعد استخدام المرحاض؟ بعد اللعب؟ بعد لمس الحيوانات؟، هل يغسل طفلك وجه بعد الاستيقاظ من النوم؟ تقليم وتنظيف طفلك أظافره اسبوعيا؟ والاستحمام؟ والاعتناء بشعره؟).

*** فيما يتعلق بجودة حياة الطفل:**

1- هل كانت صحة طفلك جيدة؟ هل قام طفلك بنشاط بدنيا (مثل الجري وركوب الدراجات)؟ وكان قادر على العمل والدراسة جيدة؟ هل كان بكامل طاقته؟

2- هل حيات طفلك ممتعة/ سعيدة؟ ويشعر بالارتياح والرضا عن حياته؟ هل كان طفلك في مزاج جيد؟ ويشعر بالفرح؟

3- هل شعر طفلك بالضجر أو الوحدة أو انه تحت الضغط؟

4- هل كان لدي طفلك ما يكفي من الوقت لنفسه ليفعل ما يريد في وقت فراغه؟ فرصه ليخرج مع اصدقائه؟

5- هل قمتي بفهم طفلك؟ وشعر انه محبوب بالنسبة لكم؟ وكان سعيد بوجوده في البيت؟ هل قضيتم وقتا كافيا مع طفلك؟ وتعاملوه بعدل مع باقي اخوته؟ وكان قادر غلى التحدث معكم في أي وقت؟

6- هل كان مع طفلك ما يكفي من المال للقيام بنفس الأشياء كأصدقائه؟ وتغطيه نفقاته الخاصة؟ ومعه ما يكفي ليتنزه مع اصدقائه؟

7- هل كان طفلك خائفا من الطلاب الآخرين في المدرسة؟ هل كان الطلاب الاخرين يستهزئون ويضحكون على طفلك؟

Annex (8): LSD post-hoc and regression test results

LSD Post-Hoc: Father's years of schooling			
Father's years of schooling	Father's years of schooling	Mean Difference	Sig.
Less than 12 years	12 years to 16 years	-0.29*	0.000
	More than 16 years	-0.34*	0.000
LSD Post-Hoc: Family income			
Family income	Family income	Mean Difference	Sig.
1000 or less	1001-1600	-0.17*	0.018
	1601-3000	-0.40*	0.000
	> 3001	-0.42*	0.000
1001-1600	1601-3000	-0.22*	0.003
	> 3001	-0.25*	0.002
LSD Post-Hoc: Pocket money			
Pocket money	Pocket money	Mean Difference	Sig.
Yes	Often	0.48*	0.000
	No	0.85*	0.000
Often	No	0.37*	0.028
LSD Post-Hoc: Enough pocket money			
Enough pocket money	Enough pocket money	Mean Difference	Sig.
Yes, enough	Not enough sometimes	0.17*	0.005
	Not enough always	0.44*	0.000
	Yes, enough sometimes	0.39*	0.000
LSD Post-Hoc: Have breakfast			
Have breakfast	Have breakfast	Mean Difference	Sig.
Always	Sometimes	0.25*	0.000
	Never	0.69*	0.000
LSD Post-Hoc: Number of meals			
Number of meals	Number of meals	Mean Difference	Sig.
1 meal	2 meals	-0.50*	0.000
	3 meals	-0.78*	0.000
	4 or more	-0.77*	0.000
2 meals	3 meals	-0.28*	0.000
	4 or more	-0.27*	0.001
LSD Post-Hoc: Take enough time while eating			
Take enough time while eating	Take enough time while eating	Mean Difference	Sig.
Always	Sometimes	0.18*	0.002
	Never	0.34*	0.012
LSD Post-Hoc: Eat between meals			
Eat between meals	Eat between meals	Mean Difference	Sig.
Always	Sometimes	0.13*	0.014
LSD Post-Hoc: Eat with family			
Eat with family	Eat with family	Mean Difference	Sig.
Always	Sometimes	0.21*	0.000
	Never	1.16*	0.000
Sometimes	Never	0.95*	0.000

LSD post-hoc and regression test results

LSD Post-Hoc: FCS			
FCS	FCS	Mean Difference	Sig.
Acceptable	Poor	1.13*	0.000
	Borderline	0.72*	0.000
LSD Post-Hoc: Sleep hours at daytime			
Sleep hours at daytime	Sleep hours at daytime	Mean Difference	Sig.
More than 2 hours	Not sleep	-0.79*	0.018
	From 0.5 to 2 hours	-0.71*	0.035
LSD Post-Hoc: Worried and not sleep at night			
Worried and not sleep at night	Worried and not sleep at night	Mean Difference	Sig.
Always	Sometimes	-0.35*	0.000
	Never	-0.43*	0.000

Annex (9): Measuring of Physical Activity

TABLE 6-1 Physical Activities and Their Scores

If your activity was equivalent to this...	Then list the number of minutes here and ...	Multiply by this factor ...	Add this column to get physical activity level sc
Activities of Daily Living			
Gardening (no lifting)		0.0032	
Household tasks (moderate effort)		0.0024	
Lifting items continuously		0.0029	
Loading/unloading car		0.0019	
Lying quietly		0.0000	
Mopping		0.0024	
Mowing lawn (power mower)		0.0033	
Raking lawn		0.0029	
Riding in a vehicle		0.0000	
Sitting (idle)		0.0000	
Sitting (doing light activity)		0.0005	
Taking out trash		0.0019	
Vacuuming		0.0024	
Walking the dog		0.0019	
Walking from house to car or bus		0.0014	
Watering plants		0.0014	
Additional Activities			
Billiards		0.0013	
Calisthenics (no weight)		0.0029	
Canoeing (leisurely)		0.0014	
Chopping wood		0.0037	
Climbing hills (carrying 11 lb load)		0.0061	
Climbing hills (no load)		0.0056	
Cycling (leisurely)		0.0024	
Cycling (moderately)		0.0045	
Dancing (aerobic or ballet)		0.0048	
Dancing (ballroom, leisurely)		0.0018	
Dancing (fast ballroom or square)		0.0043	
Golf (with cart)		0.0014	
Golf (without cart)		0.0032	
Horseback riding (walking)		0.0012	
Horseback riding (trotting)		0.0053	
Jogging (6 mph)		0.0088	
Music (playing accordion)		0.0008	
Music (playing cello)		0.0012	
Music (playing flute)		0.0010	
Music (playing piano)		0.0012	
Music (playing violin)		0.0014	
Rope skipping		0.0105	
Skating (ice)		0.0043	
Skating (roller)		0.0052	
Skiing (water or downhill)		0.0055	
Squash		0.0106	
Surfing		0.0048	
Swimming (slow)		0.0033	
Swimming (fast)		0.0057	
Tennis (doubles)		0.0038	
Tennis (singles)		0.0057	
Volleyball (noncompetitive)		0.0018	
Walking (2 mph)		0.0014	
Walking (3 mph)		0.0022	
Walking (4 mph)		0.0033	
Walking (5 mph)		0.0067	
Subtotal			
Factor for basal energy and the thermic effect of food			1.1
Your physical activity level score			

TABLE F-2 Physical Activity Level Scores and Their PA Factors

Physical Activity Level Score	Description	Men: PA Factor	Women: PA Factor
1.0 to 1.39	Sedentary	1.0	1.0
1.4 to 1.59	Low active	1.11	1.12
1.6 to 1.89	Active	1.25	1.27
1.9 and above	Very active	1.48	1.45

TABLE F-3 Physical Activity Equivalents and Their PA Factors

Description	Physical Activity Equivalents	Men: PA Factor	Women: PA Factor
Sedentary	Only those physical activities required for normal independent living	1.0	1.0
	Activities equivalent to walking at a pace of 3–4 mph for the following distances:		
Low active	1.5 to 3.0 miles/day	1.11	1.12
Active	3 to 10 miles/day	1.25	1.27
Very active	10 or more miles/day	1.48	1.45

TABLE F-4 Total Energy Expenditure (TEE) in kCalories per Day) for Women 30 Years of Age[a] at Various Levels of Activity and Various Heights and Weights

Heights m (in)	Physical Activity Level	Weight[b] kg (lb)					
1.45 (57)		38.9 (86)	45.2 (100)	52.6 (116)	63.1 (139)	73.6 (162)	84.1 (185)
		kCalories					
	Sedentary	1564	1623	1698	1813	1927	2042
	Low active	1734	1800	1912	2043	2174	2304
	Active	1946	2021	2112	2257	2403	2548
	Very active	2201	2287	2387	2553	2719	2886
1.50 (59)		41.6 (92)	48.4 (107)	56.3 (124)	67.5 (149)	78.8 (174)	90.0 (198)
		kCalories					
	Sedentary	1625	1689	1771	1894	2017	2139
	Low active	1803	1874	1996	2136	2276	2415
	Active	2025	2105	2205	2360	2516	2672
	Very active	2291	2382	2493	2671	2849	3027
1.55 (61)		44.4 (98)	51.7 (114)	60.1 (132)	72.1 (159)	84.1 (185)	96.1 (212)
		kCalories					
	Sedentary	1688	1756	1846	1977	2108	2239
	Low active	1873	1949	2081	2230	2380	2529
	Active	2104	2190	2299	2466	2632	2798
	Very active	2382	2480	2601	2791	2981	3171
1.60 (63)		47.4 (104)	55.0 (121)	64.0 (141)	76.8 (169)	89.6 (197)	102.4 (226)
		kCalories					
	Sedentary	1752	1824	1922	2061	2201	2340
	Low active	1944	2025	2168	2327	2486	2645
	Active	2185	2276	2396	2573	2750	2927
	Very active	2474	2578	2712	2914	3116	3318

continued

[a] For each year below 30, add 7 kcalories/day to TEE. For each year above 30, subtract 7 kcalories/day from TEE.
[b] These columns represent a BMI of 18.5, 22.5, 25, 30, 35, and 40, respectively.

Annex (10): Interpretation of scores of the KIDSCREEN-52 dimensions scales

Dimension	Low score	High score
Physical well-being	Physically exhausted, physically unwell, feeling unfit, having low energy	Physically fit, active, healthy, energetic
Psychological well-being	No pleasure in life, dissatisfaction with life	Happy, view life positively, satisfied with life, pleased, cheerful
Moods and emotions	Feels depressed, unhappy, feeling in bad mood	Feeling good, feeling in good mood
Self-perception	Negative body image, self-rejection, unhappy/dissatisfied with self, having low self-esteem, feeling uncomfortable with appearance	Self-confident, satisfied with self, positive body image, happy with self, having good self-esteem, comfortable with appearance
Autonomy	Restricted, oppressed, dependent	Feeling free to decide, independent, autonomous
Parent relations and home life	Feeling alone, overlooked, not appreciated, perceives parents unavailable/unfair	Feeling secure, supported and loved, feeling well understood/ well-cared, perceives parents fair/available
Social support and peers	Feeling excluded, not accepted by peers, not supported by peers, not relying on peers	Feeling accepted, supported and included in peer group, relying on peers
School environment	Disliking school and/or teachers, negative feelings about school, not doing well	Feeling happy at school and doing well, enjoying school life
Social acceptance	Feeling tormented by peers, bullied, feeling rejected by peers	Not feeling bullied, feeling respected and accepted by peers
Financial resources	Feeling finances are restricting lifestyle, feeling financially disadvantaged	Feeling satisfied with financial resources, feeling well-off, enjoying financial resources

Annex (11): List of experts

No.	Name	Position
1.	Dr. Yehia Abed	Al- Quds university
2.	Dr. Bassam Abu Hamad	Al- Quds university
3.	Dr. Khitam Abu Hamad	Al- Quds university
4.	Dr. Adnan El Whaidi	Ard El Insan
5.	Dr. Safaa Naseer	UNDP
6.	Dr. Ashraf El Jede	Islamic university
7.	Dr. Yousef El Gaesh	Islamic university
8.	Dr. Sanaa Abu Daqaa	Islamic university
9.	Dr. Jehad El Esee	Nutrition expert
10.	Mrs. Maysoun Turban	Ard El Insan

Annex (12): Helsinki approval

المجلس الفلسطيني للبحث الصحي

Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار

Developing the Palestinian health system through institutionalizing the use of information in decision making

Helsinki Committee
For Ethical Approval

Date: 01/08/2016 **Number:** PHRC/HC/135/16

Name: KHOLOUD KH. AL SEDAWI **الاسم:** خلود الصيداوي

We would like to inform you that the committee had discussed the proposal of your study about:

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:

Lifestyle Pattern and Quality of Life among school children in Gaza City-Palestine

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/135/16 in its meeting on 01/08/2016

و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member

Member

Chairman

11/8/2016

Genral Conditions:-

1. Valid for 2 years from the date of approval.
2. It is necessary to notify the committee of any change in the approved study protocol.
3. The committee appreciates receiving a copy of your final research when completed.

Specific Conditions:-

E-Mail:pal.phrc@gmail.com

Gaza - Palestine غزة - فلسطين

شارع النصر - مفترق العيون

Annex (13): Governmental and Privet schools approval – West & East Gaza

State of Palestine
Ministry of Education & Higher Education
Directorate of Education /west Gaza

دولة فلسطين
وزارة التربية و التعليم العالي
مديرية التربية والتعليم / غرب غزة

قسم التخطيط والمعلومات

التاريخ: 12 / 3 /2017م
الموافق: 13 جماد ثاني 1438هـ

السادة/ مديري ومديرات المدارس المعنية المحترمون،،

السلام عليكم ورحمة الله وبركاته،

الموضوع: تسهيل مهمة

نهديكم عاطر التحيات، ونتمنى لكم موفور الصحة والعافية، بخصوص الموضوع أعلاه، يرجى من سيادتكم تسهيل مهمة الباحثة/ خلود خالد الصيداوي ، والتي تجري بحثاً بعنوان:

" Lifestyle Pattern and Quality of Life among School Children in Gaza city Palestine "

في تطبيق أدوات البحث على عينة من طلبة المرحلة الأساسية في المدارس الحكومية و الخاصة، وذلك استكمالاً لمتطلبات الحصول على درجة الماجستير في كلية الصحة العامة جامعة القدس بغزة، تخصص إدارة صحية، وذلك حسب الأصول.

ولكم منا فائق الاحترام والتقدير،،،

مدير التربية والتعليم

أ. فتحي علي رضوان

m.bakri

West Gaza - Tel : (+ 9708 2865209 ، 2829206) Fax (+ 9708 2865300)
WWW.facebook.com/dirwest

غرب غزة – هاتف : (2865209 ، 2829206 + 9708) فاكس (2865300 + 9708)
Email: dirwest@mohe.ps

State of Palestine
Ministry of Education & Higher Education
Directorate of Education\East Gaza

دولة فلسطين
وزارة التربية والتعليم العالي
مديرية التربية والتعليم / شرق غزة

قسم التخطيط والمعلومات

اليـــوم: الأحد ١٣ جمادى ثان ١٤٣٨ هـ.
الموافق: ١٢ مارس/آذار ٢٠١٧م.

السادة/ مدراء المدارس المعنية **حفظهم الله ،،**

تحية طيبة وبعد ،،

الموضوع/ تسهيل مهمة بحث

بداية نهديكم أطيب التحيات، وندعو لكم بموفور الصحة والعافية. وبالإشارة إلى الموضوع أعلاه، فإنه لا مانع لدينا من تسهيل مهمة الباحثة/ خلود خالد الصيداوي، والتي تجري بحثا بعنوان:

Lifestyle Pattern and Quality of life among School Children in Gaza city Palestine

وذلك استكمالا لمتطلبات الحصول على درجة الماجستير من كلية الصحة العامة جامعة القدس بغزة تخصص إدارة صحية، ومساعدتها في تطبيق أدوات الدراسة على عينة طلبة المرحلة الأساسية في المدارس الحكومية والخاصة، وذلك حسب الأصول.

واقبلوا فائق الاحترام والتقدير ،،،

12/3/2017
م. أشرف حسني فروانة
رئيس قسم التخطيط والمعلومات

وزارة التربية والتعليم العالي
مديرية التربية والتعليم/شرق غزة
قسم التخطيط والمعلومات

أ. أشرف رياض حرز الله
مدير التربية والتعليم/

Annex (14): UNRWA schools approval

Al-Quds University
Jerusalem
School of Public Health

جامعة القدس
القدس
كلية الصحة العامة

التاريخ:2017/3/6

حضرة الدكتور/فريد أبو عاذرة المحترم
مدير برنامج التعليم–وكالة الغوث
تحية طيبة وبعد،،،

الموضوع:مساعدة خلود الصيداوي

نهديكم أطيب التمنيات ونتمنى لكم دوام التقدم والأزدهار، ونود أعلامكم بأن الطالبة المذكورة أعلاه تقوم بعمل بحث كمتطلب للحصول على درجة الماجستير في الصحة العامة–مسار إدارة صحية بعنوان:

Lifestyle Pattern and Quality of Life among School Children in Gaza City-Palestine

وعليه نرجو من سيادتكم التكرم بالموافقة على تسهيل مهمة الطالبة في إنجاز هذا البحث حيث تشمل عينة الدراسة الطلبة الملتحقين بالصفوف الرابع والخامس والسادس الأساسي وذلك بعد الحصول على موافقة أولياء أمورهم والمسجلين في مدارس شرق وغرب غزة التابعة لإدارتكم الموقرة.

شاكرين لكم حسن تعاونكم ودعمكم للمسيرة التعليمية،،،
و اقبلوا فائق التحية و الاحترام،،،

د. بسام أبو حمد
منسق عام برامج الصحة العامة
جامعة القدس–فرع غزة

نسخة: برفق الملف

Jerusalem Branch/Telefax 02-2799234
Gaza Branch/Telefax 08-2644220 -2644210
P.O. box 51000 Jerusalem

فرع القدس / تلفاكس 02-2799234
فرع غزة / تلفاكس 08-264420-2644210
ص.ب. ٥١٠٠٠ القدس

Annex (15): Summary of food intake frequency of the study' schoolchildren

FFQ variables		Boys		Girls		Total	
		Freq.	%	Freq.	%	Freq.	%
Milk and milk products	Never/ rarely	25	12.5	21	12.4	46	12.4
	< 3 times / week	36	18.0	29	17.1	65	17.6
	≥ 3 times / week	139	69.5	120	70.6	259	70.0
Egg	Never/ rarely	17	8.5	31	18.2	48	13.0
	< 3 times / week	71	35.	44	25.9	115	31.1
	≥ 3 times / week	112	56.0	95	55.9	207	55.9
Meat and meat products	Never/ rarely	33	16.5	36	21.2	69	18.6
	< 3 times / week	120	60.0	105	61.8	225	60.8
	≥ 3 times / week	47	23.5	29	17.1	76	20.5
Chicken	Never/ rarely	13	6.5	18	10.6	31	8.4
	< 3 times / week	152	76.0	119	70.0	271	73.2
	≥ 3 times / week	35	17.5	33	19.4	68	18.4
Fish	Never/ rarely	82	41.0	78	45.9	160	43.2
	< 3 times / week	115	57.5	91	53.5	206	55.7
	≥ 3 times / week	3	1.5	1	0.6	4	1.1
Liver	Never/ rarely	91	45.5	86	50.6	177	47.8
	< 3 times / week	100	50.0	77	45.3	177	47.8
	≥ 3 times / week	9	4.5	7	4.1	16	4.3
Oil and fats	Never/ rarely	25	12.5	50	29.4	75	20.3
	< 3 times / week	81	40.5	36	21.2	117	31.6
	≥ 3 times / week	94	47.0	84	49.4	178	48.1
Fruit	Never/ rarely	19	9.5	16	9.4	35	9.5
	< 3 times / week	73	36.5	67	39.4	140	37.8
	≥ 3 times / week	108	54.0	87	51.2	195	52.7
Vegetable	Never/ rarely	5	2.5	6	3.5	11	3.0
	< 3 times / week	90	45.0	44	25.9	134	36.2
	≥ 3 times / week	105	52.5	120	70.6	225	60.8
Sweets	Never/ rarely	30	15.0	12	7.1	42	11.4
	< 3 times / week	74	37.0	49	28.8	123	33.2
	≥ 3 times / week	96	48.0	109	64.1	205	55.4
Nuts	Never/ rarely	75	37.5	78	45.9	153	41.4
	< 3 times / week	94	47.0	73	42.9	167	45.1
	≥ 3 times / week	31	15.5	19	11.2	50	13.5
Legumes	Never/ rarely	-	-	-	-	-	-
	< 3 times / week	3	1.5	-	-	3	0.8
	≥ 3 times / week	197	98.5	170	100.0	367	99.2
Fast & Salty food	Never/ rarely	46	23.0	52	30.6	98	26.5
	< 3 times / week	130	65.0	99	58.2	229	61.9
	≥ 3 times / week	24	12.0	19	11.2	43	11.6
Chinese noodles "Endomy"	Never/ rarely	26	13.0	32	18.8	58	15.6
	< 3 times / week	130	65.0	99	58.2	229	61.9
	≥ 3 times / week	44	22.0	39	23	83	22.5
Chilly foods	Never/ rarely	76	38.0	84	49.4	160	43.2
	< 3 times / week	59	29.5	29	17.1	88	23.8
	≥ 3 times / week	65	32.5	57	33.5	122	33.0

Abstract in Arabic

نمط حياة الأطفال وجودة حياتهم بين أطفال المدارس في مدينة غزة

اعداد: خلود خالد الصيداوي

اشراف: د. امل صرصور

ملخص الدراسة:

يَجري على المستوى العالمي حالياً اهتمامٌ عميق بالجوانب المتصلة بالتغذية والنمو والتطور وجودة الحياة للأطفال. الأطفال هم سادة المستقبل، حيث أن تعليمهم عادات صحية سليمة سوف ينعكس ذلك على صحتهم في المستقبل وتؤثر على جودة حياتهم بطريقة مباشرة أو غير مباشرة. ومع ذلك، الاهتمام بهذه الفئة في الدراسات قليل.

هدفت هذه الدراسة لتقييم كل من نمط حياة الأطفال وكذلك جودة حياتهم وإيجاد العلاقة بينهم بين طلاب المدارس في مدينة غزة. وكان من أهداف الدراسة تقييم نمط حياة الأطفال، بالإضافة إلى تقييم جودة حياة الأطفال، كما هدفت إلى التعرف على العوامل الاجتماعية والاقتصادية التي قد تؤثر على كلا من نمط حياة الأطفال وجودة حياتهم، وأيضا التعرف على تأثير نمط حياة الأطفال على جودة حياتهم، إضافة إلى وضع مجموعة من التوصيات التي قد تشجع على تغيير بعض سلوكيات الأطفال وتحسين جودة حياتهم.

من أجل تحقيق أهداف هذه الدراسة، أجريت هذه الدراسة بطريقة التثليث الكمي والكيفي. ركزت العينة البحثية على الأطفال في السن ما بين 10 إلى 12 عاماً ممن اندرجوا في العام الدراسي (2016-2017). في الجزء الأول الكمي شارك 370 طالباً من مدارس الحكومة والوكالة والمدارس الخاصة من مدينة غزة ممن تنطبق عليهم شروط الدراسة من خلال تعبئة استبيان بمقابلة مباشرة مع الأطفال،

وقد وصلت نسبة المشاركة في البحث إلى 92.5 %. بينما تكون الجزء الثاني وهو النوعي من قيام الباحث بإجراء حلقتي نقاش معمقة عُقدت مع أمهات الطلاب. كما أجري للعينة قياس للأبعاد الجسدية (الأنثروبوميترية). وقد تم تحليل البيانات باستخدام الحزمة الإحصائية للعلوم الاجتماعية (SPSS) حيث أجريت التوزيعات، الترددات والنسب المئوية، الجداول، كما حسبت النسب المئوية المتوسطة والعامة والجداول المتقاطعة واستخدام ANOVA لإيجاد العلاقات بين المتغيرات.

واستناد اً لمقاييس مؤشر كتلة الجسم أظهرت نتائج الدراسة أن 74.9% من الأطفال المشاركين في الدراسة ذات وزن طبيعي بالنسبة لعمرهم، وقد عانى 2.2% من الأطفال انخفاض في الوزن مع انتشار أعلى للبنات (2.4%) مقارنة الاولاد (2.0%)، بينما عانى 23% منهم من السمنة وزيادة في الوزن مع انتشار أعلى الاولاد مقارنة بالبنات (29.5%) و (15.3%) بالتتابع.

وأظهرت نتائج الدراسة أن 94.9% من الأطفال ذات استهلاك جيد بالنسبة للاستهلاك اليومي للغذاء ونسبة ضئيلة حوالي 0.8% استهلاكهم للحصص الغذائية ضعيف. ويجدر بالذكر وفق النتائج أن أكثر من نصف الأطفال (62.2%) كانوا يعيشون حياة نشطة ونشطة جدًا، وقد علت نسبة البنات في هذا النحو عن نسبة الأولاد، وكانت 35.2% مقارنةً ب 27% على التوالي. واتضح أن 36.8% من الأطفال كانوا يعيشون حياة راكدةً حركياً أو ساكنة، حيث كان عدد الأولاد يساوي البنات. كما أظهرت النتائج أن معظم الأطفال ينامون أكثر من ثماني ساعات يوميا ويمارسون عادات النظافة الشخصية الصحيحة. كما أظهرت النتائج الكلية للبحث أن معظم الأطفال لديهم مستوى جيد من جودة الحياة في جميع الأبعاد، حيث كانت جودة الحياة بين البنات أعلى من الأولاد في معظم مجالات جودة الحياة. كما بينت نتائج الدراسة المتصلة بجودة الحياة لدى الأطفال حصول مجال علاقات الوالدين والحياة المنزلية على أعلى النسب (93%). وعلى النقيض من ذلك سجلت الاستقلالية أقل النسب (74%).

أظهرت الدراسة اختلافات ذات دلالة احصائية فارقة عند مقارنة جودة الحياة بالنسبة لكافة متغيرات الوضعين الاقتصادي والصحي، فقد ارتفعت جودة الحياة للمستجيبين الأكثر دخلا والأفضل من حيث

مفهومهم لحالتهم الصحية. تمتع الأطفال اللذين كانوا يأخذون مصروف يومي وعدد اسرهم اقل من ست افراد بجودة حياتهم بالمقارنة بالأطفال الاخريين.

كما أظهرت الدراسة العلاقة بين جودة حياة الأطفال ونمط حياتهم كانت ذات دلالة إحصائية مرتفعة. حيث كانت جودة حياة الأطفال ذات مستوى عالٍ بعلاقة قوية مع الأطفال الذين تناولوا الإفطار دائمًا، والأطفال الذين يتناولون وجبات خفيفة بين الوجبات الرئيسية، والأطفال الذين لا يتناولون وجبات الطعام أثناء مشاهدة التلفزيون أو اللعب، والأطفال الذين لم يكن لديهم التلفزيون أو الكمبيوتر أو الهاتف المحمول في غرفة نومهم، والأطفال الذين يقومون بممارسات النظافة الشخصية الصحيحة.

بشكل عام، خلصت الدراسة إلى أن حالة الرفاهية لأطفال مدينة غزة تتأثر بعدة عوامل من أهمها الوضع الصحي لهم ويعتقد أنه يساهم على نحو أكبر من باقي العوامل، الوضع الاقتصادي، والعوامل الديموغرافية، كما استنتجت كون مفهوم العافية والرفاهية يعتبر مفهوماً متعدد الأوجه، وعليه فإن التدخلات من أجل الارتقاء به ينبغي أن تكون متعددة القطاعات ومنسقة بين مختلف الفاعلين. إن المزيد من الفهم لهذه العلاقات سيسهل تطوير التدخلات لمساعدة الأطفال الذين يعانون من نقص في العافية/ الرفاهية، من خلال تلبية احتياجات الأطفال والمساعدة في حل مشاكل نمط حياتهم مثل تعزيز أسلوب حياة صحي وسلوك إيجابي وعادات غذائية جيدة وإجراء تعليم صحي وزيادة النشاط البدني.