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NATIONAL COUNCIL FOR FAMILY AFFAIRS
أحدى مؤسسات جلالة الملكة رانيا العبد الله

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International

Physical and Psychosocial Impact of Child Labor in Jordan



برنامج مكافحة عمالة الاطفال عبر التعليم
Combating Exploitive Child Labor Through Education



Ministry of Labor



questscope

After substantial deliberations with a group of workers in the field of combating child labor (technical committee) during drafting the national framework to combat child labor, and which was adapted by the national committee to combat child labor, it was agreed to define child labor as follows:

"Any mental or physical effort exerted by a child for or without pay, whether permanently, incidentally, temporarily or seasonally, and is considered harmful to him, and is done at the mental, physical, social, or moral level, and which conflicts with his studies and deprives him from the opportunities to commit to learning and studying through compelling him to leave school prematurely, or requires him to attempt to combine school attendance and long, concentrated work for hours."



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National Council for Family Affairs

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Table of Content

Topic	Page number
Table of content	3
Index of Table	8
Forward	11
Introduction	12
Executive summary	13
1. Chapter I: Introduction and Purposes	
1.1 Introduction	16
1.2 Study problems	16
1.3 Significance of the study	16
1.4 Objective of the study	17
2. Chapter II: literature review	
2.1 Introduction	18
2.2 Concepts of the study	18
2.3 Child rights in the international and local conventions	18
2.4 Child labor	20
2.4.1 Child labor in the world	20
2.4.2 Child labor in the Jordan	20
2.5 Type of child labor	21
2.6 Reasons for child labor	22
2.7 Impacts of child labor	23

2.8 Elimination of child labor	27
2.9 Summary of literature	28
2.10 Key concepts of the study	28
3. Chapter III: Methodology of the Study	
3.1 Design of the study	30
3.2 Study Population	30
3.3 Study Sample	30
3.4 Data collection procedure	31
3.5 Instruments of the study	33
3.6 Data analysis	35
4. Chapter IV: Results	
4.1 Demographic characteristics	36
4.1.1 Sample distribution	36
4.1.2 Gender	37
4.1.3 Age	37
4.1.4 Working status	38
4.1.5 Type of work	39
4.1.6 Type of employment	40
4.1.7 Payment	41
4.1.8 Reasons for work	42
4.1.9 Work Satisfaction	43
4.1.10 Desire to pursue education	44

4.1.11 Hours and start up period of working	45
4.1.12 Type of health insurance	46
4.1.13 Parents' working status	47
4.1.14 Sources of family income	49
4.1.15 The presence of parents	50
4.1.16 Household income levels	51
4.1.17 Parents' level of education	53
4.1.18 Family Size	54
4.1.19 child's birth order	55
4.1.20 general discussion	55
4.2 Health screening survey	57
4.2.1 Health concerns and risk behaviors	58
4.2.2 Physical health concerns	58
4.2.3 Psychosocial health concerns	58
4.2.4 Risk behaviors	58
4.2.5 Sexual health concerns	59
4.2.6 Relationship between children's working status and physical health	63
4.2.7 Difference between working and nonworking children in physical and psychosocial health	64
4.3 Child abuse	66
4.4 Laboratory and Clinical examination	73
4.4.1 Blood components	73

Physical and Psychosocial Impact of Child Labor in Jordan

4.4.2 Hepatitis A	74
4.4.3 Ferritin	75
4.4.4 weight, Height and Body Mass Index	75
4.4.5 Vision examination	76
4.4.6 Physical examination	78
4.5 Psychosocial health of working and nonworking children	79
4.5.1 Strengths and difficulties survey	79
4.5.2 Anger expression	85
4.5.3 Coping efficacy	90
4.5.4 Difference in psychological health	94
4.5.4.1 Strengths and Difficulties	94
4.5.4.2 Anger expression	95
4.5.4.3 Coping efficacy	96
4.6 Working and nonworking children in Palestinian refugee camps	97
4.6.1 Demographic characteristics	97
4.6.1.1 Gender and age	97
4.6.1.2 Type of work	97
4.6.1.3 Place and nature of work	97
4.6.1.4 Reasons for work and work satisfaction	98
4.6.1.5 Desire to pursue education	98
4.6.1.6 Working hours and wages	98
4.6.1.7 Family status	98
4.6.2 Physical and psychosocial health	98

4.6.3 Child abuse	100
4.6.3.1 Father's child abuse	100
4.6.3.2 Mother's child abuse	102
4.6.3.3 Teacher's child abuse	104
4.6.3.4 Employer's child abuse	105
4.6.4 Clinical and laboratory examination	107
4.6.5 Differences between child in and outside refugee camps	108
4.6.5.1 Difference in demographic characteristics	108
4.6.5.2 Difference in physical and health concerns	109
4.6.5.3 Differences in psychosocial Health	110
4.6.5.4 Difference in clinical and laboratory examination	111
5. Chapter V: Recommendations	
5.1 Public Health	112
5.2 Education	112
5.3 Decision and policy makers	113
5.4 Research	113
6. References	114
7. Appendices	
7.1 Consent forms	119
7.2 Study Survey	121
7.3 Type of work	131

Index of tables

Table	Title	Page
1.a	Distribution of sample according to the governorate and the status of work	36
1.b	Distribution of working children by region	37
2	Age of children	38
3	school children in regards to working status	38
4	Distribution of sample according to the status of work and the type of work	39
5	Work Status according to their employer	40
6	Type of payment in relation to working status	41
7	Reason for work in relation to working status	42
8	Work satisfaction in relation to working status	43
9	Desire to pursue education in relation to working status	44
10	Working hours and start up period in relation to working status	46
11	Health insurance in relation to working status	47
12	Parents' working status in relation to children's' working status	48
13	Sources of income in relation to children's working status	49
14	Presence of parent (alive or deceased) in relation to children working status	51
15	Level of household income in relation to children working status	52
16.a	Father's level of education in relation to children's working status	53
16. b	Mother's level of education in relation to children's working status	54
17	Family size in relation to children's working status	54
18	Birth order in relation to children's working status	55

19	Physical complaints in relation to children working status	57
20.a	Health concerns and risk behaviors among nonschool working children	60
20.b	Health concerns and risk behaviors among nonworking school children	61
20.c	Health concerns and risk behaviors among school working children	62
20.d	Difference between working and nonworking children in physical and psychosocial health	65
21.a	Forms of child abuse among nonschool working children	67
21.b	Forms of child abuse among School working children	69
21.c	Forms of child abuse among nonworking school children	71
21.d	Differences in forms of abuse among working and nonworking children	72
22.a	Distribution of sample according to the laboratory tests	74
22.b	Distribution of sample according to height and weight	75
22.c	Mean values of body mass index	76
22.d	Distribution of sample according to the results of vision test	78
23.a	Strengths and difficulties survey among nonworking school children	80
23.b	Strengths and difficulties survey among school children working in holidays	81
23.c	Strengths and difficulties survey among school working children	82
23.d	Strengths and difficulties survey among nonschool working children	84
24.a	Anger expression among nonworking school children	85
24.b	Anger expression among school children working in holidays	86
24.c	Anger expression among school working children	87
24.d	Anger expression among nonschool working children	89
25.a	Coping efficacy scale among nonworking school children	90

Physical and Psychosocial Impact of Child Labor in Jordan

25.b	Coping efficacy among school children working in holiday	91
25.c	Coping efficacy among school working children	92
25.d	Coping efficacy among nonschool working children	93
26	A presentation of the means of the SDQ: self report (total score, subscales' scores) in four groups.	95
27	A presentation of the means of total Anger Expression Scale for Children (AESC) score and subscales' scores in four groups	96
28	Comparison of the total coping efficacy scores in the four groups	97
29	Health and physical health concerns in children in refugee camps	99
30.a	Father's child abuse among children in refugee camps	101
30.b	Mother's child abuse among children in refugee camps	103
30.c	Teacher's child abuse among children in refugee camps	104
30.d	Employer's child abuse among children in refugee camps	106
31	Blood tests among children in refugee camps	107
32	Differences in physical and health concerns between children in and outside of the refugee camps	109
33	Differences in psychosocial health between children in and outside the refugee camps	110
34	Differences in Blood tests between children in and outside refugee camps	111

Forward

Childhood is the hope for the future and Sunrise for hopeful tomorrow. Childhood is one of the most important stages in human life, in which individual form his personality and his character. As the childhood experiences affect the individual's points of strength and forms his weakness, theories of psychology have emphasized that childhood period of life is the fundamental stage in life that forms the well adjusted adult character in all aspects; physical, cognitive, affective, social and moral.

Recently, and during the past few decades, there is an increased interest in children's rights especially in the field of child labor. This concern was the result of the international community efforts that aimed at providing and supporting all possible procedures and interventions to protect children from risk of work and their psychosocial and physical health impacts.

This study is concerned about examining the physical and psychosocial health impacts of child labor, and came to reflect the National Council for Family Affairs' concern in addressing the problem using the scientific research method. It is one of the main achievements of the NCFA that emphasized the role of the council in supporting and caring for childhood and scientific research, and as an outcome of Combating Exploitive Child Labor through Education project, sponsored by the USA ministry of labor, under the supervision of CHF international and in partnership with Questscope for social development, Jordan ministry of education, and Jordan ministry of labor. Moreover, this study came to provide an evidence- based knowledge and information for decision and policy makers to better plan and make decisions.

We hope that this study make a significant scientific contribution and raises the interest of decision-makers and researchers in Jordan and around the world through providing information and scientific data that encompasses the impact of child labor. We would like to thank the Scientific Research Committee, professors from the universities of Jordan, who provided the expertise and support for the study and for the research team who have conducted the study and contributes to make this work possible and achievable.

Mohammed Mikdadi
Acting General Secretary / National Council for Family Affairs



Introduction

The phenomenon of child labor raises the concern of many human rights activists in the world, given the negative effects of child labor on society in general and on children in particular. However, fight against this unacceptable phenomenon remains a real challenge for all societies in light of the increasing incidence of poverty and lack of awareness of its adverse effects on the development of children. Children who work at an early age constitute a direct threat to their safety, health and welfare. Child labor standing as stumbling block to child' school education, which would in certain provide children with better future and opportunities.

The phenomenon child labor is one of the socio-economic dilemmas that has serious negative impacts on the society, in general and on children in particular. Child labor is one of those significant problems in the present time that obviously influence the life of 215 million children around the world and threat the life of 32 000 children in Jordan, according to the Jordan national survey (Department of Statistics, 2007).

in order to investigate the physical and psychosocial health impact of child labor, and to provide an evidenced-based knowledge and scientific information for the researchers and policy and decision makers, the Combating Exploitive Child Labor throug Education Project decided to have a field study to investigate the impacts in scientific way. Therefore, this study came to examine the psychological, social, and physical health problems of child labor, and to identify forms of child abuse that have negative impact on child health and endangers child's life.

In order to establish a basis for comparison and analysis of the impacts, the study sample included (4008) Jordanian children from four different groups; working children who have left the schools (nonschool working children), children who are studying and working at the same time (school working children), and non-working school children at age of 6-16 years at the time of the study. The sample recruited from five different governorates and three Palestinian refugee camps in Jordan. The study used as many scientific instruments for measuring health-related indicators of psychological, physical and social health. In addition, part of the sample was physically examined and was subject to laboratory investigations.

We hope that this scientific achievement provide an evidenced-based knowledge and information that contribute to better decision and policy making and form a background for national strategies of child labor. In conclusion, we thank all those who participated in all phases of this study and make this achievement possible.

Combating Exploitive Child Labor throug Education Project

Executive summary

Child labor is considered as one of the main social problems that affect the Jordanian community. Child labor has physical and psychosocial impact on child's health and his growth and development. Child labor has a negative effect on the child's physical, affective, and cognitive development. Children's inexperience and emotional immaturity result in lowering their ability to recognize and assess potential risks and to make appropriate decisions related to their work type and risk. They are also unable to balance between benefits and risks of their works making them vulnerable to higher risk incidence due to these works.

Therefore, the National Council for Family Affairs in collaboration with number of experts in child's health from the university of Jordan and Ministry of Health conducted this study to investigate the impact of child labor. The focus was on physical and psychosocial impact and on forms of abuse that working children are subject to at their working settings, homes and schools.

This study utilized the explorative cross-sectional approach to collect data from children using structured interview. Trained research assistants collected the data through structured interview using the designation survey at the school and industrial sites in five governorates and three refugee camps in Jordan. The study sample included (4008) Jordanian children from four different groups; working children who have left the schools (nonschool working children), children who are studying and working at the same time (school working children), and non-working school children at age of 6-16 years at the time of the study. The sample recruited from five different governorates and three Palestinian refugee camps. The analysis showed that the majority of the sample as follows: capital city of Amman (34.0%, n = 1363), Zarqa (19%, n = 763), Irbid (15.8%, n = 634), Balqaa (12.9%, n = 516), and Maan (5.5%, n = 220). Whereas children from the Palestinian refugee camps represented 12.8% (n = 512) of the sample.

Data has been collected using instruments to answer the research questions. This included the health screening survey (Constantino and Bricker, 1997), coping efficacy scale (Sandler, 2000), anger expression scale (Steele, 2009), strength and difficulty questionnaire (Goodman, 2003), adolescent health survey (Nelson, Barnard, King, Hassanein, & Ropoff, 1993), and physical health exam form designated for the purpose of this study. In addition, an author-developed profile was developed to collect data regarding the demographic and personal characteristics of the children. The analysis showed that the majority of the children were males (74.8%, n = 2998), while female children represented 25.2% (n = 1010). The age of participants ranged from 6 – 16 years with mean age of 13.1 years. In regards to school children, the study showed that about 15.7% of the children in school are working in holidays and 6.7% working during school time. While there were 52.2% of the school children who reported not working at all. Moreover, the analysis showed that most of school children are working in the field of services (32%), while most of the nonschool working children are working in the field of vehicle repairs (26.5%).

In addition, the analysis showed that most of the working children are satisfied about their work condition ever with a mean working hour of 39.7 hrs a week and a mean wage of 23 Jordanian dinars per week.

On the other hand, the results showed that school working children were the highest to report common cold, visiting their doctors for a health complains, and visiting emergency department during the past month. While about 31.2% of the nonschool working children have teeth complains, and that 25% of them have vision complains, while 53% have headache complains, and 5% hearing problems, and enuresis. Moreover, the analysis showed that nonschool working children do complain from psychological and social problems. The results showed that 24% of them suffer loneliness, 27% suffer depressed feeling, 36% suffer home problems, 24% suffer problem with their employers, 14% have legal problems,

and about 44% of them spend most of their time alone. Whereas these children have also involved in risk behaviors as 43% of them were smoking cigarettes some time and 19% reported that they always smoke cigarettes.

Regarding forms of child abuse, about 35.8% of the nonschool working children reported being abused from their fathers, 18.2% from their employers and 14.4% from their mothers. While the psychological abuse was lower among fathers and higher among employers and mothers. The most reported form of psychological abuse was insulting the child. While mothers were the most reported persons to neglect their children and the reported proportions of fathers and employers were almost equal.

Regarding the differences between children in their physical healthy, the analysis showed that there is a significant difference between the four groups of children in regards to frequency of common cold, flu, and visiting doctor for health complains. Nonschool working children were the most to report these problems, then those children who work holidays and then who work and study at the same time. While all blood investigation showed almost equal reading and within normal ranges. However the school working children had the lowest reading in hemoglobin. There were also four children with positive hepatitis A; two of them nonschool working and the other two are school working children.

Whereas, almost all values of Ferritin were normal except for two schools- working children and two nonschool working children had the Ferritin level below the normal range. In addition, the physical examination showed that all children in the four groups have almost the same physical complains. In almost all physical examination items there were less than 5% of the children complaining from physical deteriorations. The most reported problems were related to skin and teeth, and that was more apparent among nonschool working children and school working children.

Using the strength and difficulty questionnaire, the analysis showed that school working and nonschool working children have the highest reports of psychological problem, lowest scores in the ability to express anger, and the lowest score in the ability to control anger. The analysis showed that there was a significant difference in between children in anger as trait and anger expression. In particular, the nonschool working children had the lowest score in anger feeling and expression. While in regards to coping efficacy, the analysis showed that nonworking children had the highest ability and efficacy to cope with their problems, while school working children had the lowest ability and efficacy to cope with their problems if continued in the future.

In conclusion, working children whether at school or left schools suffer a number of physical and psychosocial problems, and involved in number of risk behaviors, had several physical problems, and have been abused and neglected in different forms. Although there were not differences in laboratory and physical examination, the exam showed that the nonschool working children have the lowest level of health care, and have the highest reports of physical problems than their counterparts at the schools. Therefore, there is a need to provide an appropriate health care for children whether they are at school or left school through systematic health check up for children. Efforts have to be geared toward increasing awareness among families especially those who have low level of education to the importance having their children pursue their education instead of sending them to workshops and industrial sites. Also there should be more emphasis on the education system and school environment.

Curricula and school environment have to consider the child mental and emotional needs, and schools have to develop their teachers capacity and skills to use an appropriate teaching strategies and to respects and dignify their students. Decision and policy makers have to consider and enhance the

dialogue at the school setting and avoid using all forms of abuse against children at school settings. Researchers are also required to conduct qualitative and field studies that investigate reasons for leaving schools and reason or work. Parents and children have to be included in such studies. Public, nongovernmental and international institutions have to collaborate to eliminate child labor and propose practical solutions for families, employers and society. There should be a review to all laws and regulations that are related to child labor to make them effective and influential. This requires collaboration between all parties who are concerned about the impact of child labor whether those who plan or implement programs and laws.



1.1 Introduction

The work of children is considered as one of the most important issues that were addressed in the social context. In the past, this issue was seen as an evidence of fertility in the community or as a natural effect of the industrial revolution. The presence of the machine gave the rationale to the employment of children as they can deal with such instruments as the adults. This was a clear evidence of the exploitation of children for profit-making in the hands of cheap labor. The ILO (2008) estimated that there are at least 351.7 million working children around the world. In Jordan, the Department of Statistics estimated that in 2007/2008 the number of working children was 32,676 children. This has led to the emergence of recent studies concerned with the negative consequences of child labor, which concluded that child labor have negative impact on growth, development, education and health of working children.

1.2 Study Problem

Child labor is considered as one of the main social problems that affect the Jordanian community. Child labor has physical and psychosocial impact on child's health, growth and development. Child labor has a negative effect on the child's physical, affective, and cognitive development. Children's inexperience and emotional immaturity result in lowering children's ability to recognize and assess potential risks, and affect their ability to make appropriate decisions. In addition, they are unable to balance between benefits and risk of their works making them vulnerable to higher risk incidence due to these works. Due to the limited information and research studies regarding the impact of child labor, having this study will allow for better understanding for the problem and will increase our knowledge about the psychosocial and physical impacts of the child labor in the Jordanian community. In addition, there is limited number of studies in this field. In addition, the available studies have not investigated precisely and comprehensively the psychosocial and

physical impacts of child labor, and have just limited its focus on a specific group of working children or have use a small sample sizes that do not represent the population of working children. This led to limited understanding of the real consequences of the problem. Therefore, the research Advisory Committee of the Combating Exploitive Child Labor through Education Project recommended after reviewing the projects and the Jordanian studies related to child labor that there is a necessity for a specialized study looking at the impact of child labor, particularly the physical, psychological and social impacts. This was also consistent with the limited number of global studies on the physical, psychological and social impact of child labor. Thus, this study came to address this issue and to provide better understanding for the problem through investigating the nature of child labor in Jordan and identify those possible effects of child labor such as the physical, psychological and social ones.

1.3 Significance of the Study

This study is focusing on a group of Jordanian population forming one of the largest sectors of the Jordanian community, and those are children at the age of 6-16 years. In particular, those who are working and at high risk for physical, psychological and social health consequences as a result of the work they do. The significance of this study can be summarized as follows:

1. The previous studies have not been accurately and comprehensively investigating the physical, psychological and social consequences of child labor, and have limited their scope to specific category of working children or have used a small sample that is not representative. This led to a lack of thorough understanding of the problem of child labor.
2. There is a growing global interest in studying and understanding the psychological and social consequences of child labor, particularly, with the increased economic and social problems such as the financial crisis and wars, which contributed to raise the poverty

level in the world. Poverty, as demonstrated by previous studies, is the most important reason of child labor in the world.

3. This study is the first of its kind in Jordan, in terms of scientific methodology that used to compare the psychological, social and physical consequences of child labor among children who left school, those school working children and school non-working children. This comparison allows revealing reliable information and conclusions.

4. The study was conducted on a national sample representing children from different governorates of Jordan. This allows making better comparisons and understanding of the problem of child labor and the impact on children's physical, psychological and social health for the purpose of revealing and finding better solution for the problem.

Therefore, this study came to identify the problem of child labor in Jordan and its impact on the child's health and wellbeing that will allow for better planning. As well as developing prevention programs and modifications in the Jordanian laws and regulations related to child labor.

1.4 Objectives of the study

The overall purpose of the study was to identify the physical, psychological and social impact of child labor in Jordan. The specific objectives were:

1. Assess and describe the nature of child labor in Jordan
2. Identify the psychosocial and physical health impact of child labor in Jordan
3. Determine the Types of abuse imposed on working children, whether by the family, the employers or by society as a whole.
4. Compare the physical and psychosocial health between nonschool working children, school working children, and school nonworking children.

2.1 Introduction

In this part the theoretical aspect of the study, and previous studies on child labor and the impact of work on the health of working children in terms of physical, psychological, social health will be discussed. Then we discuss ways that was proposed by previous studies to combat child labor and ways to deal and reduce child labor.

2.2 Concepts of the study:

Child: defined as all persons under the eighteen years of age (the UN High Commissioner for Human Rights United Nations, 1989).

Child labor: there is no agreement on the definition of child labor, but there are some definitions that can be proposed. The ILO defined child labor as "economic activities practiced by children under the age of twelve" (ILO, 2008) or is "any type of work deprives the child of his childhood, ambition, dignity, and cause damage to the physical and mental development "(ILO, 2004). Or any type of work that is harmful on the level of physical and mental, social and ethical for the child and that affects the level of education and deprives him of the opportunity to go to school and learning, or force him to work long hours (ILO, 2004). The latter definition is consistent with the definition of Bequele & Boyden (1988), who pointed out that child labor refer to a state when a child is involved in exploitative economic activities that are mentally, physically, and socially hazardous (Bequele & Boyden, 1988; ILO, 1996a). Children are at risk when their needs for food, shelter, education, medical care, protection, and security are not met. UNICEF refers to these children as "children in especially difficult circumstances" (CEDC).

Activities labeled "worst forms" under Article 3(d) of C182 are often labeled as "**Hazardous forms of child labor**". The companion recommendation document for C182, R190 Worst Forms of Child Labor Recommendation, suggests that these hazardous forms of child

labor include: "(a) work which exposes children to physical, psychological, or sexual abuse; (b) work underground, under water, at dangerous heights, or in confined spaces; (c) work with dangerous machinery, equipment and tools, or which involves the handling or transport of heavy loads; (d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperature, noise levels, or vibrations damaging to their health; (e) work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises or the employer." (R190, Section II.3.a-e). (International Labour Organization, 1999).

Child abuse: are all forms of abuse or maltreatment that include physical, psychological, sexual abuse or neglect and exploitation that lead to an obvious damage or potential damage to children's health, growth and development, and dignity as a result of his working (ILO, 1999).

For the purposes of this study, certain operational definitions are propose related to the classification of children according to work status:

A. Nonschool working children: refers to children who work and have left school and did not return to school after leaving.

B. School working children: refers to children who are working and are still in school, they are working and studying at the same time and during school time.

C. Children working in holidays: refers to children who are working and are still in school, but their work is limited only in times of holidays or school holidays.

D. Non-working children: refers to children who are not working at all and are still in school.

E. Working children: refers to all children who work, whether during school time, or working in the holidays or left school. This includes A, B, and C categories.

2.3 Children's rights and requirements in international and local conventions:

Children needs are many and vary depending on child's development and growth phase. Number of studies and research conducted in this field, addressing these requirements in depth

analysis. However, one of the most important global reports is issued by the Directorate of Health in Britain in 2004, which is one of the important references that can be used as a framework. The report entitled "Every Child Matters" contains five basic necessities and those are:

1. Be healthy: This is achieved through attention to physical and mental health and through following a pattern of healthy life style.

2. Stay safe: This is achieved through the protection of children from the risks and negligence.

3. Enjoy and achieve: the child need to enjoy his life and develop the necessary skills during childhood and improve his/her academic achievement.

4. Make a positive contribution: Children should be encouraged to take actions that contribute to community building away from the heinous acts which harms the society.

5. Achieve economic well-being: to provide good economic life for the child in order to be able to achieve what he wish for in life. (Directorate of Health, 2004).

Accordingly, children have to be care of and their basic requirement has to be met. All acts and threats that hinder their growth and development have to be limited and ever prevented. No matter what these threats might be, UNICEF considers that children are in danger as long as the need of food, shelter, education, health care, and protection and security are not me. Caring about children's health contribute in giving them better opportunities in education and enhance their role in society and helping them to improve the working conditions in the future and then, and as a result, to eliminate poverty (Directorate of Children, Schools and Families British, 2009). All international conventions, without exception, emphasized the need to provide the child a life of dignity with the acquisition of all rights. This include all children's rights declared in the Geneva Declaration of the Rights of Child on 1924, the Declaration on the Rights of Child adopted by the General Assembly in November 20 / 1959 that is recognized in the Universal Declaration of Human Rights and the

International Covention on Civil and Political Rights (in particular, articles 23 and 24) and the International Covention on Economic, Social and Cultural Rights (in particular, article 10) and in the statutes and protocols of specialized agencies and international organizations caring for children. All these agreements and conventions has indicated that international organizations need to work together to protect the rights of children and considered that the physical and mental immaturity of child needs certain preventive measures and care, including appropriate legal protection before and after birth.

This statement has been also emphasized in the Declaration on the Rights of the Children. Article (2) of the Declaration on the Rights of the Child states:

1) States Parties shall respect the rights set forth in the present Convention to each child within their jurisdiction without any kind of discrimination. Regardless of the child or parent or legal guardian, color, sex, language, religion, political or other opinion, national origin, ethnic or social origin, property, disability, birth or other status.

2) States Parties shall take all appropriate measures to ensure the child is protected from all forms of discrimination or punishment on the basis of the status and the child's parents or legal guardian or by family members, or their activities, expressed opinions, or beliefs. Also Article (6): 1) States Parties recognize that every child has the inherent right to life. F) States Parties shall ensure to the maximum extent possible the survival and development of children. Article 34: States Parties undertake to protect the child from all forms of sexual exploitation and sexual abuse. For these purposes, States Parties shall in particular take all appropriate national, bilateral and multilateral measures to prevent:

1) The inducement or coercion of a child to engage in any unlawful sexual activity.

2) The exploitative use of children in prostitution or other unlawful sexual practices.

3) The exploitative use of children in pornographic performances and materials. Add the text of Article 36: States Parties shall

protect the child from all forms of exploitation prejudicial to any aspect of well-being of the child. These materials are all established rights of the child are related to what can be produced on the work of the child from receiving a denial of these rights.

moreover, the international efforts as well as stipulated in the ILO Convention on the Worst Forms of Child Labour and Immediate Action for the Elimination of child labor (No. 182) in June 1999. Article (3), stipulates:

"The term" worst forms of child labor, refers to the following:

- A.** All forms of slavery or practices similar to slavery, sale and trafficking of children, debt bondage and serfdom and forced or compulsory labor, including forced or compulsory recruitment of children for use in armed conflicts.
- B.** Use of a child or procuring or offering for purposes of prostitution or the production of pornography or for pornographic performances.
- C.** Use of a child or procuring or offering to engage in illegal activities, particularly the production of drugs as defined in the relevant international treaties and trade.
- D.** The work that is likely to lead, by its nature or the circumstances in which it is carried out to harm children's health, safety or morals.

In Jordan; the Jordanian Labor Law No (8) for the year 1996 and the amendments made to it, banning the employment of children and juveniles. Article (73) banned employment of children and juveniles in harmony with ILO Convention No (38) for the year 1973 that defined the minimum age for employment which was ratified by Jordan in 1997, also in harmony with ILO convention No (183) for the year (1999) as we have mentioned previously related to the Elimination of the Worst Forms of Child Labour, ratified by Jordan in the year (2000) and the Convention of the Arab Labor (No. 18) for the year 1966 on the employment of juveniles.

2.4 Child labor

2.4.1 Child labor in the world

The International Labor Organization (2008) estimated that there are at least 351.7 million economically active children in the world (210.8 million between aged 5 to 14 and 140.9 million aged 15 to 17). Nearly 170 million of these children are involved in hazardous work (111 million aged 5 to 14; 59 million aged 15 to 17). An example of this dangerous work is clear in the report published by the Bennett, Hodne, and Sherer, (2004) who found that 70% of children working in agriculture in the world are at risk of equipment, sharp instruments, pesticides, carrying heavy loads, exposure to extreme heat and cold, and lack of water more than children who work in other economic activities. The main difference between the work of children in developed countries and developing countries is that the work of children in developed countries is a part-time and within the conditions and work in environment that is less hazardous compared to developing countries. While children in developing countries work due to poverty, children in developed countries are working to gain money, to help in their study, and in purchasing personal requirements (ILO, 2004).

2.4.2 Child labor in Jordan

In Jordan, the Department of Statistics in its report for 2007 / 2008 has estimated the number of children working in the Kingdom to be 32,676 children in the age group of 5-17 years, which is equal to 1.8% of all children in the Kingdom in this age group (Department of Statistics, 2008). The capital city of Amman was the most attractive for working children as 32.4% (n = 10 593) children were working in Amman. While the rest of working children were distributed in all other governorates of the Kingdom. The report showed that 78.8% (n = 25764 children) working in urban and 21.2% (n = 6912 children) working in the rural areas. This show the cities attract children for work more than rural areas do for certain economic reasons. About 91% (n = 29302 children) represented the percentage

of the Jordanian children, while the rest of 8.2% were children belong to other Arab nationalities, and 0.8% (258 children) only non-Arab nationalities. The survey further indicated that the most important reason for child labor is to achieve additional income for the family (38%) and 87% of them were satisfied with their work and most of them working in the repair of vehicles (36%) and agriculture (27%) (Department of Statistics, 2008).

The phenomenon of working girls in Jordan are rare with an estimated rate of employment among girls in the age group (5-17 years) less than 0.5%. In general, the proportion of male workers who are between the ages of 5-17 years was 3.2%. The average monthly income for children is about 85.75 dinars and 52.7% gave their income to the parents or guardians, 23.8% have purchased things for their own, 12.5% have purchased things for family and 5.1% paid school fees (Department of Statistics General, 2007).

The Jordan Ministry of Labor report (2002) showed that the majority of children working in the areas of auto repair, carpentry, blacksmithing and sales, sewing, construction and restaurants. The children working in the streets in the capital city of Amman are selling newspapers, food, and chewing gum. According to a study by Shahateet and Dabdoub (2005), the working children in 2005 are much higher than those before about ten years related to the deterioration of economic and living conditions in Jordan.

They added that the most important reason for child labor is to provide additional income for their families, and therefore, some of them resort to work in the collection of garbage and waste recyclable and sell them to stores operating in those fields.

2.5 Types of child labor

There are several types of child labor, where some of them is difficult and arduous and others is a hazard and some is considered unethical. And can be classified as the following:

Household working

Examples include taking care of younger children and doing housekeeping. The girls are more vulnerable such kind of these works than male children (Musvoto, 2007). This kind of work is the prevalent type in Asia. This could be either in the family home or in the homes of others. The difficulty of monitoring such type of businesses that girls are subject to all forms of abuse such as beating, humiliation and sexual harassment (Thijs, 1997).

Paid Employee

Here, the child works for specific wages such as working in factories or farms. For example, the presence of almost a million children in Egypt working in the cotton crops during the school holidays. But the working conditions of those children is bad, where they are beaten by the employer, and exposed to harm because of the lack of protection from pesticides that they use and they are also exposed to high temperature and worked an average of 11 hours a day (Barakeh, 2001).

The school works

this Include the use of children in school maintenance activities during the school day (Musvoto, 2007).

Coerced work

This includes the type of business of slavery and prostitution, military action, and any other illegal acts. This is the format of the worst forms of child labor (Musvoto, 2007). The International Labour Organization in 2002 reported that about 1.8 million children in the world are used for sexual purposes to satisfy the desires of adults.

Work with family (unpaid)

This includes having the child work with a family business without being paid for. Some children help their families in agricultural projects, or family owned business (Salazari, & Glasinovich, 1998).

2.6 Reasons of child labor

Previous studies have shown that there are number of reasons for child labor can be summarized as follows:

A - Poverty

Poverty is the most important reason for child labor in the world (Kenny, 1999, Bey, 2003, Gharaibeh and Homann, 2003, Matalqa, 2004, Musvoto, 2007). The reports of the Department of Statistics of Jordan for the year 2008 showed that children of poorer families are more likely to engage in the labor market than other children. This result corresponds with Gharaibeh and Homann (2003) study that showed also that the main reason of the work of children was to help the family financially, and where the head of the family is disabled due to illness, or dead, which affects the family financial status. According to Ray (2000), the higher the poverty the greater the number of hours worked by the child and less time to go to school.

Abu Hamdan (2005), in collaboration with the Information and Research Center at King Hussein Foundation conducted a study on child labor in the city of Irbid in Jordan. The aim of that study was to identify the characteristics of working children and their families and to identify the services available to these children and the reasons leading to their work. Interviews conducted with the children working in their premises in the central vegetable markets, shops and garages in the streets, using the interview method with children and their families, employers and professionals in the governmental and non-governmental institutions. The results showed that the main reason to work from the perspective of working children is the economic situation; a child said "I am working to get money to help myself financially and in order to give some money to my mother to buy us our daily needs. No one is there to help us but me and God." Parents of these children reported that the main reason that forced them to ask their children to work is the lack of income for the family, while official in governmental and non-governmental institutions mentioned that the main reason for child labor is poverty, unemployment, family problems, low academic achievement of children, and child neglect. Hence, working children and their families and professionals agreed that the main reason for child labor in Jordan is poverty.

B - Family tradition

Child labor may be considered as part of the family heritage and social pattern that affects either positively or negatively on the involvement of children in work at an early age. In some societies children help their families in their projects such as working in a shop or family business such as a farm. An example of this is that children in Thailand are working in the rice fields to help their parents, and children who help parents receive respect by members of the community, and the children who do not help their parents are ostracized from their society and are considered lazy (Flaynoy, 2002).

It should be mentioned that it is expected from children in South Africa to provide assistance to families, especially in agricultural work (Musvoto, 2007). In Jordan, children from families who raise cattle are more likely to be involved in work than children who are not (Department of Statistics, 2008).

Some parents believe that the work of some of children makes the child responsible and able to make better assessment and evaluation when they grow up, and teaching them a vocation that make them able to support themselves when they grow up (Salazari, & Glasinovich, 1998). It was found that this kind of thinking may be linked to the belief of parents and their level of education, where studies have shown earlier that the lower the educational level of parents, the more likely the child to be involved in working (Turk, 2000, Taroni, 2002; the International Labour Organization, 2004, Omokhodoin, F. & Uchendu, 2010) . Turk (2000) in her study that included 266 working children in the city of Zarqa, Jordan showed that the low educational level of parents is one of the main reasons that led to child labor. In addition, the negative perception of education among heads of the household has increased the likelihood of child labor (Quest Scope, 1999).

D - Lack of educational services

The lack of availability of educational services increased the risk of child labor (Musvoto, 2007). ILO showed that the weakness of the educational system in schools resulted

in alienating children from going to school and helps to engage children in the working environment (ILO, 2004). This is in line with the study carried out by Abu Hamdan (2005) that found that the most important reasons for working children to leave the school is the bad behavior of teachers, teaching methods and the use of severe punishment. A child in that study said "that the teachers treated us with arrogance, not smiling, using bad words, and hitting us with their feet and hands" (Abu Hamdan, Team Center for Information and Research, 2005). Hence, we found that prevention of child labor may be associated with improving the quality of education and create an encouraging school environment. This will constitute a barrier to involve children in work through reducing the chances of leaving school and reducing children school dropout.

E - Lower wages for children

Low wages of children is one of the main reasons for attracting children to work, where employers and parents attract children to the labor market because they gain the lowest wages. Children are unable to identify the appropriate wages for their works. Children workers receive a salary equivalent to half of that for the adults and these results in increased demand for hiring them (ILO, 2002). According to Abbood (1997), the low wages for children was one of the main reasons for attracting children to work. The study conducted by Maraqa (1999) titled "child labor in Jordan society" and aimed at identifying the reasons for child labor in Jordan found that, and according to employers, that children are more likely to learn faster than the adults and that children accept to work for longer period of time with less wages that adults do.

F. Society perception to child labor

The society image has great influence on child labor. Lack of concern and knowledge of the society regarding the impact of child labor have contributed to parents and employers' exploitation of children in the adults works (Musvoto, 2007). Culture has also found to be associated with child labor. In societies where culture limits women's work to household, children become the only resort for the families to have a financial support if parents are dead

or disabled (Ray, 2004).

G. lack of organizing and deterrent laws that eliminate child labor

The lack of organizing laws that eliminate child labor in the communities that child labor seems prevalent for reason such as poverty, the problem of child labor and its impact on the society is very apparent. Therefore, the World Health Organization in the year 2004 reported the effort of the United Nations in eliminating child labor and concluded that the lack of adequate adults' protection of working children and the lack of deterrent laws increases children vulnerability to the psychological and social risks resulted from the work itself (WHO, 2004).

2.7 Impact of child labor

The impact of work on child health may be positive or negative (Woodhead, 2004) and depends on the nature of the work. Therefore, the nature of the work determines the type of risk resulting from any given work. Therefore, the work is considered positive if the work does not affect the child's physical health and growth and does not affect school performance. These includes works like assisting parents in the home and work at holidays as these kind of works help in child growth and development, teach the child skills that contribute to developing child's social identity and giving them the knowledge to be effective in the society (International Labor Organization, 2004). Also through these work, children will have the chance to build new friendship and especially when these works require team working. Friendship is considered one of the most important factors for social support among children (Panter-Bricks, 2002). Bashiman (2000) added that if a child felt that he/she learns a skill of his work, and then for certain they will have positive perception toward their work. Previous Jordanian studies showed that 45% of working children reported that their work made them feel independent, 36% felt the sense of responsibility, 35% had improved their income, 31% learned a skill and a job, and 28% built new friendships (Abu Hamdan, Team Center for Information and Research, 2005).

On the other hand, and according to the International Centre for Education (2005), most working children do jobs that have negative effects on their health, growth and development, as well as their ability to acquire the basic skills required in the systems of capitalism and that contribute to their inability to obtain better opportunities in the future, and improve their financial income. This, in turn, increases the problem of poverty in these communities.

In general, child labor involves endangering children's health. Studies showed that number of children work in factories and mines that use industrial machinery, chemicals, requires hard work, dealing with animals and insects, and exposure to high temperature or very cold one, endanger child's health and life. Moreover, children may be used in works that have obvious life-threatening situations such as sex work, soldiers in wars, and in acts of smuggling, drugs and begging, which leads to severe direct abuse and threat of death if work is not done perfectly (ILO, 2004, Edmonds, 2007). In the United States of America for example, it was found that adolescents aged 15-17 years are prone to accidents at work twice the rate of work-related injury in adults (Center for Disease Control and Prevention, 1998).

Physical impact of child labor

The most important characteristic of child workers is the lack of personal experience and emotional maturity, cognitive and physical maturity appropriate to the type of works assigned to them. Previous studies have shown that there are clear evidence of physical effects of child labor such as physical injuries and diseases caused by malnutrition, stress and direct exposure to harm as a result of non-use of appropriate clothing (Forastierie, 1997, Graitcer, & Lere, 1998). Gharaibeh and Homann conducted a qualitative study in 2003 in Irbid city in Jordan where the aims of their study was to determine the characteristics of working children as well as to determine the extent of risks of child labor such as violence resulting from work. In this study, an interview with a sample of 41 child workers in an industrial

zone in Irbid, using the method of interview. The results of the study showed that working children have been subjected to health risks, inhalation of chemical substances, and physical wounds. The results showed also that these children were subject to verbal violence and physical abuse (61%) and sexual (8%) abuse. The researchers' recommendations included that the health professionals, especially doctors and pediatricians are required to protect these children, as well as the need to strengthen legislation and strategies to help these children who suffer from social and financial difficulties. The Department of Statistics (2008) reported that 40.8% of working children suffer from some types of diseases and injuries as a result of work and most of these problems are severe

exhaustion, wounds and superficial injuries. A study by Hadi (2000) using random sample of 4643 children aged 5-15 years in 150 villages in Bangladesh found that about 20% of the sample is working and that about 12% of child workers were beaten by their employers. Another study by Saif (2006), which aimed to identify the phenomenon of child labor in Jordan and to identify risks of child labor, the results showed that 4.1% of working children reported that they suffer from coughing and shortness of breath, headache, pain in the eyes, and that working children are at risk for inconvenience, carrying heavy loads, and stand for long periods. It is worth mentioning that these children are not familiar with the impact of these risks to their health. About 4.7% of these children reported that they had suffered verbal abuse from the employer. In addition, previous studies have shown that the hard work of the child may lead to increased pressure on the bone and can cause damage to the skeletal system and affect the growth and development later on life (The U.S. National Council for Scientific Research, 1998). These results are consistent with the findings of what Hawamdeh and Spencer (2003) found in their survey of 135 child workers in the area of Irbid, Jerash, and north of the Jordan Valley. The main purpose of their study was to investigate the impact of child labor on children's development,

especially the impact of child labor on height, weight and Body Mass Index (BMI). They found that child labor has a negative impact on growth. In addition, the International Labor Organization (2008) reported that child labor causing problems in sleep, central nervous system, and intelligence.

In regards to work environment, it was found that work environment is adversely affecting physical health of child workers (Mathews, & Iacopino, 2003, Melissa, 2003, the Department of Statistics of Jordan, 2008). The Department of Statistics of Jordan (2008) reported that 20.8% of children are working in dusty environment, 19.3% working in a cold environment or a very hot, 13.4% exposed to noise, and 11% carrying heavy loads. In another study carried out by Kayyali (2006) on a sample of 80 children, entitled "Health impact of Child Labor in the job of car repair" in the area of Ein Al-Basha in Al-Balqa Governorate in Jordan, found that 77.7% of working children are exposed to chemicals, and 69.4% carrying or transporting loads relatively large. While, Alhilalat (2003) found that children working in the city of Petra are exposed to health risks and work injuries such as heat stroke, exhaustion, and pain in the abdomen and back wound, fractures, and hits by the animals they use.

Work in mining, construction and agriculture is considered of the highest reported injuries among all types of child works (Kebebew, 1998). Previous international studies showed that the probabilities of absorption of chemicals, and lead in children are higher than in adults, especially in children working in agriculture that makes them vulnerable to number of diseases more than others (Melissa, 2003). The results are supported by a study conducted by Physicians for Human Rights to find out the work condition, the social and educational circumstances of child workers in cotton crops in India 2001, followed by an interview with 100 children. The study showed that 88% of working children were girls, and aged between 7-14 years. Children work about 12 hours a day, and 88% of working children work to pay family debts. The study also showed that these children at risk for insecticides, did not get protective clothing, and as a result of pesticides children were suffering from headaches, fatigue, and

skins and eyes allergies. Working children in the repair of vehicles in the study of Kayyali (2006) reported that they were suffering from symptoms as a result of working in an unhealthy environment as 60% of them have skin problems, 58.8% have headache, 42% have problems in the skeletal system, and 35% have respiratory problems.

The U.S. National Council for Scientific Research (1998) reported that that child labor increases the chances of disease and the risk of cancer, especially children who are exposed to chemicals in the working environment. Moreover, negative effects of child labor include abuse of all forms, including sexual ones. The sexual abuse of children, especially girls affects negatively and significantly child's health (Woodhead, 1998), making them vulnerable to the risk of physical problems and diseases such as AIDS, moral, psychological health problems, and risk behaviors (Musvoto, 2007). It is worth mentioning that the sexual abuse of children also affects their relationship with others, and ability to build trust relationship with the community and self-confidence. This would increase the probability of aggressive behaviors against the community. Studies have also showed that sexually abused children find it difficult to engage in school as they feel rejected by their teachers and colleagues (Woodhead, 1998). Accordingly; these children have to be considered and motivated to be engaged in the social school activities, and better supportive conditions should be created for these children at schools.

Psychosocial impact of child labor

While most national and international studies focused on physical effects of child labor, studies neglected the psychosocial impact. Boyden, Leng and Mayers (1998) reported that working children are more vulnerable to psychological and social risks than of physical ones. The reason is that children lack the physical power and authority to do their jobs, their work is often not seen as productive, and they are at the lowest grades and levels of all workers (Woodhead, 1998). In a study used the deductive methodology in Ethiopia to determine the impact of child labor on psychological and mental health of children

through the use of a random sample of 258 working children at age of 5-15 years, working in their homes, streets, hotels, restaurants, and shops, compared to 4472 non-working school children. The results showed that working children have had mood disorders, anxiety and stress more than non-working children.

Also the study found that psychological and behavioral problems are evident among working children compared to non-working children. The study recommended that the government and community institutions who are aware that work constitutes a danger to the childrens' development making them vulnerable to psychological problems more than others, should make an effort to reduce child labor as a priority on their agendas (Fekaday, Alem, Hagglof, 2006).

As child labor may negatively affect children to adapt their behavior in the society, Matalqa in 2004 conducted a study using a sample of 104 working children in the streets in Jordan, who used to sell chewing gum, crackers, or collected recycling materials. The main objective of the study was to investigate the phenomenon of street children; reasons, impact on children's health, and social adaptability.

The study concluded that these working children have low adaptive skill, low level of physical health, and tend to use certain unwanted social behaviors. Dmour (2006) maintained that smoking, using obscene words, using alcohol and direct exposure to inhalants are the most reported reckless behaviors among working children.

Psychological and social risks of child labor can be summarized as follows:

- Social isolation and weak emotional connectedness (Woodhead, 2004).
- Risky behaviors such as crime, use of drugs and narcotics (Taroni, 2002). This was supported by the study carried out by Gharaibeh and Homann (2003) who found that there were five children among the 41 child workers who reported abusing drugs.

- Emotional abuse and lack of fair treatment, including physical and sexual abuse (Woodhead, 2004). Child's neglect especially in domestic work, affects children wellbeing and making them vulnerable to psychological problems. Children who are neglected and discriminated feel isolated and have less emotional development than non-working children in the same age (Stegmann, 2003, Musvoto, 2007).

- Bullying, intolerance as well as rejection from colleagues and relatives (Woodhead, 2004).

- Lack of job security and vulnerability to financial exploitation.

- Inability to match between schools and work that causes anxiety, concentration problems and ineffective coping (Woodhead, 2004).

It was found that the physical environment and hazardous chemicals in the workplace can affect the psychological and social development of children. For example, the exposure of children to chemicals such as lead adversely affects the growth of the nervous system and this affects the psychological wellbeing of the child (Banks, Ferretti, & Shuccard, 1997; Lewendon, Kinra, Nelcler, and Cronin, 2001). The work of the child in an unhealthy environment such as the presence of the noise and inappropriate ventilation in addition to the lack of safe tools put children under pressure. Work injuries may lead to serious permanent disability that negatively affecting the child psychologically, and may lead to isolation and feeling of powerlessness (Woodhead, 2004). There is an association between emotional and physical abuse. Woodhead (1998) reported that working children are beaten by their employers. Whereas, Stegmann (2003) adressed that exposure to emotional abuse is not limited to employer as working children are exposed as well to all forms of abuse by teachers in the schools and their parents. In addition, child workers are also exposed to forms of sexual abuse. Children who feel lack of power and authority are vulnerable to serious forms of sexual abuse, particularly the female workers. Freyed (1996) asserted that children are

exposed to sexual abuse from people whom children believe that they are a source of confidence and trust. Culture plays a significant role in reporting sexual abuse. A child who is sexually abused in some communities is subject to feel of shame, as well, by his family and never treated as a victim but as an offender (Baker, and Dwairy, 2003). Therefore, families tend to remain silence and not to report sexual harassment and abuse, fearing social punishment of ostracism and shame by the members of their community. Previous studies also showed that working children suffer problems in thinking and attitudes toward the future that may contribute in developing negative perception of their life (Turk, 2000).

The impact of child labor on academic achievement

The debate on child labor is essentially related to rights of children to education. The work deprives the child of education and that leads to a reduction and lack of access to better job opportunities later on life. The second goal of the millennium Development Goals for the year 2015 (Millennium Development Goals [MDG]) postulates that "for all boys and girls have the right to complete basic education, which is achieved through the elimination of child labor or by an appropriate adaptation of education systems." This idea is very significant as it propose the idea of not allowing the children to leave schools that will grantee better job opportunities in the future and limit the problem of poverty in such communities. The ILO (2008) reported that the most reported reason for school delinquencies are poverty, low academic achievement, and parents perceptive toward children education.

Number of studies showed that there is a negative impact of child labor on education (Heady, 2000, Sanchez, 2002, Mathews, & Iacopino, 2003). Heady (2000) has made a study in Ghana in 2000 to examine the effect of child labor on the educational achievement of children. It was found that the educational attainments of children who work and study simultaneously are less than children who are studying only. The researcher

attributed the low academic achievement to child's exhaustion, lack of follow-up, and drop out (Heady, 2000). In support of these results, the Sanchez (2002) found that educational attainment in mathematics and languages of working children was less than non-working children, and leaving school had negative effect on the psychological wellbeing of working children. In the study conducted by Mathews and Iacopino (2003) in India, a 13 years working female worker stated "when I see children who are in the same age go to school I feel I lost something and I feel bad about myself, and I expected that my future will better off by going to school." Other studies showed that child labor increases the rate of illiteracy and the proximity level of education among girls, which have significant impact on the next generation. As few of non-educated parents send their children to school, the problem of child labor is expected to worsen, which predicts an increase of employment opportunity for children and this leads to the continuation of this problem among these families (Parker and Bachman, 2001).

2.8 Elimination of child labor

The entire previous studies, which focused on working children and tried to find solutions to the problem, had an agreement on methods for elimination of child labor. Recommendations can be summarized as follows:

1. Prevent child labor through the implementation of the law and penalize employers especially when child labor is in hazardous areas (Braizer, 1998). In the Convention (No. 182) year 1999, the International Labor Organization listed number of works that endangers child's life and those are: slavery, child trafficking, forced labor, prostitution (sex work) and drug trafficking. Jordan is considered a pioneer in this field. Jordan has endorsed many conventions issued by the United Nations Declaration of the Rights of the Child in 1995. In 1996, the law raised the minimum age for employment from 13 years to 16 years old. But there is still a need to work on strengthening the law and the use of sanctions for offenders who exploit children in harmful works.

Therefore, this study is expected to strengthen legislation on the elimination of child labor. According to the Jordanian law, the employer need to obtain written consent from the father of the 16 to 18 years old child before their employment, and they should have a birth certificate and a certificate of absence of disease. A violation for the law required to pay a fine of (100-500) Jordanian Dinars (equivalent to 140-700 U.S. \$). Moreover, the Jordanian laws prohibit child's employment in dangerous works such as child prostitution, and prevent trafficking in children (Shahateet and Dabdoub, 2002).

2. Research studies are required to provide us with key information about the problem, its impact, and the necessary measures to solve the problem (ILO, 2004). So this study came to identify the magnitude of the problem in Jordan and its impact to propose better planning and solution for the problem.

3. Ensuring compulsory basic education to encourage children to go to school. Compulsory education and the development of supportive laws will enable elimination of child labor and increase school attendance (Weiner, 1990). In Jordan, the tenth paragraph of the Education Act No. 3 of Jordan for the year 1997 that the basic education is free and compulsory for Jordanian children. Although the enrollment rates in Jordan are high (95%), the percentage of enrollment of working children is less than non-working ones especially among older children. For example, the enrollment rate among male children at age 16 - 17 years is 88.6% among non-working children and 23.2% among working children (Jordan Department of Statistics, 2008). The National Council for Family Affairs is currently conducting a project to eliminate child labor through education, through cooperation with CHF international, Quest scope, and the Ministry of Labor.

4. Working children should be encouraged to go to school. This can be achieved by improving the quality of teaching, training teachers, increase number of schools, and developing curricula that focus on mental, social, psychological and social wellbeing of

students (ILO, 2004; Ray, 2007; Rosati, & Rossi, 2007).

5. Work on the registration of all births that will regulate access to schools and control child labor (Braizer, 1997).

6. Giving priority of work for adults, and not for children (Braizer, 1997).

7. Focus on the media to raise community awareness regarding negative impact of child labor, and encourage governments and employers to apply the international rules and regulation of child labor recommended by the International Labor Organization (ILO, 2004).

2.9 Summary of literature

Previous studies have shown that child labor has negative effects on the child's physical, psychological, and social health. Among the most important reasons of child labor is poverty and low income of the family. Most of the studies have emphasized the need to improve education system and find practical solutions for economic problems.

It is important to mention that most of the previous studies used small sample size that may not be representative, and through focusing only on working children. Those studies also attempted to identify the health status and symptoms by asking the child rather than conducting a physical examination by a professional health care provider. This study came to increase our knowledge about the problem and its consequences on children's physical, psychological, and social health. The study is using representative sample based on a scientific research and using the method of comparison between working children and non-working children who are studying and working at the same time.

2.10 Key Concepts in the study

2.10.1 Demographic and personal characteristics

This refers to information related to children such as age, gender, type of work, the benefits

of work, information on the type of work, the behavior of the employer, family size, income, housing, type of residence, place of residence, source of family income, parents education and work, the desire to pursue education, the child's desire to work, and child's satisfaction.

2.10.2 Health concerns

This includes information related to general physical health such as diseases, public health complaints, admission to hospital, visits to clinics and hospital emergency units. These data will be collected through the health screening questionnaire (Constantino, and Bricker, 1997).

2.10.3 Coping efficacy

Defined as "response made by a child when exposed to a stressful situation leading to a deliberate action to organize the emotional, cognitive, behavioral, physiological status, and environment." (p. 89). The efficacy referred to the ability to use the appropriate coping mechanism. Coping efficacy will be measured in this study using the coping efficacy scale (Sandler, 2000) that measures the children's ability to manage their problem and their level of satisfaction for the coping strategies that they have used to cope with their problem.

2.10.4 Anger

Is a response to severe emotional and disturbing real or expected stimulus (Thomas, 1998, p. 121). In this study, anger will be measured using anger expression scale in children (Steele, 2009), which is divided to four main domains: anger as trait, internal anger expression, anger control, external anger expression.

2.10.5 Psychological and social difficulties

Refers to a set of psychological and behavioral disturbances that includes symptoms related to affection, emotions, reckless behaviors, hyperactivity / inattention, relationship with friends, and social behaviors. In this study will be study of psychological difficulties

will be measured by strength and difficulty questionnaire in children (Goodman, 2003).

2.10.6 Health concerns and risk behaviors

Refers to child's feelings and concerns related to mental health, as well as all behaviors that the child is doing and that can be classified as risky behaviors (physical, psychological, social, and sexual). In this study, adolescent health questionnaire will be used to measure health concerns and risk behaviors (Nelson, Barnard, King, Hassanein, & Ropoff, 1993).

2.10.7 Physical health

Referred to all information related to children's physical health obtained through laboratory testing and clinical examination. This method will allow identifying problems and physical health status of the child. A specific format has been developed that allow conduction of physical exam for the child from head to toe. In addition, a blood sample extracted to identify the blood cell counts, level of Ferritin, and hepatitis A

3.1 Design of the study

A cross-sectional explorative design was used to collect data from working and non-working children using a multi-sectorial approach. Information related to child's physical, social and psychological health collected using structured questionnaires. Data collected by trained research assistants at the industrial, non-industrial work sites, and schools in five governorates and three Palestinian refugee camps in Jordan. Data were collected during the period between 02/07/2010 to 05/05/2010.

3.2 Study Population

The population of this study is children who are working whether left the schools or still at schools. In addition, the same age group of children who are at school and not working. The age of the children ranged from 6-16 years at the time of the study. According to the report of the Department of Statistics for the year 2007/2008, the number of Jordanians working children are 29 302 children spread over all governorates of the Kingdom. Among them, about 32% were in Amman alone and the rest distributed on other governorates of the Kingdom. It was noted that child labor in Jordan is concentrated in five governorates and those are Amman, Irbid, Zarqa, Balqa, and Ma'an. For the purposes of comparison, one of the objectives of the study was to have a sample of children who are not working, therefore, a sample of nonworking children have been recruited from schools in Jordan. A stratified random sample recruited from various public schools in the five governorates mentioned above, percentages represent the distribution of working children in the Kingdom. In addition, a sample of Palestinian refugee children from Palestinian refugee camps' schools in Jordan and that included children work in the industrial areas in these camps have been recruited.

3.3 Study Sample

For the purposes of this study, two types of sampling method were used. The Multi-stage sampling method that was chosen allowed selecting the sample in series of sampling techniques.

After selecting the five governorates, which represent the highest percentages of working children, sample recruitment was as the following:

- First the directorate of the Ministry of Education has been selected randomly.
- Then, schools have been selected randomly from the selected directorates.
- Then, classes have been selected randomly from the selected schools.
- Then, a sample of students have been has been selected randomly from the selected classes according to sample size.

Thus, according to two rules: First, the distribution of child labor in the governorates and the second the distribution of population according to the report of the Department of Statistics for children aged 6-16 in the governorates mentioned; sample has be selected randomly to achieve the designated sample size. The target sample per governorate was as the following: 32% from Amman, 15% from Zarqa, 19% from Irbid, 7% from Balqa, 2% from Ma'an.

In regards to the sample size of working children, it was calculated as follows: according to the insights of researchers in the field of statistics and social studies, the use of larger sample gives greater representation to the population of the study. Therefore it is recommended to use a larger sample as possible. Therefore, the accuracy of the representation of the study population increased the sample and as a result the accuracy of the result increases. Others suggest that a sample of (5-10%) of the total study population is generally representative to the population. Taking into account that the size of the population of the study is about (30,000) working children, 5% will represent about (1500) children and 10% is equal to (3000) children. Therefore, at least 1500 child were estimated as the sample size, and at least 3000 children for the comparative sample. The selection of the sample has also considered the male-female ratio as about 90% of the working children are males and 10% of the working children are females, according to the report of the Department of Statistics (2007/2008).

Sample size of the medical examination and laboratory group

To verify that the sample was representative and in order to give credibility to the study, then statistical program (Survey System-Creative Research Systems) was used to calculate the representative sample. Accordingly, the sample is required to obtain the power of .08 with statistical significance equal to .05, two tailed level of significance and Effect size of .30, it was necessary to have at least (117) children in each of the comparison groups, and this comes from the equation by adjusting the interval to (.375) and the probability of type-I to .05, and the biggest difference can occur between groups is equivalent to .375 with standard deviation of 1.0 and a effect size of 0.177.

Regarding selection of the sample, convenience sample technique was used to recruit children who agreed to participate in the study and who were interviewed in the factories, repair shops, and those working in the streets (only selling, not begging). The goal was to reach the sample size desired within the time period for the collection of data in the study, which was three months.

Regarding the sample of the Palestinian refugees; three male and three females schools were selected randomly among all male and female school in the camps. In coordination with the Department of Palestinian Affairs and UNRWA, schools were selected randomly from a list of schools in the Palestinian refugee camps, and were:

1. Albaqaa camp.
2. Jerash camp.
3. Zarqa camp.

According to the total sample calculated, it was required to have at least 10 students from class 1-10, and thus, the total sample of the children from the refugee camps was: $10 \times 10 \times 6 = 540$ children, and this figure was calculated from total sample required.

3.4 Data collection procedures

- First, research assistants have been trained to collect data using the designated survey. The training included the procedure and the ethical consideration, and subjects rights in research. The principal investigator took the responsibility to train the data collectors during the data collection phase and the pilot testing phase. Note regarding the strength and weaknesses of the data collectors has been considered and the language errors and problems have been used to check the validity and reliability of the tools.

- Official letters have been sent to all stakeholder and those are:

- Schools: the Ministry of Education has been contacted to have their permission to collect the data from the randomly selected schools, and to assign a person to serve as officers to facilitate approaching students at the classes.

- Refugee camps: the Palestinian affair agency has been contacted to have their permission to collect the data from the randomly selected schools, and to assign a person to serve as officers to facilitate approaching students at the classes.

- Then, the research team contacted the selected schools. 20 students have been approached from each class that was selected randomly from grade 1 to 10 in collaboration with the officers from each of the selected school. 10 students have been approached from the Palestinian refugee camps' school.

- Students interviewed in three groups. Group 1 were students in grade 1 – 3, group 2 were student in grade 4 – 6, and group 3 were students in grade 7-10. The total sample were [(20X 3) = 60] student per group in the governmental schools and [10X 3 = 30] students in the refugee camps.

- Research team clarified the purpose of the study and what is expected from the children and what type of questions are they expecting.
- The initial screening included that the research assistant identified the working status of the child and then they conduct the interview in a place designated by the school facilitator.
- Among those agreed to participate in the study, a convenience sample used to recruit a sample of both groups; the working and non-working children. A pediatrician and family physicians conducted the physical exam and a registered nurse took the responsibility to withdraw blood from the children at the schools setting.
- Children who participated in the physical exam have been compensated with 3.0 Jordanian Dinnar.

In Details Data Collection Were As The Following:

1. Written approval from the Ministry of Education was obtained, and the schools that were selected randomly, were contacted to set an appointment for the purposes of data collection.
2. The principal researcher clarified the purpose of the study to the facilitate data collection.
3. One class has been selected randomly from each grade.
4. Consent forms have been handed to the randomized selected children in randomly selected classes. The cover letter asks the guardian (or at least one of them) to sign the consent form for their child's participation in the study Consenting conducted into two phases:
 - a. Consenting for the participate in the first phase, that include conducting the interview of the psychosocial health (appendix 1.1)
 - b. And then another form sent for those who agreed and signed the first form, approve for the children participation in the second phase that include the physical and the laboratory examination (appendix 1.2).

The consent form includes information related to the purpose of the study, its importance, and importance to the child's health, and that the information in the study will be confidential and no one will have access to the information except the research team. Also the cover letter ensured that the information will be used only for the scientific purposes. The cover letter mentioned that a compensation of 3 JD will be paid to children who will participate in phase 2 as an expression of gratitude for their participation and approval for giving a blood sample. Also the letter mentioned that they will not afford any cost related to blood testing and medical examination, and in case any of the participants hurt due to procedures of the study the research team will make the appropriate referral. The letter included contact information for the National Council for Family Affairs and the principal investigator PI. In case the parents are illiterate or cannot read and write, they were recommended to call the PI to answer all their questions.

5. Then, the letter has been sent with all students at the class to increase the response rate among the participants to allow sufficient sample size to be selected randomly.
6. The research team returned in the time and date agreed upon with the children and coordinators of the schools to conduct the interview and collect data from children whose parents have agreed their participation
7. The random sample was withdrawn from each class and in groups of classes (1-3, 4-6, 7-10) and each group separately.
8. If the randomly selected child did not have the approval from his guardian, another child was selected. The process continued until desired sample size reached.
9. Researchers clarify the objectives of the research for children in a manner commensurate with their age and stage of mental development.
10. Data were collected using the interview by the researcher, whom worked to ask the question and fill answers. The children from the age of 14-16 filled the form by themselves in the presence of researchers.

11. Then, the research team returned later to the school and distributed the consent form to those children who have participated in phase one to get their guardian approval to participate in phase two. They, the research team returned to the school on the time and date agreed upon with the school coordinator to conduct the medical exams and to withdraw blood samples from children who have their approval from their guardian. Medical exam was conducted by competent pediatrician / family physician and the blood withdrawn by a registered nurse.

12. After the completion of all required data collection and the work of the clinical examination and blood sampling, the child was handed over an amount of (3) JD in presence of the coordinator of the school in a closed envelope.

13. Data then was entered using statistical program (SPSS-15). All data has been kept in a closed cabinet, accessible only by research team. The blood sample was sent to the ministry of health's central laboratories (based on prior agreement) and entered using the statistical program (SPSS-15).

Regarding the convenience sample, which represents nonschool working children targeted at their working sites, the Department of Statistics 2007/2008 estimated that more than 35% of working children are employed in the car repair, 27% in agriculture and forestry, 16% in manufacturing industry, and 8% in construction.

Procedure of data collection for these children was as follows:

1. The research team conducted field trips to industrial zones, shops, industrial workshops, and factories successively starting from the city of Amman ending at the city of Ma'an and the Palestinian camps.

2. Hence, research team sought help from the Ministry of Labor for the purpose of facilitating the work of researchers in cooperation with the inspectors who had the experience and knowledge about child labor location.

3. The research team obtained the approval from the employers to talk to the child and

the children were handed the consent letter to be delivered to their parents/guardians that included a call for them (or at least one of them) to consent their child's participation in the study. The consent form included information related to the purpose of the study, its importance, and importance to the child's health, and that the information in the study will be confidential, and no one will have access to the information except the research team. Also the cover letter ensured that the information will be used only for the scientific purposes. The cover letter mentioned that a compensation of 3 JD will be paid to children who, participate in phase 2 as an expression of gratitude for their participation and approval for giving a blood sample. Also the letter mentioned that they will not afford any cost related to blood testing and conduction of medical examination, and in case that participant hurt due to procedures of the study, the research team will make the appropriate referral. The letter included contact information for the National Council for Family Affairs and principal investigator. In case the parents are illiterate or cannot read and write, they were recommended to call the PI to answer all their questions.

4. The letter was sent with all eligible children to maximize the participation and to have the highest possible response rate that allow for random selection of the children for the purpose of the study and for the medical examination later.

5. The research team returned on the time and date agreed upon to conduct the interview and collect data from children whose parents approved their participation.

6. Similar to school children, Medical exam conducted by competent pediatrician / family physician and blood withdrawn by a registered nurse at the work site.

7. After the completion of all required data collection and the work of the clinical examination and blood sampling, the child was handed an amount of (3) dinars in the presence of the employer/guardian.

3.5 Instruments of the study

In order to achieve the objectives of this study, a survey has been designed to meet the

purposes of the study (see Appendix 2). The survey included multiple measures that include all aspects of health that are:

The psychological aspects.

- 1 - Social isolation.
- 2 - Somatic complaints.
- 3 - Social problems.
- 4 - Anger expression
- 5 - Personality problems
- 6 - physical and psychological abuse from parents/ employer/teacher
- 7 - sexual abuse of a parent/employer/ teacher
- 8 - child neglect

A. The physical aspects:

- 1 - Physical health and complain.
- 2 - Risk Behavior.
- 3 - Clinical physical/medical examination (from head to Toe).
- 4 - Medical history if possible.
- 5 - The following laboratory tests:
 - 1 - Complete Blood Counts (CBC)
 - 2 - Ferritin
 - 3 - Hepatitis type A

Personal and demographic characteristics of the child

An author- developed profile has been designated for the purpose of collecting information regarding the demographic and personal characteristics of the children. Information collected in regards to: age, gender, type of work, the benefits of work, information on the quality of work, the behavior of the employer, family size, income, housing, type of residence, place of residence, source of household income, parents' attitudes toward education and employment, the motivation to pursue education, the motivation for work, child's satisfaction with work. In addition, a designed form for medical/physical examination was developed for the purpose of the study.

To measure the psychosocial aspect of the child, a standardized measures have been used and those are:

1. Health Screening Questionnaire (Constantino & Bricker, 1997)

General health was measured using the

Health Screening Questionnaire (HSQ) (Constantino & Bricker, 1997). The HSQ is a 21-item self-report measure of medical and surgical history; visits to health clinics, health providers, and hospital emergency, inpatient, and outpatient departments; and general health assessment. Responses for almost all questions are either yes or no, with the exception of the last question which asks, "In general, would you say your health is..." and the response ranges from excellent (1) to poor (5). The scale has good internal consistency, with a Cronbach's alpha coefficient of 0.88. In this study, the Cronbach's alpha coefficient for the total scale was 0.83.

2. Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1999)

The SDQ is a highly structured and widely used instrument to assess emotional and behavioral problems. The SDQ consists of 25 items describing positive and negative attributes of children and adolescents that can be allocated to 5 subscales of 5 items each: the emotional symptoms subscale, the conduct problems subscale, the hyperactivity-inattention subscale, the peer problems subscale, and the prosocial behaviour subscale. Each item has to be scored on a 3-point scale with 0='not true', 1='somewhat true', and 2='certainly true'. A total difficulties score can also be calculated by summing the scores on the emotional symptoms, conduct problems, hyperactivity-inattention, and peer problems subscales (range 0-40). The Cronbach coefficient for the total scale was 0.73. The Arabic version of this questionnaire is available online <http://www.sdqinfo.com/questionnaires/arabic/g7.pdf> was used in this study.

3. The Coping Efficacy Scale for Children (Sandler et al, 2000).

Coping efficacy was measured with a 7-item scale developed by Sandler and colleagues (2000). The measure assessed students' beliefs about their ability to handle problematic situations. The Cronbach coefficient for the total scale was 0.74 (Sandler et al., 2000). To achieve optimal accuracy in Arabic, and to safeguard the reliability and validity of this tool, established guidelines for translation were used (Brislin, 1970). Translation of the

scale from English to Arabic was completed by a professional translator. A second translator translated the Arabic version back to English. Next, the original English version was compared with the back-translated English version. No error in meaning was found. To assess the feasibility and to determine if any modifications needed to be made prior to using the instrument pilot testing of the instruments was done. Eventually the instruments were pre-tested on 20 volunteer child workers and non-workers who were not included in the study. No major problem was identified with the questionnaire or with the interview process. A few sources of error were amended accordingly before launching the study.

4. Anger Expression Scale for Children (Steele et al, 2009)

The AESC is a 26-item paper-and-pencil measure that utilizes a four-point Likert response format (almost never, sometimes, often, and almost always) with higher values keyed to greater endorsement of the items. The scale is divided into 4 domains: Anger Expression/ Out, Anger In/Hostility, Anger Control/Suppression. This measure is reliable and valid and has been used with children at age 6-18 years. A relation and back translation by the research team and professional linguistic following norms of translation and has been adapted to the Jordanian community and culture.

5. Adolescent Health Inventory (Nelson, Barnard, King, Hassanein, & Ropoff, 1993).

Adolescent Health Inventory (AHI) used to measure health concerns and risk behaviors. AHI is an instrument to determine the health needs and concerns of adolescents and consists of 39 questions grouped for reporting four categories: general health, psychosocial, substance abuse, and sexual behaviors. Responses made on a Likert scale and ranges from never (0) to always (3). AHI has good internal consistency with Cronbach's Alpha ranges from .52 to .80 across categories. In this study the internal consistency had almost similar Cronbach's Alpha to those reported and ranged from .54 (sexual behaviors) to .74 (psychosocial concerns).

6. Physical Examination and Blood Remarks

physical and laboratory examination form has been developed by the research team allowing head to toe examination of the children. In

addition, a blood sample was taken to test for the complete blood counts, hepatitis A (which is transmitted through oro-fecal mode and may demonstrate the level of care physical and hygiene in children), and Ferritin.

Reliability and validity of the measured was tested as follows:

1. Preparation of the tool in Arabic by the research team.
2. After evaluating the tool at various stages; tools were evaluated by panel of expert.
3. The tools then have been evaluated by the advisory research committee at the National Council for Family Affairs.
4. The tools then have been modified in light of notes and discussions with the Advisory Committee.
5. The introduction of the final the final notes were also obtained from the advisory committee that match the purposes of the study.
6. A pilot test conducted on 30 school, students working and nonworking.
7. Modification to support validity and reliability of the measure.
8. Modifications also done based on notes from the research team and data collectors in regards to clearance and simplicity of the tools.
9. Reliability and validity testing conducted.
10. Final modifications done to the tools.

3.6 data analysis

After collecting data using the designed survey of the study, statistical program (SPSS-15) was used to conduct the statistical analysis. Descriptive statistics of central tendency and dispersion measures were used to describe and determine the levels and indicators of mental health, social and physical indicators of the participants and compare these results with their counterparts. Also inferential statistics (ANOVA), t-test, and chi-square were used to compare the three groups, as well as, the correlation coefficient (Pearson r) was used to examine association between the variables of the study. Statistical significance have been identified and set to 0.05.

4.1 Demographic characteristics

4.1.1 Sample Distribution

The study included (4008) children at age between six and sixteen. Sample collected from five cities and three Palestinian refugee camps. Table 1 (a) shows the distribution of the sample by governorates and work status. The city Of Amman formed the largest percentage of participants (34.0%, n = 1363), while (19% n = 763) of the children were from the city of Zarqa, Irbid (15.8%, n = 634) children, Balqa (12.9%, n = 516) children, and Ma'an (5.5%, n = 220) children. Children from the Palestinian refugee camps represented (12.8% n = 512). These figures represent the totals of the number of children in the sample as a whole and which included the school and nonschool children whether working or not

Table 1a: Distribution of sample according to the governorate and the status of work

Governorate	Working and studying		Working in holidays		Nonschool working		Nonworking		Total	
	%	n	%	n	%	n	%	n	%	n
Amman	7.7	105	29.9	407	29.6	404	32.9	447	34.0	1363
Irbid	3.5	22	9.6	59	27.1	172	60.1	381	15.8	634
Zarqa	7.2	55	10.4	79	28.0	214	54.4	415	19	763
Balqa	1.2	6	7.9	41	27.1	140	63.8	329	12.9	516
Maan	0	0	2.7	6	17.3	38	80.5	176	5.5	220
Refugee Camps	15.6	80	7.0	36	10.0	51	67.4	345	12.8	512
Total	6.7	268	15.7	628	25.4	1019	52.2	2093	100	4008

Regarding the sample size for school children, as shown in Table (1a), (74.6%, n = 2989 children) of the total sample were school children, compared to (25.4% n = 1019) working children. By governorate, the table also shows that the city of Amman has the highest percentage of school children (23.9%, n =959 children), then Irbid and Zarqa and Balqa, and then Maan.

The nonschool working children as shown in table (1b) formed 25.4% of the sample (1019 children). It was the city of Amman in this category that had the highest percentage of children (39.6%, n= 404 children), then was the city of Zarqa (21.0%, n = 214 children), Irbid, Balqa, and Ma'an. The Palestinian refugee children formed about (5%, n=51 children) of a sample of working children. Noting that the sample of working children was convenience one, which means that the sample included only those who agreed to participate in the study and thus do not represent the actual number of working children in the areas mentioned.

Table 1b: Distribution of working children by region

Governorate	Nonschool working	
	%	n
Amman	39.6	404
Irbid	16.8	172
Zarqa	21.0	214
Balqa	13.7	140
Maan	3.7	38
Refugee Camps	5.0	51
Total	25.4	1019

4.1.2 Gender

In regards to gender of the children, the majority of participants in the study were males (74.8%, n = 2998 children), while female children accounted for (25.2%, n = 1010 children). Regarding the state of the working among the nonschool working, the majority of working children were males (96.6%, n = 984 children), while female children represented (3.4% n = 35 children). Regarding status of work among the school children, the majority of working children were also males (29.4%, n = 878 children), while female school working children were only (0.006% n = 18 children).

Regarding the relationship between gender and work status, the analysis showed using the statistical analysis (Chi 2) that there is a statistically significant difference between males and females in relation to working status (chi square = 956.6, p <0.001). In other words, working children, whether in school or not, were mostly males, as the study showed that 21% of males working for 0.005% of females.

4.1.3 Age

The respondents' age ranged from 6-16 years. This actually was planned as an eligible criteria for targeted population (see table 2). The average age of the children in general was 13.1 (SD = 2.5) and median was 14 years. The analysis also showed that 25% of the sample was under the age of 12 years, 25% were above the age of 15 years which means that 50 % of respondents were between the ages of (12-15) years. The school children had a mean age of average age 12.7 years (SD = 2.64), and median of 13.0 years. 25% of the sample were under the age 11 years, 25% were above the age of 15 years which means that 50% of the sample was between the ages of 11-15 years. The nonschool working children had a mean age of 13.4 (SD = 1.7) and median of 15 years. 25% of the sample was under the age of 13 years, 25% was above the age of 16 years which means that 50 % of a sample was between the ages of 13-16 years.

Table 2: Age of children

Variable	Mean	SD	Median	P ₂₅	P ₇₅
Total sample	13.1	2.5	14	12	15
School children	12.7	2.6	13	11	15
Nonschool children	14.3	1.7	15	13	16

The statistical analysis (ANOVA) showed that there is a significant difference between non-working children and working children. This means that the non-working children and working children differ in terms of average age. As mentioned above, the average age of working children is higher than the average age of the non-working children of ($F_{3,3966} = 2.6, p < .001$).

4.1.4 Working Status

The study showed that 15.7% of the total study sample are working children in holidays, 6.7% are working during school time (working and studying), 52.2% do not work at all, and that 25.4% of children are working only (nonschool working children). Regarding gender of child, (see table 3), the results show that 56.4% of the male children do not work, while 98.1% of female school students do not work. In contrast, 30.6% of male school students working in holidays, 13% work during school time, while 1.2% of females working in holidays and 0.6% working during school time. Regarding the nonschool working children, (96.6%, n = 984 children) were males, while (3.4% n = 35 children) were females.

Table 3: school children in regards to working status

Gender	Frequency and percentage	Working status			Total
		Working and studying	Working in holidays	Not working	
Males	n	262	616	1136	2014
	% male	13.0	30.6	56.4	
	% working status	97.8	98.1	54.3	
Females	n	6	12	957	975
	% male	.6%	1.2	98.1	
	% working status	2.2%	1.9	45.7	
Total		268 (9.0%)	628 (21.0%)	2093 (70.0%)	2989

4.1.5 Type of work

As shown in table 4, most of the working children are generally employed in the services sector (32%, n = 567), while 17.3% (n = 307) of children are working in the vehicles repair, and (17.7%, n = 314) of the children are working in primary vocations such as carpentry and blacksmith. The lowest sector was the machines (1.8%, n = 33 children). In regards to nonschool working children, the most reported sector was vehicles repair (26.5%, n = 253 children), vocations (20.9%, n = 199 children), services (20.9%, n = 199 children), and as peddler (10.5%, n = 100 children). On the other hand, the most reported sector of working for children working in holidays was services (47.1%, n = 266 children), and vocational jobs (13.5%, n = 76 children). While, in regards to school children (working and studying), the most reported sector was the field of services (40%, n = 102 children), vocations (15.3%, n = 39 children), and as peddlers (15%, n = 38 children). Using chi-square to investigate differences between children in relation to type of work, the analysis showed that there is a statistically difference significant among children working at different levels as most of nonschool working children are working in the field of vehicle repair while school working children are working in the field of services (chi-square 269.9, p <0.001). In conclusion, most of the nonschool working children are working the field of vehicle repair, vocations and services, while school working children are working in the field of services and vocations.

Table 4: Distribution of sample according to the status of work and the type of work

Working status	Freq. & %	Total	Type of work									
			Construction	Transportation	Professional	Machine	Agriculture	Vehicle repair	Services	Primary jobs	Peddler	Vocations
Non school working	n	953	30	66	31	24	13	253	199	38	100	199
	% in working status	100	3.1	7	3.2	2.5	1.4	26.5	20.9	4	10.5	20.9
	% in type of work	53.7	52.6	64.8	47.7	72.7	26.0	82.4	35.1	36.9	57.1	63.4
Working in holidays	n	565	19	20	28	9	27	32	266	51	37	76
	% in working status	100	3.4	3.5	4.9	1.6	4.8	5.7	47.1	9.0	6.5	13.5
	% in type of work	31.9	33.3	19.6	43.1	27.3	54.0	10.4	46.9	49.1	21.1	24.2
Working and study	n	255	8	16	6	0	10	22	102	14	38	39
	% in working status	100	3.1	6.2	2.3	0	3.9	8.6	40	5.5	15	15.3
	% in type of work	14.4	14.0	15.7	9.2	0	20	7.1	18	13.6	21.7	12.4
Total		1773	57	102	65	33	50	307	567	103	175	314
		100	3.2	5.7	3.7	1.8	2.8	17.3	32	5.8	9.9	17.7

4.1.6 Type of employment

In regards to the employer, the results showed that most of working children work for their parents (38.4%, n = 709 children), or to someone outside the family (34.4%, n = 636 children) (see table 5). The analysis also showed that most of the nonschool working children working to someone outside the family (41.9%, n = 416 children), while those who work to their parents were 30.9% (n = 307 children).

Table 5: Work Status according to their employer

Working status	Freq. & %	Employer				Total
		Father and family	Relative	Friend to family	Someone outside the family	
Non school working	n	307	150	120	416	993
	% in working status	30.9	15.1	12.1	41.9	
	% in type of work	43.3	49.0	61.9	65.4	53.3
Working in holidays	n	270	123	56	148	597
	% in working status	45.2	20.6	9.4	24.8	
	% in type of work	38.1	39.8	28.9	23.3	32.4
Working and study	n	132	36	18	72	258
	% in working status	51.2	14	6.9	27.9	
	% in type of work	18.6	11.7	9.3	11.3	14.1
Total		709	309	194	636	1848
		38.4	16.7	10.4	34.4	100

As for those who work during the holidays, most of them were also working to their parents (45.2%, n= 270 children). For those who are working and studying, most of them were working to their parents (51.2%, n = 132 children). In other words, the majority of working children (school and nonschool children) are working to their parents.

4.1.7 Payment

in regards to payment from work (Table 6), the study showed that most working children were paid for their work (60.0%, n = 1116 children). The percentages for those who are unpaid or work for families are almost equal (10-11%). The lowest percentages was observed among those who have their own business (4.1%, n = 76 children). Among the nonschool working, the highest percentage observed among those who work with payment (69.3%, n=701 children) and the lowest as well as those who have their own business (2.0%, n= 20 children). Among children who work in the holidays, the highest percentage observed among children who are paid for their work (52.5%, n = 310 children), then those who are self-employed (19.7%, n = 116 children) and also in the case of children who work during school time, the highest percentage observed among children who are paid for their work (40.7% n=105 children), then those who are working with the family, without receiving payment (21.3%, n = 55 children).

Table 6: Type of payment in relation to working status

Working status		Type of payment					Total
		Paid	Owner	Self employed	Family unpaid	Unpaid	
Nonschool working	n	701	20	104	83	104	1012
	% in workers	69.3	2.0	10.3	8.2	10.3	
	% in type of payment	62.8	26.3	39.4	39.3	53.9	54.4
working in holiday	n	310	36	116	73	55	590
	% in workers	52.5	6.1	19.7	12.4	9.3	
	% in type of payment	27.8	47.4	43.9	34.6	28.5	31.7
working and studying	n	105	20	44	55	34	258
	% in workers	40.7	7.8	17.1	21.3	13.2	
	% in type of payment	9.4	26.3	16.7	26.1	17.6	13.9
Total		1116	76	264	211	193	1860
% of total		60.0	4.1	41.2	11.3	10.4	100

4.1.8 Reasons for work

in regards to reasons for work, the study revealed that the majority of children work to learn skill (41.8%, n = 784 children) while those who are forced to work represented (4.9%, n = 91 children) and those who are working to make additional income were (17.7%, n = 332 children), and the lowest percentage was for children who are working to pay debts (1.0%, n = 19 children) (Table 7).

With regard to nonschool working children, the results were similar, as the main reason for work was to learn a skills and then to help family (43.7%, n = 441 children) and (36.6%, n = 369 children, respectively. While those who are working and studying, the main reason for work was to help the family (46.6%, n = 123 children) and then to learn the skill (27.3%, n = 72 children), and then to make an additional income (16.7%, n = 44 children). For those children who work in the holidays, the main reason was to learn a skill (45%, n = 271 children) and then to help the family (26.1%, n = 157 children) and then to make an additional income (24.8%, n = 129 children).

Table 7: Reason for work in relation to working status

Working status		Reasons for work					Total
		Forced to work	Learn a skill	Helping family	Paying debts	Additional income	
Nonschool working	n	55	441	369	5	139	1009
	% in workers	5.5	43.7	36.6	.5	13.8	100.0
	% in reason of work	60.4	56.3	56.9	26.3	41.9	53.8
working in holiday	n	17	271	157	8	149	602
	% in workers	2.8	45.0	26.1	1.3	24.8	100.0
	% in reason of work	18.7	34.6	24.2	42.1	44.9	32.1
working and studying	n	19	72	123	6	44	264
	% in workers	7.2	27.3	46.6	2.3	16.7	100.0
	% in reason of work	20.9	9.2	19.0	31.6	13.3	14.1
Total		91	784	649	19	332	1875
% of total		4.9	41.8	34.6	1.0	17.7	100

Regarding the difference between the children according to the state of work and cause of work, study showed that there is a statistically significant difference between the three working groups of children (chi square = 71.1, $p < 0.001$). As stated previously, the main reasons for work among nonschool workers was to learn a skill and help the family which is similar to those working in holidays, while for those working and studying as the same time the main reason was to help family. In conclusion, the main reason for child labor, whether in school or those who have left school, were to learn a skill and to help the family.

4.1.9 Work satisfaction

As shown in table 8, most of working children feel satisfied about their work. The analysis showed that about (87.9%, $n = 1638$ children) of nonschool working children are satisfied about their work, while those who were unsatisfied were only (7.0%, $n = 131$ children) and those who are uncertain about their satisfaction were about (5.1%, $n = 96$ children). Thus, in general, we can say that working children, whether in school or left school were satisfied with their work.

Table 8: Work satisfaction in relation to working status

Working status		Work satisfaction							Total
		Very unsatisfied	Slightly unsatisfied	Not satisfied	Don't know	Satisfied	Slightly satisfied	Very satisfied	
Nonschool working	n	27	9	59	56	185	206	470	1012
	% in workers	2.7	.9	5.8	5.5	18.3	20.4	46.4	
	% in work satisfaction	75.0	60.0	73.8	58.3	57.3	61.9	47.9	54.3
working in holiday	n	7	6	11	32	100	93	346	595
	% in workers	1.2	1.0	1.8	5.4	16.8	15.6	58.2	
	% in work satisfaction	19.4	40.0	13.8	33.3	31.0	27.9	35.2	31.9
working and studying	n	2	0	10	8	38	34	166	258
	% in workers	.8	.0	3.9	3.1	14.7	13.2	64.3	
	% in work satisfaction	5.6	.0	12.5	8.3	11.8	10.2	16.9	13.8
Total		36	15	80	96	323	333	982	1865
% of total		1.9	.8	4.3	5.1	17.3	17.9	52.7	100

4.1.10 Desire to pursue education

the analysis showed that the majority of children have a desire to pursue education (60.7%, n = 1118 children), while the proportion of children who have expressed their unwillingness to pursue their education was (30.2%, n = 556 children), (9.1%, n = 168 children) of the children who is uncertain about their desire to pursue education (see table 9). In regards to nonschool working children, the majority of them do not have the desire to pursue or return to school (53.3%, n = 528 children), while those who have the desire were about (36.5%, n = 361 children), and those who have no opinion were (10.2%, n = 101 children). Related to those who work in the holidays, the analysis showed that the majority of them (89.1%, n = 530 children) have the desire to pursue their education. The lack of desire and the absence of a definite opinion represented 4.0% and 6.9%, respectively. Among those who are working and studying at the same time, the percentages were close to those who work in the holidays as the majority of them have the desire to pursue their education (88.3%, n = 227 children), and those have no desire or have no opinion were about 1.6% and 10.1 %, respectively.

Table 9: Desire to pursue education in relation to working status

Working status		desire to pursue education			Total
		DON'T KNOW	NO	YES	
Nonschool working	n	101	528	361	990
	% in workers	10.2	53.3	36.5	
	% in desire to pursue education	60.1	95.0	32.3	53.7
working in holiday	n	41	24	530	595
	% in workers	6.9	4.0	89.1	
	% in desire to pursue education	24.4	4.3	47.4	32.3
working and studying	n	26	4	227	257
	% in workers	10.1	1.6	88.3	
	% in desire to pursue education	15.5	.7	20.3	14.0
Total		168	556	1118	1842
% of total		9.1	30.2	60.7	100

The results, in general, shows that children who work and they are studying have firm desire to pursue their education, while nonschool working children do not wish to pursue their education or have lost the interest to go back to school. Therefore, learning and school environment in terms of education style and curriculum have to be emphasized and to maintain the children's desire in education. For those who have left the schools and chose the working environment, reason for their negative perception and lack of importance of education have to be studied carefully to be able to understand the reason for not believing on the importance of education, and to seek chances for them to go back to school. Therefore, there should be programs and studies to understand the reasons for the unwillingness of these children to pursue their education. Also, there should be a national plan and clear mechanism to attract these working children to schools and to create better environment at schools that may contribute to change the children's negative perception toward education and learning as a mean of life, and the better chances that education may offer them in the future.

4.1.11 Hours and start up period of working

Regarding working hours, start-up period, and wages (Table 10), the analysis showed that the average working hours for the entire sample was (39.69) hours per week (19.2 = SD) and 50% of them work (40) hours per week. The average weekly wages was about (23) JD, (50%) of them were paid (20.5) JD/week, and the maximum reached (100) dinars a week. For nonschool working children, the average number of hours worked weekly were (42.9) hours, and (50%) of them work (42) hours a week while the average wage weekly was (20.9) JD, and that (50%) of them were paid (20.5) JD weekly, and the maximum reached (100) JD /week. As for working in holidays only, the average workweek reached to (28.1) hours per week and that (50%) of them work (35) hours per week and the average wages per week was (21.1) JD, and that (50%) of them were paid (15) JD / week). regarding those school working children, the average number of weekly working hours was (33.9) hours per week, and 50% of them work (35) hours per week. Also the analysis showed that the average wages per week was (20.5) JD, and that (50%) of them paid (15) JD a week.

In regards to the start up period of working, the analysis showed that the mean number of months where children started working for the entire sample was (15.7) months, and that 50% of them started working before (10) months. The maximum start up period was (120) months. Among those who are nonschool working children, the average duration of startup period was (19.2) months and the maximum reached (120) months and (50%) of them started working before (9) months. For children working in the holidays, the average start up period was (16.9) months, while among those who work and study at the same time the start up period was (29) months and that (50%) of them had start up period of (24) months. In conclusion, children work for very long period of time and started working for a very long period of time. The figures are almost similar to adult type of working that results to deprive a child to enjoy his childhood, as well as they will be subject to psychosocial deprivation that include ability to build social relationships and friendships appropriately. In addition, the long working hours and being treated as an adult in types of works will results in physical exhaustion, fatigue and exposure to physical health problems.

Table 10: Working hours and start up period in relation to working status

Variable	Group	Mean	SD	Median	Min	Max
Working hours	Total sample	39.6	19.2	40.0	1.00	72.0
	Nonschool working	42.9	15.3	42.0	1.00	72.0
	Working in holidays	28.1	16.0	35.0	1.00	48.0
	Working and studying	33.9	21.2	35.0	1.00	72.0
Start up period	Total sample	15.7	17.7	10.0	1.00	120.0
	Nonschool working	19.2	21.4	9.0	1.00	120.0
	Working in holidays	16.9	19.4	11.0	1.00	120.0
	Working and studying	29.0	26.4	24.0	1.00	100.0
Wages per week	Total sample	23.0	17.3	20.0	.00	100.0
	Nonschool working	20.9	18.1	20.5	.00	100.0
	Working in holidays	21.1	17.9	15.0	.00	100.0
	Working and studying	20.5	19.1	15.0	.00	100.0

4.1.12 Type of Health Insurance

the analysis showed that about 51.5% of the respondents reported that they have health insurance, and (34%) reported that they don't. While about 14.5% of them do not have the knowledge if they have health insurance or not (Table 11). The non working children were the most to report that they have health insurance (65.7%, n = 1375 children). While those working in holidays and working and studying had almost equal reports (45.2%, 43.7%, respectively), and those not insured were 36.3% and 40.3%, respectively. This indicates that, generally, children do not know about their health insurance, despite of the importance of this information for children, especially those who are at the age of 14-16 years old. Among nonschool working children, the largest proportion of them had no health insurance (59.3%, n = 604 children).

Table 11: Health insurance in relation to working status

Working status		Health insurance			Total
		Don't Know	NO	YES	
Nonschool working	n	128	604	287	1019
	% in workers	12.6	59.3	28.2	100.0
Nonworking	n	294	424	1375	2093
	% in workers	14.0	20.3	65.7	
working in holiday	n	116	228	284	628
	% in workers	18.5	36.3	45.2	
working and studying	n	43	108	117	268
	% in workers	16.0	40.3	43.7	
Total		581	1364	2063	4008
% of total		14.5	34.0	51.5	100.0

4.1.13 Parents' working status

in regards to parents' working status (table 12), the analysis showed that (87.9%, n = 3291) of the children reported that their fathers are working, (82.2%, n = 2953) of the children reported that their mothers are working. For the nonworking children, most of the children reported that their fathers are working (88.4%, n = 1764 children), while about (82.0%, n = 1551) children reported that their mothers are not working. Similarly, the nonschool working children have also reported that most of their fathers are working (85.0%, n = 769 children) and that most of their mothers are not working (81.3%, n = 761 children). Regarding children who work in the holidays, about (91%, n = 537 children) of them reported that their fathers are working and about (83.5%, n = 442 children) of their mothers are not working. While for those children working and studying, (88.0%, n = 221 children) of them reported that their fathers are working and (85.0%, n = 199 children) of them reported that their mothers are not working. In conclusion, most of the non-working children and working children reported that their fathers work and their mother do not. This indicates that child labor is connected to working status of the parents. Children previously reported that they work to help their families and this is obvious here as most of the families are non-working mothers. If these children are coming from poor families then the problem of nonworking mother is solved through having their children work. Thus, child labor is an economic problem as well as a psychosocial one.

Regarding the differences between the groups of children in relation to their fathers' working status, the analysis showed that there is a statistically significant difference between the children (chi. square-12.9, $p = .006$) where the highest proportion of non-working fathers were observed among nonschool working children (15%) and then those who work and study at the same time (12.0%) then those who do not work (11.6%) then those who just work in holidays (9%). In regards to differences between children related to mother working status, there was no statistically significant difference.

In conclusion, child labor is associated with father's working status. If the father is not working, there is a great likelihood that the family will find the solution through having their children in work. Here, the child selected to be the victim due to father's disability and mothers' unemployment. Therefore, there should be a national care plan for those families where fathers and mothers are not working for certain physical disability. Having a support system and a clear national policy will enable these families not to send their children to work.

Table 12: Parents' working status in relation to children's' working status

Working status	Freq. and %	Father's working status			Mothers' working status		
		Yes	No	Total	Yes	No	Total
Nonschool working	n	769	136	905	175	761	936
	% in working status	85.0	15.0		18.7	81.3	
	% in nonworking group	23.4	30.2		27.5	25.8	
Nonworking school children	n	1764	232	1996	339	1551	1891
	% in working status	88.4	11.6		17.9	82.0	
	% in nonworking	53.6	51.4		53.3	52.5	
Working in holiday	n	537	53	590	87	442	529
	% in working status	91.0	9.0		16.4	83.5	
	% in working in holiday	16.3	11.8		13.7	15.0	
Working and studying	n	221	30	251	35	199	234
	% in working status	88.0	12.0		15.0	85.0	
	% in working and studying	6.7	6.7		5.5	6.7	
Total		3291	451	3742	636	2953	3589
% of total		87.9	12		17.7	82.2	

Financial and psychosocial care should be emphasize in any national programs as these children are coming from poor families and their work were for supporting their families financially. Moreover, legal and community programs should support women work and target those families to enhance work that may propose an alternative for child work.

4.1.14 Sources of family income

In regards to the main source of income for the family, the analysis showed that the father is the main source for the family income (64.7%, n = 2533 children) (Table 13), while about (14.2%, n = 554 children) of the sample reported that both father and mother are the main sources for family income, while children only as a source of income for a family represented (5.8%, n = 226 children) of the sample. On the other hand, children and fathers as the main sources for family income were about (7.6%, n = 297 children). Whereas, about (1.9%, n = 75 children) of the children reported that the source of household income is subsidies from government institutions and international charity organizations. This figure, however, have to be treated cautiously as children represented the source of information and these responses were never validated, and children may not have the information about all sources of income for the family. In regards to nonworking school children, most of the children reported that only the father is the source of family income (71.2% .1449 children), while father and mother together represent 15.2% of the sample. Among the nonschool working, father as the main source for family income represented about (49.7%, n = 501 children), while children only, mother and father, children and parents had almost equal proportions (11.9%, 15.7%, 11.0%), respectively. Among those who work and study, almost similar to other children (62.1%, n = 164 children) of the children reported that father is the main source of income for the family, while the father and the mother together represented (6.1%, n = 16 children), and children only as a source of family income was (9.1%, n = 24 children).

Table 13: Sources of income in relation to children's working status

Working status	Freq. and %	Sources of family (household) income								Total
		Father only	Mother only	Children only	father and mother	Father and mother and children	Relative	Welfare	Other sources	
Nonschool working	n	501	37	120	158	111	10	16	56	1009
	% in working status	49.7	3.7	11.9	15.7	11.0	1.0	1.6	5.6	
	% in nonworking group	19.8	31.1	53.1	28.5	37.4	21.3	21.3	88.9	25.8
Nonworking school children	n	1449	64	61	309	82	25	40	5	2035
	% in working status	71.2	3.1	3.0	15.2	4.0	1.2	2.0	.2	
	% in nonworking group	57.2	53.8	27.0	55.8	27.6	53.2	53.3	7.9	52.0

Working in holiday	n	419	9	21	71	63	4	17	2	606
	% in working status	69.1	1.5	3.5	11.7	10.4	.7	2.8	.3	
	% in nonworking group	16.5	7.6	9.3	12.8	21.2	8.5	22.7	3.2	15.5
Working and studying	n	164	9	24	16	41	8	2	0	264
	% in working status	62.1	3.4	9.1	6.1	15.5	3.0	.8	.0	
	% in nonworking group	6.5	7.6	10.6	2.9	13.8	17.0	2.7	.0	6.7
Total		2533	119	226	554	297	47	75	63	3914
% of total		64.7	3.0	5.8	14.2	7.6	1.2	1.9	1.6	100.0

4.1.15 The presence of parents (alive or deceased)

With regard to child labor and its relationship to their parents if they were alive or are dead, as shown in (table 14) (91.9%, n = 3650) of children responded that both parents are alive, while 5.8% children (n = 230%) reported that their fathers are deceased. With regard to school children (all groups) the reports were almost equal around 94% of these children reported that both parents are alive while (83.1%, n = 845 children) of nonschool working children reported that both parents are alive. The highest reports of deceased fathers was observed among those who are nonschool working children (10.2%, n = 104 children), deceased mothers (4.2%, n = 43 children), and both parents are deceased (2.5%, n = 25 children).

The study also showed that there is a statistically significant difference (chi square = 171.2, p < .001) among all categories of children in relation to work status. As noted above, the highest percentage of deceased fathers or mothers or parents was observed among the nonschool working children. In conclusion, 15% of nonschool working children are coming from a single parent family, mostly lost the father. Therefore, one of the significant findings in this study that child labor has to be addressed in the context of family genogram. Father was the main source for the household income as mentioned earlier, and having a deceased father means that children will take the responsibility and replace their father role in finding a financial source for the family. It is a necessity to find out and provide these families with alternatives that are persuasive to compensate for the father loss that will include financial and psychosocial interventions at all levels.

Table 14: Presence of parent (alive or deceased) in relation to children working status

Working status	Freq. and %	Parents' presence (alive or deceased)				Total
		Both are alive	Father only deceased	Mother only deceased	Both deceased	
Nonschool working	n	845	104	43	25	1017
	% in working status	83.1	10.2	4.2	2.5	
	% in nonworking group	23.2	45.2	70.5	78.1	
Nonworking school children	n	1967	84	14	3	2068
	% in working status	95.1	4.1%	.7	.1	
	% in nonworking group	53.9	36.5	23.0	9.4	
Working in holiday	n	588	28	4	2	622
	% in working status	94.5	4.5	.6	.3	
	% in nonworking group	16.1	12.2	6.6	6.3	
Working and studying	n	250	14	0	2	266
	% in working status	94.0	5.3	.0	.8	
	% in nonworking group	6.8	6.1	.0	6.3	
Total		3650	230	61	32	3973
% of total		91.9	5.8	1.5	.8	100.0

4.1.16 Household income levels

As for the of household income level as shown in (table 15), (35,8%, n= 363 children) of nonschool working children came from families with low income, while (59.8%, n = 606 children) were children of families with medium level income, and (4.3%, n = 44 children) are children of families with high level income. Whereas, children who work in the holidays were mostly children of families with medium level of income (73.2%, n = 451 children) and children who work and study at the same time were children of families of medium level of income (69.4%, n = 186 children). Related to nonworking children, they were mostly from families with medium level of income (77.8%, n = 1608 children), and very low proportion of them were of poor families (9.5%, n = 196 children).

In conclusion, school working children and non-working school children are coming from medium level of income families. Proportions of children of high level of income were almost equal among the groups. While for nonschool working children, the majority is coming from poor (36%) or has medium level of income (60%). This indicates that poverty is being emphasized as one of the main factor and contributor to child labor. Despite the inaccuracy of the information provided by the children related to their family income, children find poverty of their families is a strong justification for their work. Therefore, those who came from poor families and forced to work and leave the school are finding the work as a solution for their family financial problem. Therefore, there should be well justified and supported system that enables family to find alternatives for their financial income other than sending their children to work and leaving the school. There should be an awareness programs for families, making them aware of the fact that children who leave school lose their chances in the future to find better job and opportunities, and that the chain of poverty will continue into the future.

Table 15: Level of household income in relation to children working status

Working status	Freq. and %	level of household income			Total
		Poor	Medium	High	
Nonschool working	n	363	606	44	1013
	% in working status	35.8	59.8	4.3	
	% in nonworking group	51.9	21.3	10.6	25.5
Nonworking school children	n	197	1608	263	2068
	% in working status	9.5	77.8	12.7	
	% in nonworking group	28.2	56.4	63.4	52.2
Working in holiday	n	89	451	76	616
	% in working status	14.4	73.2	12.3	
	% in nonworking group	12.7	15.8	18.3	15.5
Working and studying	n	50	186	32	268
	% in working status	18.7	69.4	11.9	
	% in nonworking group	7.2	6.5	7.7	6.8
Total		699	2851	415	3965
% of total		17.6	71.9	10.5	100.0

4.1.17 Parents' level of education

According to information provided by children; a significant proportion of them do not have the information about their parents' level of education especially the younger ages of them (from 6-10 years). As shown in table 16 a, fathers of nonschool working children have the lowest level of education, then those fathers of children who work and study, then for those who work in holidays and the least for the nonworking children. In regards to mothers level of education (Table 16 b), the analysis showed that the least educated mothers are those mothers of nonschool working children as most of those mothers did not finish their high school level. The illiteracy rate (do not read and write) between the mothers of nonschool working children were about (15.1%, n = 132 children) and those who finished the basic were (31.4%, n = 274 children), while those mothers who have bachelor degree or above do not exceed (3.6%, n = 31 children).

Table 16a: Father's level of education in relation to children's working status

Father's level of education	Working status								Total	
	Work and study		Working in holidays		School nonworking		Nonschool working			
	%	n	%	n	%	n	%	n	%	n
Illiterate	4.2	5	3.4	18	2.8	45	11.1	102	5.4	170
Basic	30.5	36	16.9	90	16.7	264	33.2	304	22	694
high school	42.3	50	41.0	219	41.9	663	32.2	294	39	1226
Diploma	10.2	12	17.6	94	16.5	262	16.5	151	16.5	519
Bachelor	7.6	9	15.7	84	17.9	283	6	52	13.6	428
Master	5.1	6	3.6	19	2.8	45	.8	8	2.5	78
Doctorate	.0	0	1.9	10	1.3	21	.3	3	1.1	34
Total	100	118	100	534	100	1583	100	914	100	3149

Regarding the nonworking school children, about (15.3%, n = 252 children) of them reported that their mothers have the bachelor's degree or higher, while illiteracy (not read and write) among them was (4.2%, n = 69 children). On the other hand, the proportions of children working in holidays and children working and studying at the same time were almost equal and clustered between high school and diploma level. The illiterate mothers of children working in the holidays was about (4.1%, n = 22 children), while for those working and studying the proportion was (8.9%, n = 11 children) (Table 16b).

Table 16b: Mother's level of education in relation to children's working status

Mother's level of education	Working status								Total	
	Work and study		Working in holidays		School nonworking		Nonschool working			
	%	n	%	n	%	n	%	n	%	n
Illiterate	8.9	11	4.1	22	4.2	69	15.1	132	7.3	234
Basic	21.8	27	14.9	80	15.5	256	31.4	274	20.0	637
high school	37.9	47	44.4	239	45.3	748	35.3	308	42.1	1342
Diploma	21	26	21.6	116	19.8	327	14.7	128	18.7	597
Bachelor	9.7	12	10.2	55	13.0	215	3.1	27	9.7	309
Master	.9	1	3.7	20	1.5	24	.5	4	1.5	49
Doctorate	0	0	1.1	6	.8	13	0	0	.6	19
Total	100	118	100	538	100	1652	100	873	100	3187

4.1.18 Family size

regarding children's family size (Table 17), the analysis showed that there is a statistically significant positive correlation between child labor and the size of the family ($r_{bp} = .07, P < .001$). This means that the larger the family size the larger the likelihood to have the child enrolled in work. In particular, most of the working children are coming from families with large size. This means that larger family size will lead to greater probability that the child leaves the school and choose to or forced to work. The study showed that the majority of working children, whether in school or left the school are children of families of more than five children.

Table 17: Family size in relation to children's working status

Working status	Family size							Test statistics	
	< 4 member	5 members	6 members	7 members	8 member	9 members	> 10 member	r_{bp}	p
Working	6.5	11.6	22.3	22.4	16.1	10.4	10.7	-.07	< .001
Nonworking	7.7	8.0	18.3	22.3	15.0	10.1	18.6		

4.1.19 child's birth order

Regarding birth order of the child and its association to child working status, the analysis showed that there is no statistically significant relationship between birth order and child working status (working versus nonworking) (table 18). This means that working and nonworking children are not different in their order in the family using Kendall's tau b test statistics. The birth order for working children is between first and third. However, when studying the differences between children depending on the status of work (nonschool working, working in holidays, working and studying and nonworking), the analysis showed that the birth order for most of nonschool working children was between the first and sixth (77.5%) while birth order for most of children working in the holidays were between the first and the third (65%), and birth order for most of those working and studying were between the first and fifth (83%). In conclusion, the working and nonworking children do not differ in their birth order, although most of the working children are the older children among their siblings, in general.

Table 18: Birth order in relation to children's working status

status Working	Birth order						Test statistics	
	First	2 nd	3 rd	4 th	5 th	6 th or younger	Kendall's tau-b	p
Working	20.8	21.4	17.8	14.4	9.9	15.7	.053	.03
Nonworking	21.8	16.6	18.7	14.1	9.4	19.4		

4.1.20 General discussion

The argument about child labor is based on children's rights, as work will deprive children from receiving professional and vocational education that prepares them for better opportunities in the future. As the childhood experience affect the individual's points of strength and forms his weakness; theories of psychology have emphasized that childhood is the fundamental stage in life that forms the adult character in all aspects; physical, cognitive, affective, social and moral. Recently, and during the past few decades, there is an increased concern to children's rights especially in the field of child labor. This concern was due to the international community efforts to provide and support all possible procedures and intervention to protect their children from risk of work and their psychosocial and physical health impact. To achieve the second goal of the Millennium Goals for 2015, it is required that child should receive enough education and this will not be possible unless child labor eliminated. Jordan, like other countries, is seeking to achieve the best possible life for their children especially in the field of education. Therefore, this study came to reflect the efforts of the National Council for Family Affairs to identify the psychological, social and physical impact of child labor in Jordan. In addition, the study sought to identify forms of child abuse that the working children may experience in the work place or at home. The study used a sample of four groups of children that include all possible level of child work. The study compares the nonschool working children to school working children and school nonworking children. The study used the explorative approach to collect data from 4008 children in five main governorates in Jordan representing the child labor in Jordan.

In general, the study showed that most of working children are male, and that female workers represented only 3.5% of the total working children. As well as the study showed that 21% of school children are working and studying at the same time or in holidays. This ratio exceeds the reports of the Department of Statistics for the year 2008 that showed that female workers represent .05% of

the total number of working children. Hence, national survey prepared by the Department of Statistics (DOS, 2008) used a nonrandom sample of working children and this study used a convenience sampling technique. Similar to DOS (2008) and report of the Ministry of Labor (2008), this study found that most of working children are in the field of services especially school working children, while the majority of nonschool working children are in the field of vehicle repair and vocational jobs.

Male children are more likely to leave school and join work market. The majority of working children are at the field of services and vehicle repair.

The study also found that the main reason for the work of school children is to help the family and to learn a skill, while nonschool working children reported that their main reason for work is for learning a skill. The report of nonschool working children is contradicted with the main reason for leaving the school. Children left school because they are coming from poor families and they wish through work to help their families. Thus, inherently, helping families is the main reasons for work; however, this was not what children reported. This indicates that children have a perception that they are learning a skills thorough joining work market and this is highly appreciated and prioritized in relation to helping family. This may also due to the invaluable amount of contribution that child do out of his work. And that he is working not to help the family as much as to lessen the burden of family form and extra financial load (which is the child at school). Therefore, children value skills learning rather than the amount of money they make. Nevertheless, the statistical analysis showed that working children belong to poor families that have large family size and parents with low level of education. This make child's work an important source of income for these families and that the child may not be aware of this situation. This is also expected as the children are still developing and they did not have the enough cognitive skills to be able to analyze the situation appropriately.

The main reason for the work of school working children was helping their families and the main reason for the work of nonschool working children is to acquire (learn) a skill.

The results of this study correspond with several previous studies (Gharaibeh and Hoeman, 2003 and Abu-Hamdan, 2005) where these studies showed that the main reason for child labor is to assist the family financially. This study has shown also that working children are from poor families, mostly from families of large size, families rely on child work for financial support, and families lost at least one of the parents. This concludes that working children are coming from families that have very difficult socio-economical situation. Therefore, there should be certain national procedures and policies to help these families aiming at improving the economic situation of the child and the family, and developing productive projects to improve the status of work for heads of households, which helps to reduce child labor. The study showed that parents of nonschool working children have the lowest level of education, then were the parents of children who work and study at the same time. The results of this study corresponds with a previous national study (Turk, 2000) which pointed out that the low level of education for parents is one of the most important reasons that contributed to child labor.

The working children come from poor families that depend on their working child to improve their income. As well as, child labor is associated with parents' level of education. Fathers of nonschool working children have the lowest level of education among all groups of children in this study.

In addition, the study showed that most of school working children are working for their parent or families, while the nonschool working children are working for someone outside the family. This may lead to a conclusion that these children are treated as adults and may results in depriving those children from their normal development; socially, psychologically, and cognitively. Also this may give some explanation for the forms

of abuse they are experiencing. Therefore, there should be a follow up for those children. Those children lose all possible means of communication, social relations, social support, and feeling of security and safety. Especially with long working hours which reported to be in average up to 43 hours weekly, in addition to the low payment they receive that was about 20 JD a week. However, the majority of children were satisfied about their work and their working environment. Those who were dissatisfied were very few compared to those who are satisfied. This may indicate that children are not aware of their rights and they don't have the mental capability to evaluate their working situation. In other words, children feel that their work is great and being workers give them false perception about the benefits of work although wages are very low. Thus, having a job for these children considered as an achievement regardless of its consequences and that they appreciate the low wages they receive, as this little amount of money may meet some of their needs that they are deprived from in their families. The equal proportion for those who have the desire to pursue their education and those who are not, create an urgent need to reevaluate the school environment, teaching styles, incentives of learning, and curriculum building. Programs have to be developed to target families and children and increase their awareness to the importance of education, and that education is the only mean for having better professional and vocational opportunities in the future that will improve their socio-economic class of the family. In addition, there should be an effective monitoring system for school delinquents, drop outs, and legal and ethical rules and regulation to mandate basic education for all children; males and females.

4.2 Health screening survey

Concerning health problems experienced by children in this study, the results (Table 19) showed that school working children had the highest reports of common colds, visiting doctor for a health problem and visiting emergency department (66.4%, 44.6 %, 17.7%, respectively). While, non-school working children and school working children had the highest reported incidence of influenza (27%, 27.6%, respectively). While admissions to hospitals were reported mostly by nonworking school children (7.6%), and school children who work in holidays (7.2%).

Table 19: Physical complaints in relation to children working status

Variable	Work and study		Working in holidays		Nonschool working		nonworking		Test statistics	
	%	n	%	n	%	n	%	n	χ^2	p
Common cold	66.4	85	62.8	389	51.2	559	64.1	1332	54.3	<.001
Influenza	27.6	35	22.8	140	27.0	293	20.2	419	20.3	<.001
Checked your doctor for a health problem	44.6	58	35.2	216	20.2	220	35.5	730	93.4	<.001
Visited an emergency department	17.7	23	13.5	83	12.7	138	14.3	295	3.2	.37
Admitted to the hospital, even for one night?	4.3	12	7.2	44	6.0	65	7.6	156	3.7	.30

4.2.1 Health concerns and risk behaviors

In regard to health concerns and risk behaviors, the analysis showed that working children are suffering health problems, and they are at risk to these problems due to their exposure to factors that increase the likelihood of these physical problems (Table 20 a).

4.2.2 Physical health concerns

The study showed (table 20 a) that (31.2%, n = 316) nonschool working children had sometimes problems in teeth, and (24%, n = 244 children) had problems in vision, and (53%, n = 534) children suffering variable levels of headache, and (5%) experiencing problems in hearing or enuresis only.

Regarding nonworking children, the analysis showed that they do not differ much from working children in terms of health concerns and behaviors and risk factors. The results showed (Table 20 b) that about 60% of the nonworking children have dental problems. As well as in the case of a headache, 17% of them are suffering headaches most of the times (the responses ranging from often to always). While 24.4% had problems in vision, 11% in hearing, and 5.7% had the problem of enuresis.

Reports from children working in the holidays only and those who work and study at the same time (table 20 c) were different to certain degree from those nonschool working and similar to those who are nonworking. The study showed that about 69% of them have dental problems, 65% suffering headache, 33% had vision problem, 13% had hearing problems, and about 5.5% had enuresis problem.

4.2.3 Psychosocial health concerns

Regarding the psychological and social concerns, the analysis (Table 20 a) showed that there were significant number of nonschool working children suffering from psychological and social problems. The study showed that 24% of them suffer from the loneliness, 27% from depressed feeling, 36% problems at home, 24% problems with the employer, 14% problems with the law, and about 44% spend most of

their time alone. However, 87% of the children reported that they have intimate friends, which is considered as a positive indicator for social wellbeing.

Regarding psychological and social concerns, the analysis (table 20 b) showed that among nonworking children about 32.8% of children suffer loneliness, 22.8% suffer from depressed feelings, 30.9% had problems at home, 26.6% had problems in schools, and less than 5% had problems with the law. In social terms, about 89% of the children reported to have an intimate friend. However, there is some contradiction in children's reports. Whereas 89% reported having intimate friends, about 51% reported that they suffer loneliness that can be interpreted and linked to the psychosocial problems that the children reported at home and at school which might influence their feeling of loneliness.

Regarding psychological and social concerns of children working holidays and those who are working and studying at the same time (Table 20 c), the results were almost similar to those nonworking children and non school working children. The analysis showed that about 40% of children feel lonely, and 36.5% reported that they have depressed feeling, 38.3% suffered from problems at home, 34.6% suffered from problems at school, and 9% had problems with the law. Also about 89% of children reported that they have intimate friend, 69.7% of them responded that they always have an intimate friend. Moreover, and similar to those nonworking and nonschool working children, 60% of children reported that they almost spend their times alone. This leads to the conclusion that children in this age group feel lonely and psychological disturbed due to problems at school, home and with the law although they have intimate friends.

4.2.4 Risk Behaviors

Related to risk behaviors (table 20 a); the general reports of the nonschool working children were variable. While 43% of them reported that they smoke (19.1% of them are

always smoking), 82% reported that they do not use unprescribed medication, and more than 95% live with parents who do not use alcohol or drugs, and (38%, n = 422 children) reported that their parents are always smoking.

However, 79% of the children reported that they have the information about the harmful effect of smoking and alcohol, while 39.6% reported that have been told about these harmful effects. Regarding using drugs, (97.3%, n = 948 children) reported that they do not use any type of drugs and that (1.6%, n = 16 children) did have used these drug. Although the percentages of non-using is small, this percentage is alarming.

Related to risk behaviors among non-working children (Table 20 b), 5% of them reported that they smoke, of whom 2.7% smoked occasionally and 2.3% of them smoke often to always. Moreover, the study showed that 14% of them use drugs not prescribed by a physician and 2.1% of them reported that one of his parents uses alcohol / drugs. On the other hand, 49% of the children reported that their fathers smoked cigarettes and 56% of them reported that they had received information about the harmful effects of smoking and alcohol. The study also showed that (1.5%, n= 26 children) of children reported that they use drugs, and this percentage, although is small in terms as percentage and proportion, the harmful effects of drug use makes this figure alarming for critical situation in the future.

Related to risk behaviors among children working in the holidays and those who work and study at the same time (table 20 C), about 16% of children reported that they smoke, of whom 8% always smoking. About 15.4% of them use unprescribed medication. About 2.7% of the children reported that their parents use alcohol/ drugs, and 49% of them reported that their fathers smoked cigarettes (31% are always smoking). However 60.7% of children reported that they have been told about the harmful effect of smoking and

alcohol, and 2.7% (n = 22 children) did report that they have used drugs such as hashish and marijuana which is also an alarming figure among this group of children.

4.2.5 Sexual health concerns

Related to sexual health concerns (table 20 a), about 32.4% of the nonschool working children suffer from acne problems, about 50% can find information about the sexual relationship (intimacy), about 38 % of them had a physical sexual relationship, and only 46% of them self examined their genitals.

Related to sexual health concerns among nonworking children (Table 20 b), 31.6% of them reported that they are suffering from acne, 19% reported that they can find information and pictures about the intimate sexual relationship, 5.7 % of the females and 15.9% of males had physical sexual relationship, and 18.5% of them self-examined their genitals. Here we should mention that there was very low response rate for answering the questions related to sexual concerns. One explanation might be related to the sensitivity of these issues in the Arabian culture. About 55% and 54% of the females and male respectively agreed to answer the sexual concerns questions, while 80% of the children (both males and females) agreed to answer the genitalia self examination.

Related to sexual health concerns among children working in holidays and those working and studying at the same time, 36.9% of children reported that they suffer from acne problems, 31.4% of them can find information about the intimate sexual relationship, 33.5% of them self examined their genitals, and 26.4% of males stating that they have a sexual relationships with females.

Table 20a: Health concerns and risk behaviors among nonschool working children

Variables	Never		Sometimes		Often		Always	
	n	%	n	%	n	%	n	%
Physical health concern								
I have problems with teeth	539	53.2	316	31.2	92	9.1	67	6.6
I have problems with the vision	770	75.9	161	15.9	42	4.1	41	4.0
I have hearing problems	929	91.7	63	6.2	10	1.0	11	1.1
I have night bedwetting (enuresis)	958	95.3	36	3.6	7	7.0	4	4.0
I had headache	475	47.1	420	41.6	81	8.0	33	3.3
Psychosocial health concerns								
I feel lonely	762	75.9	169	16.8	43	4.3	30	3.0
I feel depressed	737	73.1	182	18.1	57	5.7	32	3.2
I have problems at home	643	64.2	261	26.0	72	7.2	26	2.6
I have problems in school / at work	764	76.3	175	17.5	39	3.8	23	2.3
I have trouble with the law and the police	866	86.3	70	7.0	21	2.1	46	4.6
I have intimate friends	133	13.3	140	14.0	237	23.7	492	49.1
I spend times alone	569	56.8	295	29.4	87	8.7	51	5.1
Risk behaviors								
I smoke cigarettes	571	56.6	128	12.7	116	11.5	193	19.1
I use non-prescribed medication and drugs	821	82.0	140	13.9	24	2.4	17	1.7
My parents use alcohol/drugs	946	95.4	23	2.3	10	1.0	13	1.3
My father smoke cigarettes	361	37.5	47	4.9	133	13.8	422	38.0
I was told about cigarettes and drugs	209	20.7	165	16.3	236	23.4	400	39.6
I use drug such as hashish and marijuana	948	97.3	10	1.0	10	0.1	6	0.6
Sexual health concern								
I have acne	648	67.6	209	21.8	72	7.5	29	3.0
I can find information and pictures about sexual relationship between couples	438	50.5	238	27.5	103	11.9	88	10.1
Male: I have a special relationship with females more than just words	253	62.0	93	22.8	30	7.3	32	7.8
I check my genitals	515	54.2	203	21.3	119	12.5	113	11.9

Table 20b: Health concerns and risk behaviors among nonworking school children

Variables	Never		Sometimes		Often		Always	
	n	%	n	%	n	%	n	%
Physical health concern								
I have problems with tooth	787	38.1	738	35.7	274	13.3	267	12.9
I have problems with the vision	1558	75.6	265	12.8	99	4.8	140	6.8
I have hearing problems	1831	88.9	146	7.1	55	2.7	28	1.4
I have night bedwetting (enuresis)	1932	94.3	68	3.6	21	1.0	26	1.2
I had headache	852	41.5	848	41.3	223	10.9	129	6.2
Psychosocial health concerns								
I feel lonely	1379	67.2	394	19.2	146	7.1	132	6.4
I feel depressed	1325	77.2	149	8.7	149	8.7	92	5.3
I have problems at home	1414	69.1	420	20.5	107	5.2	104	5.1
I have problems in school / at work	1506	73.4	391	19.1	98	4.8	56	2.7
I have trouble with the law and the police	1936	95.4	39	1.9	21	1.0	34	1.7
I have intimate friends	225	11.1	186	9.2	205	10.1	1413	69.6
I spend times alone	992	49.3	668	33.2	205	10.1	149	7.4
Risk behaviors								
I smoke cigarettes	1932	95.0	56	2.7	28	1.4	18	0.9
I use non-prescribed medication and drugs	1753	85.9	208	10.2	45	2.2	35	1.7
My parents use alcohol/drugs	1992	97.9	22	1.1	10	0.5	11	0.5
My father smoke cigarettes	1032	51.4	218	10.9	225	11.2	533	26.5
I was told about cigarettes and drugs	895	43.9	311	15.2	266	13.0	567	27.8
I use drug such as hashish and marijuana	1655	98.5	4	0.2	5	0.3	16	0.9
Sexual health concern								
I have acne	1136	68.4	293	17.6	108	6.5	123	7.4
I can find information and pictures about sexual relationship between couples	1347	80.9	206	12.4	56	3.4	56	3.4
Female: I have a special relationship with males more than just words	918	94.3	24	2.5	13	1.3	18	1.8
Male: I have a special relationship with females more than just words	849	84.1	81	8.0	40	4.0	40	4.0
I check my genitals	1350	81.5	187	11.3	69	4.1	50	3.0

Table 20c: Health concerns and risk behaviors among school working children

Variables	Never		Sometimes		Often		Always	
	n	%	n	%	n	%	n	%
Physical health concern								
I have problems with tooth	272	31.0	355	40.4	119	13.5	132	15.0
I have problems with the vision	592	67.3	149	17.0	65	7.4	73	8.3
I have hearing problems	760	86.9	72	8.2	31	3.5	12	1.4
I have night bedwetting (enuresis)	821	94.5	22	2.5	19	2.2	6	0.7
I had headache	311	35.5	381	43.5	123	14.1	60	6.9
Psychosocial health concerns								
I feel lonely	570	60.1	190	20.0	75	7.9	113	11.9
I feel depressed	554	63.5	218	25.0	65	7.5	35	4.5
I have problems at home	534	61.7	217	25.1	70	8.1	45	5.2
I have problems in school / at work	573	65.4	197	22.5	63	7.2	43	4.9
I have trouble with the law and the police	788	91.1	42	4.9	14	1.6	21	2.4
I have intimate friends	95	10.9	64	7.3	105	12.0	609	69.7
I spend times alone	355	40.5	341	39.0	113	13.0	66	7.5
Risk behaviors								
I smoke cigarettes	732	84.0	69	7.9	30	3.4	40	4.6
I use non-prescribed medication and drugs	735	84.6	99	11.4	21	2.4	14	1.6
My parents use alcohol/drugs	849	97.3	7	0.8	3	0.3	14	1.6
My father smoke cigarettes	443	50.7	98	11.2	61	7.0	272	31.1
I was told about cigarettes and drugs	355	39.3	133	14.7	111	12.3	303	33.6
I use drug such as hashish and marijuana	788	97.3	10	1.2	5	0.6	7	0.9
Sexual health concern								
I have acne	495	63.1	111	14.1	81	10.3	98	12.5
I can find information and pictures about sexual relationship between couples	549	68.6	133	16.6	58	7.3	60	7.5
Male: I have a special relationship with females more than just words	587	73.6	111	13.9	42	5.3	58	7.3
I check my genitals	553	66.5	156	18.9	61	7.3	61	7.3

4.2.6 Relationship between children's working status and their physical health

Regarding the relationship between children's working status and their physical health, the analyses showed that there is a statistical significant difference between the groups of children in this study in regards to incidence of common cold, influenza and number of times visiting a doctor for the purposes of treatment (Table 20 d). However, there was no statistical difference in the number of times visiting emergency department, and number of admissions to hospitals. As mentioned above, non working school children were the most to report hospital admissions, visiting emergency departments and physician for the purpose of treatment, and getting flu and common cold. However, nonschool children, and then those working in holidays and then those work and study at the same time had the highest reports of physical health problems (Table 20 a, b). The most reported health problems were dental problems and headache, while enuresis and hearing problems were the least reported ones. Although children did not report vision problem, the physical exam showed that children who work and study and nonschool working children had significant vision problems that required further investigations for reason of not reporting those problems by the children.

Conclusion

The study showed that school working had higher reports of common cold, flu and visiting physicians and emergency department for the purpose of treatment. While the majority of nonschool working complained of headache. The results correspond with previous national study (Kayyali, 2006) who found that working children had significant physical problems such as headache and skin lesions. Nevertheless, nonworking children still had the highest reports of physical health problems. Psychologically, the results revealed that school working children have significant psychosocial disturbances. Whereas 25% of the school working children reported feeling of loneliness and depression, 15% of them had also reported problems at home, work, and with the law and the police. This may question the quality and type of psychological and social support that working children receive at home, school and work. Working children are not given the time to enjoy their childhood appropriately and deprived from all possible means of psychosocial development. One explanation for the deterioration of the psychological and social wellbeing of working children can be explained by the acknowledgement that their working is not legal, therefore; they are deprived from all civil rights to health and education.

School working children had higher reports of physical problems such as common cold, flu, skin lesions, and dental problems than nonschool working children. However, nonworking children had the highest report of physical problems among all groups of children in this study.

Another explanation is related to home and school as children reported frequent problems at both school and home. Children are supposed to receive love and care at school and home, but on reality they are struggling with problems that will increase the likelihood for these children to find other sources and involve in risk behaviors such as drug and crimes.

Working children suffer significant psychosocial problems such as loneliness, depression, social isolation, and problems at home, school and with police and law.

About 45% of the children in this study reported that they are smoking, 20% are using nonprescribed medications, and 2.5% are using drugs. This agrees with previous study conducted by Dmour (2006) who found that smoking and alcohol are among the most reported delinquent and risk behaviors among working children. Therefore, there should be an effective national plan that eliminates child labor which is one of the main reasons for drugs, alcohol and smoking among children. Furthermore, these programs should target children and families and use public media and communication methods to increase awareness.

45% of the working children are smokers, 20% use nonprescribed medication, and 2.5% use drugs

In addition, about 15% of males working children reported having sexual relationships with girls and 40% have access to pornography which makes working children at high risk for sexually transmitted disease. Therefore, it can be concluded that child's work deprived the child from receiving the appropriate education and from receiving social and psychological guidance from good role models. Working children are isolated from their families, lack family monitoring system, deprived from sources of information, and not educated about risk related behaviors that increases their vulnerability to physical and psychosocial problems and disturbances. As mentioned previously, nonschool working children had higher percentages of psychosocial problems that emphasize the role of school and home as sources of guidance and protection against risk behaviors. Therefore, schools and homes are not supposed to be food and shelters only, and rather a prepared environment than enable growth and development of a child and provides him with education, psychological growth, social relationship and enhance his bio-psychosocial and mental skills and capabilities.

Homes and schools are supposed to be the guardians for children and to provide them with the environment that allows them to grow and develop psychosocially and mentally.

4.2.7 Difference between working and nonworking children in physical and psychosocial health

Related to the differences between working children (all levels) and nonworking children in their physical and psychosocial health (table 20 d) using chi-square, the analysis showed that there is a significant difference between the children in regards to feeling lonely, feeling depressed, frequency of problems at home, problems with police and laws, smoking, drugs and nonprescribed medications, headache, and spending times alone. The greatest difference found between the children was in using drugs such as hashish and marijuana, smoking and problems with law.

Table 20d: Difference between working and nonworking children in physical and psychosocial health

Variables		Working status						Statically test	
		Nonschool working		Work and study		Nonworking			
		% in working status	n	% in working status	n	% in working status	n	X ²	p
Headache	Never	47.1	475	35.5	311	41.5	852	25.6	< .001
	Sometime to always	52.9	534	64.5	564	58.5	1200		
Feeling lonely	Never	75.9	762	60.1	570	67.2	1379	32.1	< .001
	Sometime to always	24.1	242	39.9	378	32.8	672		
Feeling depressed	Never	73.1	737	63.5	554	77.2	1325	24.8	< .001
	Sometime to always	26.9	271	36.5	318	22.8	390		
Problems at home	Never	64.2	643	61.7	534	69.1	1414	17.7	< .001
	Sometime to always	35.8	359	38.3	332	30.9	631		
Problems at schools /work	Never	76.3	746	65.4	573	73.4	1506	28.4	< .001
	Sometime to always	23.7	237	34.6	303	26.6	545		
Problems with law	Never	86.3	866	91.1	788	95.4	1936	76.7	
	Sometime to always	13.7	137	8.9	77	4.6	94		
Spend times alone	Never	56.8	569	40.5	355	49.2	992	50.3	< .001
	Sometime to always	43.2	463	50.5	520	50.8	1022		
Smoking cigarettes	Never	56.6	571	84.0	732	95.0	1932	61.4	< .001
	Sometime to always	43.4	433	16.0	139	5.0	102		
Use nonprescribed medications	Never	82	821	84.6	735	85.9	1753		.006
	Sometime to always	18	187	15.4	134	14.1	288		
Use drugs such marijuana and hashish	Never	97.3	209	97.3	788	98.5	1655		< .001
	Sometime to always	27	801	2.7	22	1.4	26		

4.3 Child abuse

In regards to forms of child abuse, the analysis showed that children are exposed to different types of abuse in different proportions. Among nonschool children who agreed to respond to the survey and answered the questions related to abuse, the analysis showed that physical abuse was the most prevalent form of abuse and that fathers were the most user of all forms of abuse (table 21a). The highest reported physical abuse form used by fathers was being beaten for any given mistake (35.8%, n = 365 children), while the lowest was being punished by burning or some burning tool if child disobey him (2.7%, n = 36). Mothers highest reported form of physical abuse was "beat me for any given mistake" (18.2, n = 201 children) and the lowest was "injured or caused me a fracture" (1.4%, n = 15 children). Similarly, the employers most reported form was "beat me for any given mistake" (14.4%, n = 159 children), while the lowest was punished by burning or some burning tool if I disobey him" (0.8%, n = 9 children). However, being beat severely was common among fathers, mothers and employers (17.8%, 6.2%, and 7.1%, respectively). The results indicate that working children are severely abused physically by all those who supposed to care about them; parents and employers.

Nonschool working children are expose to all forms of physical abuse such as burning and hits by their parents and employers

Regarding psychological abuse, father remained the most reported abuser, while employers and mothers were the least to use psychological abuse. The analysis showed that fathers and employers were the most deride children in front of strangers (18%, 14.5%, respectively), use cursing and insulations (21.2%, 12.7%, respectively), and deride children when their work do not satisfy them (20%, 15.5%, respectively). Moreover, 10% (n = 106) of children have reported that their mothers deride them when they do works that do not satisfy her. In general, nonschool working children were being abused psychologically more than being abused physically.

Nonschool working children were subjected to psychological abuse with higher rates than physical abuse

In relation to negligence, children had variable reports with employers being the most reported negligent and mothers remaining the least reported negligent. About 16.4% and 16.6% of the children reported that their fathers and employers did not care about their dress or appearance, and that was the highest reported form of negligence, while the lowest reported form of negligence was in regards to "not providing me with good food and dress" (father, 6.1%, n = 67; and employers, 10.5%, n = 116) of the children.

Nonschool working children were neglected by their employers and parents, and the most reported forms of negligence was not providing children with appropriate clothes, not caring when they are sick, not caring about appearance and not proving children with good food and dress.

In regards to sexual abuse, most of the children refused to answer questions related to forms of sexual abuse. However, among those who agreed to answer the questions, the analysis showed identical reports from the children as 1.2% (n = 13) of children reported being sexual abused by fathers, mothers and employers "touch in places that I do not want anybody to touch it" and about 0.8% of them also reported being asked by their fathers, mothers and employers to take off their cloths and disclose parts of their bodies.

There is high possibility that nonschool working children are sexually abused by their parents and employers. Although rates were very low, sexual abuse remains the most harmful form of abuse even with low rates.

Table 21a: Forms of child abuse among nonschool working children

Item	Father		Mother		Employer	
	n	%	n	%	n	%
Physical abuse						
Rush to beat me if I made a mistake	365	35.8	201	18.2	159	14.4
Beat me violently if I do not listen to him	196	17.8	69	6.2	78	7.1
Use harsh methods to punish me (burning, or hot tools) if I disobeyed him	30	2.7	17	1.5	9	.8
Kick and push me if I did any mistake	116	10.5	31	2.8	44	4.0
I have injuries and bruises and fractures because of his punishment	62	5.6	15	1.4	22	2.0
Psychological abuse						
Derided me in front of strangers	198	18.0	66	6.0	160	14.5
Cursed me and called me with bad names	243	21.2	69	6.3	140	12.7
Threatening me with death (killing) when I misbehaved	69	6.3	33	3.0	32	2.9
Threatening me with a knife to punish me if did wrong	32	2.9	17	6.5	23	4.1
Derided me when my work does not satisfy him	220	20.0	106	9.6	171	15.5
Neglect						
Do not care for my clothing even if it is a decent	180	16.4	99	9.0	183	16.6
knows that the risk of hardware, tools and equipment around, but do not care about it	91	8.3	59	5.4	99	9.0
I have fallen and wounded several times and did not provided health care to me.	78	7.1	38	3.4	65	5.9
does not care about me if I get sick or injured or eaten something rotten	63	5.7	31	2.8	72	6.5
does not provide me with good food and the appropriate clothing	67	6.1	51	4.6	116	10.5
Sexual abuse						
Touches me in areas of my body that I do not want anybody to touch it.	13	1.2	13	1.2	13	1.2
asked me to touch parts of his/her body that I do not want to touch	11	1.0	7	.6	7	.6
asked me to take off my clothes and to reveal parts of my body	9	.8	9	.8	9	.8

In regards to forms of child abuse that school working children are facing (table 21 b), the analysis showed that teachers were the most reported physical abusers. About (51%, n = 69 children) of children reported that their teachers beat them for any given mistake they do, (35.6%, n = 48 children) of them reported that their teachers beat them violently, (14.1%, n = 19 children) reported being punished harshly such as burning, and (23.7%, n = 32 children) being kicked and pushed for any mistake. While fathers and employers were the second in the frequency in using physical abuse.

School working children are exposed to different forms of physical abuse such as hit, kick and push and punished harshly and violently for any mistake by their teachers

Moreover, teachers were also the most reported users of psychological abuse forms. About (23%, n = 31 children) and (13.3%, n = 18 children) of the children reported that their teachers and fathers respectively derided them in front of strangers. Both fathers and teachers were almost equal in using insultation, cursing and threatening of killing for children if they did a mistake (11.9%, 15.6%, respectively). Fathers have been also reported to deride children if children's work did not satisfy them (16.3%, n = 22 children), and mothers were the least to do that for children (8.1%, n = 11 children). It has been noted that threatening using a knife or sharp tool was the least reported form of abuse. While in regards to negligence, fathers and teachers were the most reported user of all forms of negligence.

The most reported form of negligence by father was "knows that the risk of hardware,

tools and equipment around, but do not care about it" (19.3%, n = 26 children), while among teacher the most reported form was "does not care about me if I get sick or injured or eaten something rotten" (20.8%, n = 28 children). Interestingly, mothers and employers had almost equal proportions in forms of negligence, and the most reported form was "Do not care for my clothing even if it is not decent" (11.6%, n = 15 children).

There is an evidence that both fathers and teachers abuse children psychologically, and forms of negligence has been reported such as not providing children with appropriate dress, not caring when they are sick, not caring about appearance and not providing children with good food and dress

In regards to sexual abuse, the rates were also almost equal among parents, teachers, and employers even with very low rate of response among children. Nevertheless, teachers remained the highest reported ones. Among those who agreed to answer questions related to sexual abuse, about (5.9%, n = 8) of children reported that their teachers touched places in their bodies that they do not want anyone to touch, while (2.2%, n = 3) and (3.7%, n = 5) of children reported their mothers and fathers did so, respectively.

About 5.9% of the school working children who responded to sexual abuse form, reported that they have been sexually abused by their teachers

Table 21b: Forms of child abuse among school working children

Item	Father		Mother		Teacher		Employer	
	n	%	n	%	n	%	n	%
Physical abuse								
Rush to beat me if I made a mistake	24	32.6	21	15.6	69	51.1	17	12.6
Beat me violently if I do not listen to him	32	23.7	15	11.1	48	35.6	14	10.4
Use harsh methods to punish me (burning, or hot tools) if I disobeyed him	12	8.9	5	3.7	19	14.1	7	5.2
Kick and push me if I did any mistake	22	16.3	11	8.1	32	23.7	6	4.4
I have injuries and bruises and fractures because of his punishment	18	13.3	5	3.7	15	11.1	5	3.7
Psychological abuse								
Derided me in front of strangers	18	13.3	8	5.9	31	23.0	11	8.1
Cursed me and called me with bad names	16	11.9	9	6.7	19	14.1	8	5.9
Threatening me with death (killing) when I misbehaved	16	11.9	11	8.1	21	15.6	7	5.4
Threatening me with a knife to punish me if I did wrong	8	5.9	6	4.4	4	3.7	3	2.2
Derided me when my work does not satisfy him	22	16.3	11	8.1	23	17.0	12	8.9
Negligence								
Do not care for my clothing even if it is a decent	24	17.8	15	11.1	21	15.6	15	11.6
knows that the risk of hardware, tools and equipment around, but do not care about it	26	19.3	21	15.6	20	14.8	12	8.9
I have fallen and wounded several times and did not provided health care to me.	20	14.8	12	8.9	20	14.8	11	8.1
does not care about me if I get sick or injured or eaten something rotten	25	18.5	18	13.3	28	20.8	11	8.1
does not provide me with good food and the appropriate clothing	18	13.3	13	9.6	26	19.3		
Sexual abuse								
Touches me in areas of my body that I do not want anybody to touch it.	5	3.7	3	2.2	8	5.9	4	3.0
asked me to touch parts of his/her body that I do not want to touch	5	3.7	3	2.2	6	4.4	4	3.0
asked me to take off my clothes and to reveal parts of my body	4	3.0	3	2.2	6	4.4	3	2.2

In regards to forms of abuse among nonworking school children, the study (Table 21 c) showed that the teachers were the most reported physical abusers and more than school working children. The analysis showed that about (28.7%, n = 604 children) reported that their teachers rush to beat them if they do any mistake, and (19.7%, n = 415 children) reported that their teachers beat them violently if they do not listen to them. Furthermore, about (11%, n = 232 children) reported that they were kicked and pushed by their teachers. Fathers were the next person in terms of frequency as a physical abuser and then mothers, while mothers were the least reported among all. About (1.4%, n = 24) of the children reported that their mothers were beating them violently if they do not listen to her. However, the use of harsh methods of punishment or the use of burning was almost equal among fathers, mothers, and teacher (4.9%, 3.6%, and 4.9%, respectively).

Regarding psychological abuse (table 21 c), teachers remained the most reported abusers in all forms of psychological abuse, ranging from threatening by using the knife to punish (2.1%, n = 45 children) to deriding children in front of strangers (10.1%, n = 213 children). While fathers and mothers were almost equal in terms of forms psychological abuse and ranged from 2.2% (n = 47 children) threatening children with knife to deriding children if children's works do not satisfy them (9.4%, n = 198 children). While 6.9% (n = 145 children) of children reported that their mothers deride them if their work do not satisfy them, and 1.6% (n = 34 children) reported that their mothers use knife to threaten them.

Even nonworking children are subjected to various forms of physical and psychological abuse and neglect such as beating, kicking and pushing, deriding and insults by their teachers, while abuse reported with lower rates among parents.

In regards to neglect (table 21 c), teachers were the most reported to use forms of neglect. Ranging from being careless if children fall or injured (8%, n = 169 children) being careless about children's appearance and dress even if not decent or clean (11.4%, n = 240 children). While being careless about children's dress and appearance if not decent or clear was the most reported form of negligence among fathers (11.7%, n = 246 children) and mothers (10.3%, n = 216 children). teachers remained the most reported negligent that ranged from not seeking treatment for the child if fell or injured (8%, n = 174) to not caring about the children's appearance or dress even if not clear or appropriate (11.4%, n = 240). Regarding fathers and mothers, their negligence was most reported in terms of to not caring about the children's appearance or dress even if not clear or appropriate (11.7% , n = 247, 10.3% , n = 216) respectively Moreover, sexual abuse remained at the lowest level as most children refused to answers questions related to forms of sexual abuse. Although the rates are low, sexual abuse remains harmful even with very low rates. According to the analysis and based on reposes of those who agreed to answer the questions, 1.5% (n = 32), 2.0% (n = 42), and 2.1% (n = 43) of children reported that they have touched in place that they do not want anyone to touch by their mothers, fathers, and teachers, respectively.

Overall, comparing the rates of abuse, the study showed that teachers are the most reported person to use forms of physical and psychological abuse against children who work and study and those who do not work. Those children reported that teachers are rushing to beat them if they did any mistake and they were neglecting them. The results are consistent with previous study by Abu Hamdan (2005) who reported that the negative behaviors and severe punishment used by teachers are among the most reported forms of abuse at schools that contributed to school children dropout. Therefore, teachers must be oriented and reinforced to use alternative methods of interaction and communication with school children. As well as, the study showed that nonschool working children are exposed to several forms of physical and psychological abuse and neglect both by fathers and mothers at homes and by their employers. Thus, nonschool working children lack social support and means of communication, lack feeling of safety and security. The results correspond with previous national study (Gharaibeh, & Hoeman, 2003), that found that most of working children in their study were abused physically, psychologically, and sexually.

Children are abused physically, psychologically and sexually whether at school or working settings

Table 21c: Forms of child abuse among nonworking school children

Item	Father		Mother		Teacher	
	n	%	n	%	n	%
Physical abuse						
Rush to beat me if I made a mistake	486	23.3	409	19.4	604	28.7
Beat me violently if I do not listen to him	325	15.4	24	1.4	415	19.7
Use harsh methods to punish me (burning, or hot tools) if I disobeyed him	104	4.9	75	3.6	104	4.9
Kick and push me if I did any mistake	182	8.6	108	5.1	232	11.0
I have injuries and bruises and fractures because of his punishment	108	5.1	77	3.7	119	5.7
Psychological abuse						
Derided me in front of strangers	139	6.6	98	4.7	213	10.1
Cursed me and called me with bad names	133	6.3	91	4.3	183	8.7
Threatening me with death (killing) when I misbehaved	142	6.7	100	4.8	121	5.7
Threatening me with a knife to punish me if did wrong	47	2.2	34	1.6	45	2.1
Derided me when my work does not satisfy him	198	9.4	145	6.9	199	9.5
Neglect						
Do not care for my clothing even if it is a decent	246	11.7	216	10.3	240	11.4
knows that the risk of hardware, tools and equipment around, but do not care about it	180	8.6	156	7.4	174	8.3
I have fallen and wounded several times and did not provided health care to me.	152	7.2	131	6.2	169	8.0
does not care about me if I get sick or injured or eaten something rotten	163	7.7	140	6.7	193	9.2
does not provide me with good food and the appropriate clothing	148	7.0	132	6.3		
Sexual abuse						
Touches me in areas of my body that I do not want anybody to touch it.	42	2.0	32	1.5	43	2.1
asked me to touch parts of his/her body that I do not want to touch	36	1.7	29	1.4	36	1.7
asked me to take off my clothes and to reveal parts of my body	27	1.3	16	.8	29	1.4

Differences in exposure to abuse among working and nonworking children

Regarding differences between working and nonworking children (Table 21 d) among all three forms of abuse; physical, psychological and neglect, the results showed that school working children are most vulnerable to all forms of physical abuse by fathers, mothers, employers, and teacher. In addition, teachers were the most reported to abuse children, and mothers were the least reported person to do so. In general, school working children had the highest reports of physical abuse by their teachers, and the highest reports of psychological abuse by their mothers and teachers, while nonschool working children were mostly abused psychologically by their fathers and employers. The results showed that the most reported abusers were the teachers and the least are the mothers.

The results related to negligence showed that school working children had the highest reports of negligence by their fathers, mothers, teachers and employers. Teachers were also the most reported negligent for school working children, while employers had the lowest rates of negligence for the nonschool working children. The rates of negligence were least among employers than it is among fathers and mothers.

Table 21d: Differences in forms of abuse among working and nonworking children

Form of abuse	Working status	Mean score of abuse			
		Employer	Teacher	Mother	Father
Physical abuse	Nonschool working	5.66		6.02	14.80
	Nonworking		14.00	6.64	11.46
	School working	7.26	27.12	8.44	18.96
Psychological abuse	Nonschool working	9.94		6.28	13.68
	Nonworking		7.22	4.46	6.24
	School working	6.10	14.68	6.64	11.86
Neglect	Nonschool working	9.70		5.04	8.72
	Nonworking		9.23	7.38	8.44
	School working	9.18	17.06	11.7	16.74

4.4 Laboratory and clinical examination

4.4.1 Blood Components

Regarding laboratory investigations which involved a sample of 298 children: nonschool working children (n=98 children), nonworking school children (n=117 children), working in holidays (n=61 children), and school working (n= 22 children). The study revealed (table 22a) that readings of laboratory tests among all children groups are comparable in hemoglobin level (an indicator of the Hematocrit with normal average of 11.0 - 14.0 mg / dm). Detailed results showed that the average hemoglobin in nonschool working children (14.1 mg / dm) with a higher limit of (16.6 mg / dm). Among school working children, results showed that they had the least average (13.1 mg /dm) with a higher limit of 15.8 mg / dm. All of which are within normal hemoglobin levels. Using (ANOVA) (a statistical test to compare differences between different groups), there was no statistically significant differences in hemoglobin between children either working or non-working; there was statistically significant differences between nonschool working children and nonworking school children. In conclusion, nonschool working children had normal ranges of hemoglobin levels.

Regarding white blood cells (elevation of level more than 9000 / dm is considered an indicator of infections, since the normal level is 4500-9000 / dm) and by using ANOVA test, the results showed that there was no statistical significant differences between groups of the study. The readings were very close to the average white blood cells (6900/ dl) where the highest reading was (13200/ dl). School working children had the highest average of white blood cells (7300/ dl) with the highest reading of (13200/ dl) for the children who work only in holidays and 11600/ dl) for those children who work and study. In conclusion, working children, whether in school or not, had a positive indicator of not having signs of the infections (elevated white blood cells).

Concerning, platelets counts (which responsible for the clotting mechanism in an injured body with normal average (150000-450000 / dm), the study showed that children who work in holiday have the highest average of platelets count (309000) with the highest reading of platelets count of (456 000). In children who study and work at the same time, the highest average platelet count was (277.800). Statistical analysis using ANOVA test showed that while there were no statistical differences between nonworking school children and school working; there was statistical significant differences between nonschool working children and children who work in holidays. In conclusion, there is a positive indicator of normal range count of platelets. Children who work in holidays had the highest average of platelets, and that all readings are within normal range of platelets counts.

In general, working children have normal outcomes in terms of blood components (Hemoglobin, white blood cells, Platelets and Red blood cells) which is considered a positive sign of health status

In order to have better explanation of the results, the abnormal readings can be summarized per category. Regarding nonschool working children, the results of Hemoglobin and Red blood cells were normal, while only 4.5% of white blood cells reading (n=5) were higher than normal level of, and 1.1% (n=1) platelets count had lower than normal level. For those school working children, results showed that 13% (n=3) of them had higher white blood cells count than normal levels and 4.5% (n=1) of them had Platelets count less than normal levels. The results of hemoglobin were within normal average for this group of children. Among those children who are working in holidays, results revealed that 15% (n=10) of them were above the normal average of white blood cells and platelets counts with normal results of hemoglobin. Among the nonworking school children, the results reported only one reading (0.8%, n=1)) of blood Hemoglobin less than normal. Furthermore, white blood cells count was higher than normal in only 10% (n=12) and the Hemoglobin level was normal for this group of children.

It is important to mention that increase in white blood cells more than normal levels may be an indicator of inflammation or infection, which may lead to serious complications and aggravated systematic infection if been neglected and/ or not given adequate attention. Low Platelets count is an indicator that the child may have hematologic disorder and displays bleeding tendency where lacking attention may critically exacerbate child health status and may threaten his life.

In terms of percentages, school working children have the highest readings white blood cells and platelets count, while it is lesser among nonschool working children

4.4.2 Hepatitis A

Using the screening test of (IgM), the total number of viral hepatitis cases in the study sample was only four children. The results showed one case for nonschool working children, two cases among nonworking school children and one case for the school working children.

Table 22a: Distribution of sample according to the laboratory tests

Variable	Working Status	n	Mean	SD	Min	Max	F	P
Hb	Nonschool working children	98	14.1	.99	11.80	16.60	7.969	< 0.001
	Nonworking school children	117	13.4	1.02	9.30	15.90		
	School working in holidays	61	13.5	1.26	10.30	16.10		
	School working children	22	13.1	.912	11.80	15.80		
HCT	Nonschool working children	98	42.9	3.29	34.20	49.80	4.017	.008
	Nonworking school children	117	41.5	3.07	28.20	48.80		
	School working in holidays	61	41.6	3.47	34.80	49.10		
	School working children	22	41.2	3.04	34.00	48.20		
WBC White blood cells	Nonschool working children	98	6.9	1.63	3.5	13.2	.668	.25
	Nonworking school children	117	7.0	1.82	3.4	11.7		
	School working in holidays	61	7.3	2.08	2.3	13.2		
	School working children	22	7.3	2.10	3.5	11.6		
RBC Red blood cells	Nonschool working children	98	5.1	.42	4.35	6.55	1.402	.242
	Nonworking school children	117	5.0	.48	4.03	7.27		
	School working in holidays	61	5.1	.66	4.06	8.48		
	School working children	22	4.9	1.22	.00	7.23		
PLAT Platelets	Nonschool working children	98	282.2	61.10	113.00	441.00	2.914	.04
	Nonworking school children	117	296.3	56.52	158.00	437.00		
	School working in holidays	61	309.4	67.66	169.00	456.00		
	School working children	22	277.6	79.80	122.00	441.00		

4.4.3 Ferritin

The results showed that Ferritin levels for nonschool working children and school working children were within the normal range and this may be explained as children having normal levels of hemoglobin. Among the children who work in the holidays, (3%, n= 2) children had lower than normal (normal level=13.0). Ferritin level for the two children was 4.5 and 6.69, respectively. Among nonworking school children, 1.6% of them had Ferritin below the normal range. The study results showed that Ferritin level in nonschool working children and school working children is better than it was in those children who work in the holidays only and nonworking ones. Using ANOVA test, the results showed that there was no statistically significant differences between the four groups of children.

4.4.4 Weight, Height, and Body Mass Index

As mentioned previously, nonschool working children had higher mean of age than those at school. Therefore, weight and height were expected to be higher in nonschool working children (Table 22 b). The results revealed that there is a statistically significant difference among all groups of children either working or not working in regard to weight and height. These measures are highly considered in regard to child's growth and development.

Table 22b: Distribution of sample according to height and weight

Variable	Working Status	No	Mean	SD	Min	Max	F	P
Weight	Nonschool working children	98	58.4	14.4	34.5	102.2	8.89	< 0.001
	Nonworking school children	117	47.5	15.01	22.8	110.4		
	School working children	61	51.3	17.61	20.0	113.9		
	School working in holidays	22	48.1	12.01	27.6	72.0		
Height	Nonschool working children	98	163.6	11.46	138.0	185.0	13.09	< 0.001
	Nonworking school children	117	151.6	13.83	114.0	189.0		
	School working children	61	155.7	16.50	116.0	183.0		
	School working in holidays	22	155.1	11.39	126.0	176.0		

About the Body Mass Index (BMI), nonschool working children had the highest average of body mass index. The average of BMI among children who are working and studying at same time was less compared to those children who are school non working children, although the average age of the children who are school non working was lower compared to those who are studying and working at same time (Table 22 c).

The charts of growth and development were used to compare and show the relationships between age and BMI for each child group separately. It was noticed that children working in the holidays (Chart 1) had a higher values above the percentile 50th, which addressed that those children have almost a normal growth values except for 10% of them (n=6) who had values higher than the percentile 90th, which indicates obesity problems. In addition, two children (3%) were below the percentile 5th, which indicates that these children may suffer malnutrition. As a result, children who are working in the holidays only have normal curve of growth and development (chart 1).

Among school working children, chart 2 showed that the values of those children fell within the overall pattern of the curve (closed to the percentile 50) except for 5 children (22%) who had values higher than percentile 90th, which is an indicator of obesity problem. The values of body mass index of nonschool working children (chart 3) were very high where 11% of them (n=11) fell above percentile 90th (an indicator of obesity) and 4% of them (n=4) were below percentile 5 (emaciated). Among all groups, the nonworking school children had the highest values of BMI in relation to age as shown in growth and development chart (4). The values accumulated between percentile 50th and 90th and there were 14 children (12%) had higher values above the percentile 90th (an indicator of obesity) and 9 children (8%) fall below percentile 5th values (an indication of the emaciation).

nonworking school children are suffering from disturbances in body mass index as well as changes in growth and development more than school working children and nonschool working children. Nonschool working showed variation in their body mass indices with a remarkable group of them are suffering obesity and malnutrition problems

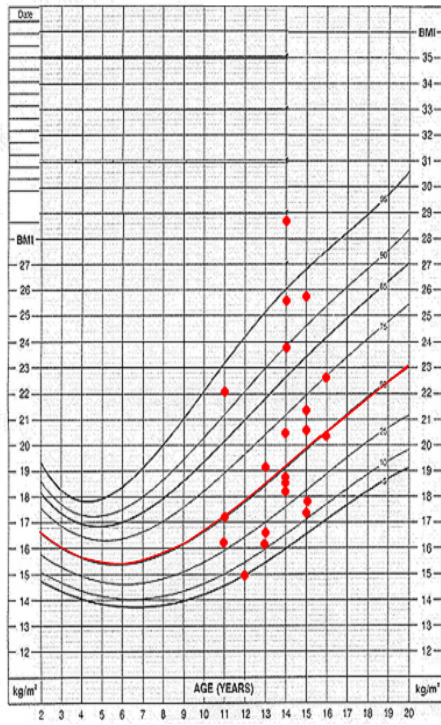
Table 22c: Mean values of body mass index

Working Status	Mean of BMI	SD	Max	Min	Mean Age
Nonworking school children	20.26	4.12	35.9	14.2	12.9
Nonschool working children	21.61	4.14	34.4	15.2	14.8
School working children	20.09	3.61	28.9	15.0	13.8
School working in holidays	20.55	4.20	36.8	14.1	13.4

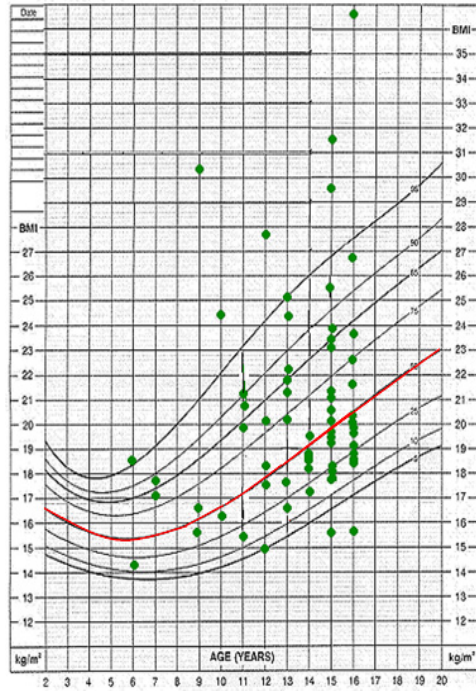
4.4.5 Vision examination

The study showed (Table 22 d) that nonschool working children and School working children are vulnerable to vision problems. About 13.6% of nonschool working children had problems in the right eye and 16% had problems in the left eye, while 22.5% the school working children had problems in the right eye by and 27.5% of them had a problem in the left eye.

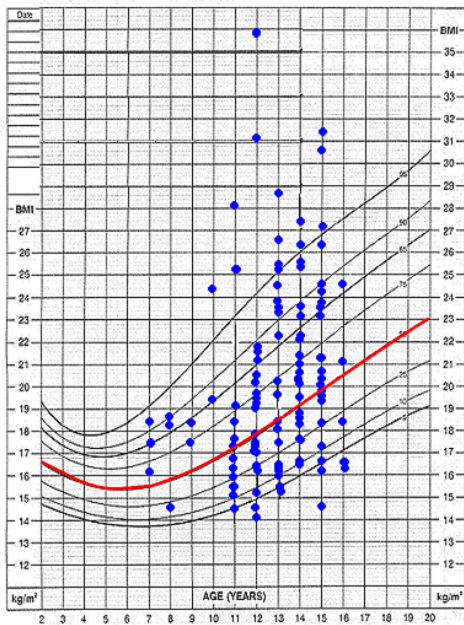
School working children



School working in holidays



Nonschool working children



Nonworking school children

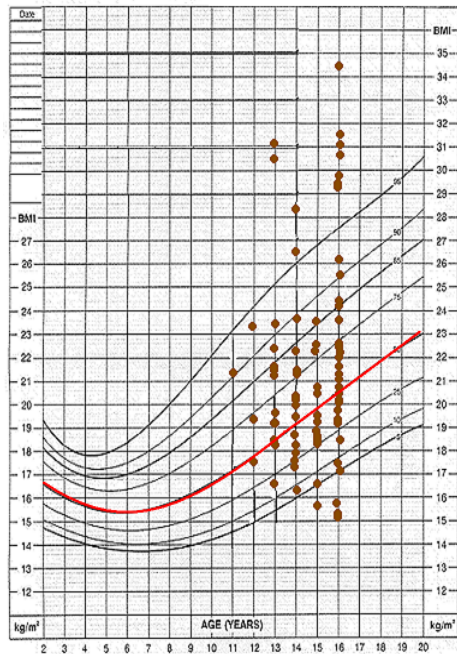


Table 22d: Distribution of sample according to the results of vision test

variable	Working status	6/6		6/9		6/12		6/18		6/24		6/36	
		n	%	n	%	n	%	n	%	n	%	n	%
Right eye	Nonschool working children	86	1	8	8.2	1	1.0	1	1.0	1	1.0	1	1.0
	Nonworking school children	108	0	7	5.9	0	0	2	1.7	0	0	0	0
	School working in holidays	57	0	4	6.5	0	0	0	0	0	0	0	0
	School working children	17	0	3	13.6	0	0	0	0	2	9.0	0	0
Left eye	Nonschool working children	83	1	9	9.2	3	3.1	1	1.0	1	1.0	1	1.0
	Nonworking school children	105	0	10	8.5	2	1.7	0	0	0	0	0	0
	School working in holidays	55	0	6	9.8	0	0	0	0	0	0	0	0
	School working children	16	0	4	18.2	1	4.5	0	0	1	4.5	0	0

4.4.6 Physical examination

The results of physical examination showed that children in all groups are suffering from physical problems. The clinical examination in Appendix (2) showed that the percentage of children who suffer from health problems are no more than 5% of the total sample. However, the dental and skin problems were more evident in nonschool working children (32%, n=28) and school working children (25%, n=8), while it was below 5% for those school working in holidays and nonworking school children.

Abdominal disorders including wounds, sores and pain were highly evident in nonschool working children (4.5%, n=48), rather than other children from the other groups which reported only less than 5%. The working children and Nonworking school children reported similar rates of skin problems. About 2.3% of the nonschool working children reported skin problems, while it was about 7.5% among school working children and less than 2% among nonworking school children and school working in holidays. Periodontal problems including mouth and gums have been also reported among different children groups. The highest percentage of periodontal problems have been reported among those nonschool working children (11.1%), while it was less than 1% in nonworking school children and children who work in the holidays only, and about 4.5% among school working children. In general, physical examination showed that nonschool working children are more vulnerable to physical health problems, while the percentage is similar in ratio among non- economically active school children and children who work in the holidays. These results were consistent with laboratory results as mentioned earlier.

The physical examination showed that nonschool working children are more vulnerable to physical health problems including mouth, teeth, and abdominal disorders including pain, wounds and skin problems

In conclusion, The study showed that children who work and study at the same time are more likely to have cold and flu rather than other children, and where asking for medical advice in response to such health problem. Additionally, results showed that the majority of nonschool working children had headaches as an indication of negative effects on physical health status as a result of their work, which is consistent with Kayyali (2006) who highlighted that nonschool working children are at risk of developing health problems such as skin problems and headaches rather than other children groups. The most visible problems in the current study were dental problems, headaches, and the least reported problem were enuresis and hearing problems. Although the children were not significantly complaining from vision problems, the clinical examination showed that the nonschool working children are suffering of vision problems, which should be considered as not reported explicitly by the children.

4.5 Psychosocial health of working and nonworking children

This section review the psychosocial health among the working and non-working children (4008 children). Strengths and four difficulties attributes, anger expression and coping efficacy were measured to identify the psychosocial health among children in four different groups (*non-working school children, school working children, school children working in holidays and non-school working children*).

4.5.1 Strengths and difficulties survey

The Strengths and Difficulties Questionnaire (SDQ) was used to assess the emotional and behavioral problems among the working and non-working children. The SDQ consists of the following subscales; the emotional symptoms, the conduct problems, the hyperactivity-inattention, the peer problems, and the prosocial behaviour. The results revealed that there were differences in children responses to the items of the SDQ in the four groups. These responses presented the children scores on the item as not true, somewhat true and certainly true.

Nonworking school children

The responses of non-working school children group are presented in Table (23 a). The results revealed that 94.8% (somewhat true and certainly true) of non-working school children tried to be nice to other people and care about their feelings. This reflect that these children appreciated building good social relationships with other people. Moreover, 89.2% of these children reported that the item " I have one good friend or more" as (somewhat true and certainly true). This reflect the importance of friendship among these children. In addition, the results revealed that 73.4% of these children reported that they didn't fight a lot with other people and 87.7% reported that they didn't take things that does not belong to them from homes, schools or elsewhere. This indicates that there were few of conduct problems among these children.

Table 23a: Strengths and difficulties survey among nonworking school children

Items	Not true		Somewhat true		Certainly true	
	n	%	n	%	n	%
I try to be nice to other people. I care about their feelings	106	5.2	398	19.6	1531	75.2
I am restless, I cannot stay still for long	779	38.5	722	35.6	525	25.9
I get a lot of headaches, stomach-aches or sickness	886	43.6	806	39.7	339	16.7
I usually share with others (food, games, pens etc.)	531	26.2	647	31.9	852	42.0
I get very angry and often lose my temper	877	43.6	635	31.5	501	24.9
I am usually on my own. I generally play alone or keep to myself	1243	61.3	497	24.5	287	14.2
I usually do as I am told	1100	54.4	643	31.8	279	13.8
I worry a lot	820	40.4	756	37.3	453	22.3
I am constantly fidgeting or squirming	1115	55.1	576	28.5	333	16.5
I have one good friend or more	218	10.8	357	17.7	1446	71.5
I fight a lot. I can make other people do what I want	1481	73.4	374	18.5	164	8.1
I am often unhappy, down-hearted or tearful	1033	51.1	611	30.2	378	18.7
Other people my age generally like me	293	14.5	606	30.0	1120	55.5
I am easily distracted, I find it difficult to concent	895	44.4	744	36.9	378	18.7
I am nervous in new situations. I easily lose confidence	1171	58.1	502	24.9	341	16.9
I am kind to younger children	249	12.3	437	21.6	1336	66.1
I am often accused of lying or cheating	1343	66.5	461	22.8	217	10.7
Other children or young people pick on me or bully me	1469	72.9	369	18.3	176	8.7
(I often volunteer to help others (parents, teachers, children	266	13.1	609	30.0	1155	56.9
I think before I do things	289	14.2	608	29.8	1139	55.9
I take things that are not mine from home, school or elsewhere	1780	87.7	172	8.5	77	3.8
I get on better with adults than with people my own age	792	39.1	706	34.8	530	26.1
I have many fears, I am easily scared	907	44.9	729	36.1	384	19.0
I finish the work I'm doing. My attention is good	248	12.2	652	32.1	1133	55.7

School children working in holidays

The results revealed as presented in Table 23b that 94.5% of school children working in holidays tried to be nice to other people and care about their feelings (somewhat true and certainly true). Moreover, 90.1% of these children reported that they had one good friend or more (somewhat true and certainly true). The results revealed that only 28.9% of these children fight a lot with others.

Table 23b Strengths and difficulties survey among school children working in holidays

Items	Not true		Somewhat true		Certainly true	
	n	%	n	%	n	%
I try to be nice to other people. I care about their feelings	33	5.4	158	25.9	418	68.6
I am restless, I cannot stay still for long	214	35.3	213	35.1	179	29.5
I get a lot of headaches, stomach-aches or sickness	282	46.2	237	38.8	92	15.1
I usually share with others (food, games, pens etc.)	179	29.5	229	37.7	199	32.8
I get very angry and often lose my temper	216	35.7	236	39.0	153	25.3
I am usually on my own. I generally play alone or keep to myself	401	65.5	148	24.2	63	10.3
I usually do as I am told	277	45.4	241	39.5	92	15.1
I worry a lot	290	47.2	220	35.8	104	16.9
I am constantly fidgeting or squirming	389	63.7	145	23.7	77	12.6
I have one good friend or more	60	9.9	106	17.5	440	72.6
I fight a lot. I can make other people do what I want	427	71.2	121	20.2	52	8.7
I am often unhappy, down-hearted or tearful	354	58.5	178	29.4	73	12.1
Other people my age generally like me	71	11.7	217	35.9	317	52.4
I am easily distracted, I find it difficult to concent	252	41.9	248	41.2	102	16.9
I am nervous in new situations. I easily lose confidence	345	56.6	172	28.2	93	15.2
I am kind to younger children	75	12.4	137	22.6	395	65.1
I am often accused of lying or cheating	371	60.9	160	26.3	78	12.8
Other children or young people pick on me or bully me	418	68.2	129	21.0	66	10.8
I often volunteer to help others (parents, teachers, children)	78	12.7	209	34.0	328	53.3
I think before I do things	86	14.1	185	30.3	340	55.6
I take things that are not mine from home, school or elsewhere	514	83.8	65	10.6	34	5.5
I get on better with adults than with people my own age	194	31.9	228	37.5	186	30.6
I have many fears, I am easily scared	355	58.4	177	29.1	76	12.5
I finish the work I'm doing. My attention is good	78	12.7	175	28.5	361	58.8

School working children

The responses of school working children group are presented in table (23 c). The results revealed that 93.9% (somewhat true and certainly true) of school working children tried to be nice to other people and care about their feelings. 62.7% (somewhat true and certainly true) of these children reported that they got a lot of headaches, stomach-aches or sickness. Moreover, 62.3% of these children reported that were worried a lot (somewhat true and certainly true). This indicated that School children working and studying had a lot of psychosocial problems because of excessive burden on them to work hardly and to study at the same time. This is consistent with previous research. Heady (2000) reported that children who study and work had a lot of stressors and this causes a lot of anxiety and loss of concentration that the children have to manage. The findings of Heady and the findings from this study indicate that it is important for healthcare professionals to be aware of the mental and behavioral problems of the impact of child labour mainly in children who work and study at the same time. In addition, there should be a multi-disciplinary teams work to access and address children's psychosocial needs.

This indicates that it is important to provide support for these children by all members of the multidisciplinary team, this includes specialized support, such as that provided by a mental health professional, physicians, school nurses, psychologists or social worker for those children with emotional and psychological difficulties. Moreover, more efforts needed to retain these children at school and ensure their rights of education.

School children working and studying had a lot of psychosocial problems because of excessive burden on them to work hardly and to study at the same time.

Table 23c: Strengths and difficulties survey among School working children

Items	Not true		Somewhat true		Certainly true	
	n	%	n	%	n	%
I try to be nice to other people. I care about their feelings	8	6.1	33	25.0	91	68.9
I am restless, I cannot stay still for long	46	34.6	46	34.6	41	30.8
I get a lot of headaches, stomach-aches or sickness	50	37.3	58	43.3	26	19.4
I usually share with others (food, games, pens etc.)	27	20.3	48	36.1	58	43.6
I get very angry and often lose my temper	46	34.6	51	38.3	36	27.1
I am usually on my own. I generally play alone or keep to myself	76	58.0	27	20.6	28	21.4
I usually do as I am told	20	15.2	45	34.1	67	50.8
I worry a lot	49	37.7	53	40.8	28	21.5
I am constantly fidgeting or squirming	72	54.5	32	24.2	28	21.2
I have one good friend or more	13	9.8	27	20.5	92	69.7

I fight a lot. I can make other people do what I want	90	68.2	28	21.2	14	10.6
I am often unhappy, down-hearted or tearful	66	50.0	46	34.8	20	15.2
Other people my age generally like me	11	8.5	43	33.1	76	58.5
I am easily distracted, I find it difficult to concent	44	34.1	52	40.3	33	25.6
I am nervous in new situations. I easily lose confidence	70	52.6	38	28.6	25	18.8
I am kind to younger children	15	11.4	32	24.2	85	64.4
I am often accused of lying or cheating	78	58.6	36	27.1	19	14.3
Other children or young people pick on me or bully me	81	60.9	33	24.8	19	14.3
I often volunteer to help others (parents, teachers, children)	4	3.0	40	30.3	88	66.7
I think before I do things	16	12.1	41	31.1	75	56.8
I take things that are not mine from home, school or elsewhere	111	83.5	9	6.8	13	9.8
I get on better with adults than with people my own age	37	28.5	51	39.2	42	32.3
I have many fears, I am easily scared	69	53.1	42	32.3	19	14.6
I finish the work I'm doing. My attention is good	14	10.8	34	26.2	82	63.0

Non school working children

Of non-school working children group, The results revealed as shown in Table (23 d) 90% of these children reported that they tried to be nice to other people and care about their feelings (somewhat true and certainly true). Moreover, 85.3% of children in this group reported that the item «I take things that are not mine from home, school or elsewhere» is not true. 88.3% of these children reported that they had one good friend or more (somewhat true and certainly true). In addition, 85.8% stated that they often volunteer to help others (parents, teachers, children) (somewhat true and certainly true). Only 31.6% of these children reported that they like to be alone (somewhat true and certainly true). This indicated that more efforts are needed to strength the positive social relations with others among these children and encourage them to be a good member in the society and to build good relationships with other children.

Table 23d: Strengths and difficulties survey among Nonschool working children

Items	Not true		Somewhat true		Certainly true	
	n	%	n	%	n	%
I try to be nice to other people. I care about their feelings	109	10.1	452	41.8	521	48.2
I am restless, I cannot stay still for long	420	39.7	381	35.2	272	25.1
I get a lot of headaches, stomach-aches or sickness	640	58.9	368	33.9	78	7.2
I usually share with others (food, games, pens etc.)	252	23.2	486	44.8	348	32.0
I get very angry and often lose my temper	582	53.6	372	34.3	131	12.1
I am usually on my own. I generally play alone or keep to myself	738	68.4	245	22.7	96	8.9
I usually do as I am told	171	15.8	471	43.5	442	40.8
I worry a lot	688	63.5	276	26.4	110	10.1
I am constantly fidgeting or squirming	681	63.0	262	24.2	138	12.8
I have one good friend or more	127	11.7	282	26.0	677	62.3
I fight a lot. I can make other people do what I want	702	65.1	279	25.9	98	9.1
I am often unhappy, down-hearted or tearful	691	63.9	287	26.5	104	9.6
Other people my age generally like me	102	9.5	474	43.9	503	46.6
I am easily distracted, I find it difficult to concent	589	54.8	369	34.3	117	10.9
I am nervous in new situations. I easily lose confidence	658	61.2	276	25.7	142	13.2
I am kind to younger children	130	12.0	398	36.8	553	51.2
I am often accused of lying or cheating	804	74.7	194	18.0	79	7.3
Other children or young people pick on me or bully me	825	76.3	185	17.1	71	6.6
I often volunteer to help others (parents, teachers, children)	154	14.2	498	46.0	431	39.8
I think before I do things	163	15.1	492	45.4	428	39.5
I take things that are not mine from home, school or elsewhere	922	85.3	117	10.8	42	3.9
I get on better with adults than with people my own age	270	25.0	461	42.6	351	32.4
I have many fears, I am easily scared	675	62.6	306	28.4	98	9.1
I finish the work I'm doing. My attention is good	93	8.6	402	37.2	586	54.2

4.5.2 Anger expression

The propensities to become angry and to express anger have been identified as important factors in physical and psychological health in children. In this study Anger Expression Scale for Children (AESC) was used to measure the anger trait, anger expression (anger out, anger in) and anger control. The responses for this scale's items are: almost never, sometimes, often and almost always. The results detailed as below:

Nonworking school children

In the non working school children group, the results revealed that 58.9% of these children reported that they felt like yelling at someone (sometimes, often, almost always). Moreover, 40.1% of these children felt like breaking things (sometimes, often, almost always). Regarding the anger control, 71% of these children reported that they are able to control their temper (sometimes, often, almost always). In addition, 82.6% reported that they tried to be patient (sometimes, often, almost always). Details are presented in Table (24 a).

Table 24a: Anger expression among nonworking school children

Items	Almost Never		Sometimes		Often		Almost Always	
	n	%	n	%	n	%	n	%
I feel angry	629	30.8	787	38.6	288	14.1	337	16.5
I feel like yelling at someone	832	41.1	655	32.3	312	15.4	226	11.2
I get very impatient if I have to wait for something	814	40.3	541	26.8	325	16.2	338	16.7
I lose my temper easily	967	47.8	528	26.2	256	12.7	268	13.3
I feel like breaking things	1203	59.7	401	19.9	230	11.4	180	8.8
I feel grouchy or irritable	917	45.4	619	30.7	272	13.5	210	10.4
I get in a bad mood when things don't go my way	668	33.2	644	32.0	402	20.0	299	14.8
I have a bad temper	1171	58.0	475	23.5	209	10.4	163	8.1
I get very angry if my parent or teacher criticizes me	921	45.5	497	24.6	292	14.4	314	15.5
I get in a bad mood easily	1116	55.4	469	23.3	231	11.5	200	9.9
I slam doors or stomp my feet	1130	56.0	437	21.7	199	9.9	252	12.4
I keep it to myself	720	35.8	548	27.2	356	17.7	388	19.3
I control my temper	578	29.0	638	32.0	402	20.2	377	18.8
I let everybody know it	890	44.4	555	27.7	279	13.9	281	14.0

I try to be patient	351	17.4	561	27.7	488	24.1	622	30.8
I argue or fight back	767	38.2	578	28.8	357	17.8	306	15.2
I keep my cool	522	26.1	624	31.2	423	21.2	430	21.5
I hit things or people	1341	66.5	332	16.5	186	9.2	157	7.8
I feel it inside, but I don't show it	724	36.2	568	28.4	377	18.9	329	16.5
I stay well behaved	476	23.7	573	28.5	465	23.2	495	24.6
I say mean or nasty things	1364	68.0	348	17.3	173	8.6	121	6.1
I stay mad at people but keep it secret	835	41.8	596	29.8	336	16.8	233	11.6
I try to stay calm and settle the problem	456	22.6	619	30.6	443	21.9	504	24.9
I have a temper tantrum	1137	56.4	485	24.1	235	11.7	158	7.8
I hold my anger in	666	32.9	628	31.0	407	20.1	324	16.0
I try to control my angry feelings	484	23.8	615	30.2	477	23.5	458	22.5

School children working in holidays

The result revealed as presented in Table (23 b) 62.2% of children who work only in holiday reported that they felt like yelling at someone (sometimes, often, almost always). Only 45% of these children said they had a bad temper (sometimes, often, almost always). Regarding the anger expression 52% of these children reported that they slammed doors or stomped their feet (sometimes, often, almost always) when they were angry. However, 73.5% of these children reported they were been able to control their temper (sometimes, often, almost always).

Table 24b: Anger expression among school children working in holidays

Items	Almost Never		Sometimes		Often		Almost Always	
	n	%	n	%	n	%	n	%
I feel angry	184	30.1	241	39.5	101	16.5	85	13.9
I feel like yelling at someone	224	37.8	217	36.6	87	14.7	65	10.9
I get very impatient if I have to wait for something	223	37.4	156	26.2	120	20.1	97	16.3
I lose my temper easily	259	43.2	170	28.4	96	16.0	74	12.4
I feel like breaking things	322	53.8	129	21.5	72	12.0	76	12.7
I feel grouchy or irritable	259	44.3	175	29.9	85	14.5	66	11.3
I get in a bad mood when things don't go my way	183	30.3	191	31.7	127	21.1	102	16.9

I have a bad temper	325	55.0	138	23.4	82	13.9	46	7.7
I get very angry if my parent or teacher criticizes me	274	45.8	166	27.8	68	11.4	90	15.0
I get in a bad mood easily	303	50.7	149	25.0	78	13.1	67	11.2
I slam doors or stomp my feet	286	48.0	159	26.7	63	10.6	88	14.7
I keep it to myself	202	33.2	201	33.0	100	16.4	106	17.4
I control my temper	159	26.5	185	30.9	139	23.2	116	19.4
I let everybody know it	243	40.8	179	30.1	84	14.1	89	15.0
I try to be patient	89	14.8	176	29.3	143	23.8	192	32.0
I argue or fight back	166	28.4	191	32.7	112	19.2	115	19.7
I keep my cool	151	25.4	175	29.5	146	24.6	122	20.5
I hit things or people	334	56.7	134	22.8	75	12.7	46	7.8
I feel it inside, but I don't show it	196	33.1	183	30.9	117	19.7	97	16.3
I stay well behaved	142	24.0	179	30.2	143	24.2	128	21.6
I say mean or nasty things	319	54.2	146	24.8	71	12.1	53	8.9
I stay mad at people but keep it secret	227	38.0	204	34.1	96	16.1	71	11.8
I try to stay calm and settle the problem	135	22.8	190	32.1	145	24.5	122	20.6
I have a temper tantrum	312	52.2	151	25.3	77	12.9	58	9.6
I hold my anger in	175	29.4	220	37.0	104	17.5	96	16.1
I try to control my angry feelings	113	18.8	199	33.1	149	24.8	140	23.3

Table 24c: Anger expression among school working children

Items	Almost Never		Sometimes		Often		Almost Always	
	n	%	n	%	n	%	n	%
I feel angry	29	21.8	62	46.6	22	16.6	20	15.0
I feel like yelling at someone	52	40.0	35	26.9	28	21.5	15	11.5
I get very impatient if I have to wait for something	46	35.7	37	28.7	24	18.6	22	17.0
I lose my temper easily	49	38.8	44	34.9	15	11.9	18	14.2
I feel like breaking things	62	47.3	33	25.3	18	13.7	18	13.7

I feel grouchy or irritable	50	37.9	48	36.3	17	12.8	17	12.8
I get in a bad mood when things don't go my way	29	22.1	45	34.4	31	23.7	26	19.8
I have a bad temper	70	53.0	33	25.0	18	13.6	11	8.4
I get very angry if my parent or teacher criticizes me	49	37.7	27	20.8	32	24.6	22	16.9
I get in a bad mood easily	64	48.5	39	29.5	15	11.4	14	10.6
I slam doors or stomp my feet	60	46.9	28	21.9	21	16.4	19	14.8
I keep it to myself	43	33.6	33	25.8	21	16.4	31	24.2
I control my temper	35	27.3	39	30.5	33	25.8	21	16.4
I let everybody know it	55	43.0	30	23.4	22	17.2	21	16.4
I try to be patient	28	21.2	33	25.0	38	28.8	33	25.0
I argue or fight back	30	24.0	44	35.2	20	16.0	31	24.8
I keep my cool	39	30.4	35	27.3	28	21.8	26	20.3
I hit things or people	75	58.6	25	19.5	20	15.6	8	6.3
I feel it inside, but I don't show it	39	30.7	36	28.3	23	18.2	29	22.8
I stay well behaved	23	18.3	33	26.3	34	26.9	36	28.5
I say mean or nasty things	85	65.9	25	19.4	8	6.2	11	8.5
I stay mad at people but keep it secret	50	40.3	42	33.9	18	14.5	14	11.3
I try to stay calm and settle the problem	25	19.7	33	26.0	39	30.7	30	23.6
I have a temper tantrum	66	51.2	30	23.3	18	13.9	15	11.6
I hold my anger in	38	29.2	40	30.8	24	18.5	28	21.5
I try to control my angry feelings	28	21.4	41	31.3	33	25.2	29	22.1

School working children

The results revealed as presented in Table (23 c), that 78.2% of children who is working and studying at the same time reported that they feel angry (sometimes, often, almost always). The results revealed that these children express their anger in a negative ways as fighting and breaking things almost always. This is consistent with Fekaday, Alem and Hagglof (2006) study. They reported that working children reported problems in their moods more than non working children. This indicated that the importance of effective communication with these children in order to identify the triggers that lead to let them feel angry and how to teach them the strategies to deal with it. Teaching children how to control their anger is considered as vital importance to decrease antisocial behaviour and conduct problems.

Non school working children

The results revealed as presented in Table (24 d) that 53.8% of working children no longer attending school, reported that they feel angry (sometimes, often, almost always). Moreover, 65.5% of these children reported that they got very angry if their parents or teachers criticized them (sometimes, often, almost always). However, 80.5 % of these children reported they had been able to control their temper (sometimes, often, almost always).

Table 24d: Anger expression among nonschool working children

Items	Almost Never		Sometimes		Often		Almost Always	
	n	%	n	%	n	%	n	%
I feel angry	499	46.2	395	36.6	100	9.3	86	7.9
I feel like yelling at someone	575	53.4	305	28.4	135	12.5	61	5.7
I get very impatient if I have to wait for something	358	33.5	373	34.9	240	22.5	97	9.1
I lose my temper easily	548	50.8	298	27.7	146	13.6	85	7.9
I feel like breaking things	671	62.8	233	21.8	110	10.1	55	5.1
I feel grouchy or irritable	573	53.6	316	29.5	115	10.8	65	6.1
I get in a bad mood when things don't go my way	303	28.3	404	37.7	219	20.5	145	13.5
I have a bad temper	574	53.9	303	28.5	133	12.5	55	5.1
I get very angry if my parent or teacher criticizes me	371	34.5	384	35.7	201	18.7	117	10.9
I get in a bad mood easily	574	53.7	272	25.4	151	14.2	72	6.7
I slam doors or stomp my feet	617	57.7	229	21.4	140	13.1	84	7.8
I keep it to myself	387	36.3	271	25.4	241	22.6	167	15.7
I control my temper	208	19.5	359	33.7	351	33.0	147	13.8
I let everybody know it	375	35.0	341	31.8	229	21.4	126	11.8
I try to be patient	137	12.9	342	32.3	369	34.8	212	20.0
I argue or fight back	365	34.3	299	28.1	255	24.0	145	13.6
I keep my cool	183	17.2	368	34.6	365	34.3	149	13.9
I hit things or people	654	61.8	231	21.8	114	10.8	59	5.6
I feel it inside, but I don't show it	383	36.0	305	28.7	235	22.1	140	13.2
I stay well behaved	159	15.0	406	38.3	347	32.7	149	14.0

I say mean or nasty things	384	36.2	334	31.5	210	19.8	132	12.5
I stay mad at people but keep it secret	384	36.2	372	35.1	209	19.7	96	9.0
I try to stay calm and settle the problem	180	17.0	376	35.5	372	35.1	132	12.4
I have a temper tantrum	597	56.1	259	24.3	129	12.1	80	7.5
I hold my anger in	364	34.2	319	30.0	243	22.9	137	12.9
I try to control my angry feelings	98	9.2	378	35.4	374	35.0	218	20.4

4.5.3 Coping efficacy

Coping efficacy was measured using coping efficacy scale for children to assess their abilities to solve their own problems and their satisfaction with the strategies that used to solve these problems. The results revealed that there were differences in the children responses in 4 groups.

Nonworking school children

The results showed as presented in table (25 a) that 72.5 % of children in this group reported that they were satisfied with the ways in handling their problems during the last month (A little satisfied, Pretty well satisfied and Very satisfied). Moreover, the results revealed that 86.3% of children reported that the things they did during the last month worked to make the situation better (Worked a little, Worked pretty well and Worked very well). In addition, 87.6% of children in this group reported that they believed that they will be good in handling their problems in the future (a little good, pretty good and very good).

Table 25a: Coping efficacy scale among nonworking school children

Items	Not at all satisfied		A little satisfied		Pretty well satisfied		Very satisfied	
	n	%	n	%	n	%	n	%
Overall, how satisfied are you with the way you handled your problems during the last month?	569	27.5	652	31.5	528	25.5	322	15.5
Overall, compared to other kids, how good do you think that you have been in handling your problems during the past month?	439	21.2	588	28.5	677	32.8	362	17.5
	Did not work at all		Worked a little		Worked pretty well		Worked very well	
	n	%	n	%	n	%	n	%
Overall, how well do you think the things you did during the last month worked to make the situation better?	281	13.7	586	28.7	665	32.5	512	25.1
Overall, how well do you think the things you did during the last month worked to make you feel better?	295	14.4	489	23.8	611	29.7	659	32.1

	Not at all good		A little good		Pretty good		Very good	
	n	%	n	%	n	%	n	%
In the future, how good do you think that you will usually be in handling your problems?	256	12.4	389	18.9	622	30.3	790	38.4
Overall, how good do you think that you will be at making things better when problems come up in the future?	215	10.4	428	20.8	669	32.4	750	36.4
Overall, how good do you think that you will be at handling you feelings when problems come up in the future?	321	15.5	445	21.5	617	29.9	682	33.1

School children working in holiday

The results revealed as presented in Table (25 B) that 73.8% of school children working in holidays (a little satisfied, pretty well satisfied, very satisfied) reported that they thought they were good when compared to other kids in handling their problems during the past month. Moreover, the results revealed that 82.6% of children reported that the things they did during the last month worked to make the situation better (worked a little, worked pretty well and worked very well). 87.3% of these children believed that they will be good in handling their problems in the future (a little good, pretty good and very good).

Table 25b: Coping efficacy among school children working in holiday

Items	Not at all satisfied		A little satisfied		Pretty well satisfied		Very satisfied	
	n	%	n	%	n	%	n	%
Overall, how satisfied are you with the way you handled your problems during the last month?	190	31.0	185	30.2	158	25.8	80	13.0
Overall, compared to other kids, how good do you think that you have been in handling your problems during the past month?	160	26.2	203	33.2	158	25.9	90	14.7
	Did not work at all		Worked a little		Worked pretty well		Worked very well	
	n	%	n	%	n	%	n	%
Overall, how well do you think the things you did during the last month worked to make the situation better?	104	17.3	173	28.8	186	31.0	137	22.8

Overall, how well do you think the things you did during the last month worked to make you feel better?	100	16.6	148	24.5	176	29.2	179	29.7
	Not at all good		A little good		Pretty good		Very good	
	n	%	n	%	n	%	n	%
In the future, how good do you think that you will usually be in handling your problems?	78	12.7	128	20.9	192	31.3	215	35.1
Overall, how good do you think that you will be at making things better when problems come up in the future?	74	12.2	117	19.2	200	32.8	218	35.8
Overall, how good do you think that you will be at handling you feelings when problems come up in the future?	91	14.9	135	22.1	193	31.6	192	31.4

School working children

The results presented in table (25 c). The results revealed that 65.4% of children in this group reported that they were satisfied with the ways in handling their problems during the last month (A little satisfied, pretty well satisfied and very satisfied). Moreover, the results revealed that 88.3% of children reported that the things they did during the last month worked to make the situation better (worked a little, worked pretty well and worked very well). 90.1% of these children believed that they will be good in handling their problems in the future (a little good, pretty good and very good).

Table 25c: Coping efficacy among school working children

Items	Not at all satisfied		A little satisfied		Pretty well satisfied		Very satisfied	
	n	%	n	%	n	%	n	%
Overall, how satisfied are you with the way you handled your problems during the last month?	45	34.6	40	30.8	36	27.7	9	6.9
Overall, compared to other kids, how good do you think that you have been in handling your problems during the past month?	28	21.7	44	34.1	34	26.4	23	17.8

	Did not work at all		Worked a little		Worked pretty well		Worked very well	
	n	%	n	%	n	%	n	%
Overall, how well do you think the things you did during the last month worked to make the situation better?	15	11.7	43	33.6	46	35.9	24	18.8
Overall, how well do you think the things you did during the last month worked to make you feel better?	18	14.1	32	25.0	43	33.6	35	27.3
	Not at all good		A little good		Pretty good		Very good	
	n	%	n	%	n	%	n	%
In the future, how good do you think that you will usually be in handling your problems?	13	9.9	31	23.7	48	36.6	39	29.8
Overall, how good do you think that you will be at making things better when problems come up in the future?	15	11.9	18	14.3	52	41.3	41	32.5
Overall, how good do you think that you will be at handling you feelings when problems come up in the future?	19	14.6	31	23.8	38	29.3	42	32.3

Non school working children

The results revealed that 85.9% of children in this group reported that they were satisfied with the ways in handling their problems during the last month (a little satisfied, pretty well satisfied and very satisfied). Moreover, 90.9% of these children believed that things they did during the last month worked to make them feel better (worked a little, worked pretty well and worked very well). About 92.1% of these children believed that they will be good in handling their problems in the future (a little good, pretty good and very good).

Table 25d: Coping efficacy among nonschool working children

Items	Not at all satisfied		A little satisfied		Pretty well satisfied		Very satisfied	
	n	%	n	%	n	%	n	%
Overall, how satisfied are you with the way you handled your problems during the last month?	152	14.0	423	39.0	409	37.7	100	9.2

Overall, compared to other kids, how good do you think that you have been in handling your problems during the past month?	121	11.2	380	35.1	437	40.4	144	13.3
	Did not work at all		Worked a little		Worked pretty well		Worked very well	
	n	%	n	%	n	%	n	%
Overall, how well do you think the things you did during the last month worked to make the situation better?	106	9.8	397	36.8	431	39.9	145	13.5
Overall, how well do you think the things you did during the last month worked to make you feel better?	98	9.1	327	30.2	453	41.9	204	18.8
	Not at all good		A little good		Pretty good		Very good	
	n	%	n	%	n	%	n	%
In the future, how good do you think that you will usually be in handling your problems?	86	7.9	307	28.3	449	41.5	241	22.3
Overall, how good do you think that you will be at making things better when problems come up in the future?	65	6.0	279	25.8	464	42.9	273	25.3
Overall, how good do you think that you will be at handling you feelings when problems come up in the future?	86	8.0	240	22.2	406	37.6	349	32.2
In summary, the children in the four groups reported they were satisfied in handling their problems and they believed that the things they did worked to make the situation better.								

4.5.4 Difference in psychological health

4.5.4.1 Strengths and Difficulties

The results of comparison of the total SDQ scale scores, subscales scores in the four groups are shown in Table 26. The means of the total SDQ and all subscales (except the conduct subscale) were higher in school children working and studying group than other groups. A comparison was made between the four groups: *non working school children*, *school working children*, and *non school working children*. ANOVA was used to examine differences between groups. The results revealed that there were statistically significant differences between the *school working children* and *non school working children*. This indicates that school working children reported more psychosocial problems more often than the *non school working children*. See table 26

Table 26: A presentation of the means of the SDQ: self report (total score, subscales' scores) in four groups.

Dimension		Non school working children n=1019	School working children n=268	School children working in holiday n=628	Non working school children n=2093	F	P
Emotion problems	Mean	2.29	3.56	3.01	3.56	64.979	.000
	SD	2.18	2.44	2.28	2.49		
Conduct problems	Mean	2.26	3.16	3.29	3.16	69.702	.000
	SD	1.82	1.84	1.96	1.66		
Hyperactivity	Mean	3.18	3.54	3.25	3.35	3.059	.027
	SD	1.93	1.99	1.72	1.94		
Peer problems	Mean	2.88	3.03	2.75	2.72	3.231	.021
	SD	1.75	1.88	1.74	1.81		
Prosocial	Mean	5.08	6.06	5.66	5.87	44.339	.000
	SD	1.92	1.84	1.75	1.82		
Total difficulties	Mean	11.44	12.80	11.88	12.67	11.286	.000
	SD	5.35	5.92	5.37	5.61		

The results provide valuable insights and have clinical/practical implications in terms of enforcing law to reduce child labour. Understanding the impact of work on child mental and social health is essential to inform policy and future research as well as to improve the lives of children.

4.5.4.2 Anger expression

The results of comparison of the total Anger Expression Scale for Children (AESC) scores, subscales scores in the four groups are shown in Table 26a comparison was made between the four groups: *non working school children*, *school working children*, and *non school working children*. ANOVA was used to examine differences between groups. The results revealed that there were statistically significant differences in total score and two subscales; anger trait and anger out between groups. There was statistical differences between *non school working children* and other groups. Moreover, there was a statistical differences between *school working children* and *non school working children*. The results revealed that the lowest mean of the anger trait (mean 18.18), anger out (mean 11.29), anger in (mean 8.33) and total score (mean 52.46) was among *non school working children*.

On the other hand, The means of the total (AESC) and all subscales were higher in *school working children* than other groups. This is indicated that the school working children had the highest negative impact of child work. They used to express anger by breaking things, yelling at others and fighting. The results revealed that no difference between *school working children in holidays* and *non working school children*. Working in holiday didn't had a great impact in children who work only in holiday.

The results revealed that school working children had the highest negative impact of child work. This infers that efforts are needed to improve the curriculum in schools to improve the children's abilities to deal with emotions and controlling. More training for teachers are recommended. More workshops needed for Working children no longer attending school to improve their abilities to express anger in a positive way and using good strategies to control it.

Table 27: A presentation of the means of total Anger Expression Scale for Children (AESC) score and subscales' scores in four groups.

Dimension		Non school working children n=1019	School working children n=268	School children working in holiday n=628	Non working school children n=2093	F	P
Trait anger	Mean	18.13	20.55	19.52	19.17	11.156	.000
	SD	6.30	6.59	6.52	6.60		
Anger out	Mean	11.29	11.52	11.52	10.61	13.561	.000
	SD	3.63	3.74	4.03	3.60		
Anger in	Mean	8.33	8.71	8.53	8.52	1.322	.265
	SD	3.24	3.02	2.99	3.08		
Anger control	Mean	14.92	15.10	14.85	14.77	.570	.635
	SD	3.86	3.96	4.31	4.46		
Total Anger expression scale	Mean	52.46	54.58	54.17	52.77	3.432	.016
	SD	9.56	11.16	11.91	11.69		

4.5.4.3 Coping efficacy

The results of comparison of the total coping efficacy scores in the four groups are shown in table 28 revealed that the highest mean of coping efficacy and handling the problems was among non working school children (mean = 19.0). On the otherhand, the results revealed that the lowest mean of the coping efficacy was among school working children (mean 18.44). This emphasizes the importance of interventions to empower the positive coping skills among this population in order to deal with the problems that they may face at school and working sites. This is supported by Woodhead (2004) who suggested that the healthcare providers need to enhance the coping mechanisms among these children. Psycho-educational support and problem-solving programs are considered important to children to cope better with the consequences of their work and study. More efforts should be implemented to enhance students attendance at schools and reduce their involvement in work.

Using ANOVA to test for differences between groups in regards to coping efficacy. The results revealed that there were no statistical significant differences in coping efficacy between the four groups. This could be explained as working environment does not affect the child's abilities to deal and cope with the problems. More research studies should be conducted to examine coping strategies among children at schools and working sites.

Table 28: comparison of the total coping efficacy scores in the four groups

Dimension		Non school working children n=1019	School working children n=268	School children working in holiday n=628	Non working school children n=2093	F	P
Coping efficacy	Mean	18.92	18.44	18.50	19.01	2.402	.066
	SD	4.52	4.65	4.78	4.94		

4.6 Working and nonworking children in the Palestinian refugee camps

In this part, children will be classified into three groups: nonschool working, school non working, and school working children. For the purpose of explaining the influence of work and because the total sample were 512 child, categories will be collapsed into two groups working (that include nonschool, working in holidays, and working and studying at the same time) versus school nonworking. Thus, the term working children, latter, will refer to all children who work from the three groups.

4.6.1 Demographic Characteristics

The total sample for Palestinians children refugee was 512 children recruited from three camps in Jordan. About (46%, n=236 children) children from Al-baqa'a and 165 (32.2%, n=165 children), 111(21.7%, n=111 children) children were from Al-zarqa and Jerash camps, respectively. Among these children, 51 were nonschool working, and 354 were school nonworking, and 116 were working school children. In regards to children distribution according to their working status, this study showed that the highest percentage (58.7%) of nonworking children were from Albaq'a camp followed by children from Alzarq'a (29.3%) and Jerash (12%) camps, respectively. Looking at children who are school working children, the results showed that the highest percentages of these children (49.3%) were from Al-zarqa camp, while the lowest percentage reported from Albaq'a camp (36%) and from Jerash camp (14.7%).

4.6.1.1 Gender and age

The Age of children ranged from 6-16 years and this range meet the inclusion criteria of this study. The mean age was 12.7 (SD=2.8) years. The sample has approximately equally representing both males (48.6%) and females (51.4%).

4.6.1.2 Type of work

Approximate percentages reported from nonschool working children, and school working children with regard to their type of work. The highest reported type of work was services (27.3%, n =44 children) followed by vehicles repair (18.6%, n=30 children). Less children (18%, n=29 children) worked in different vocations or as machine technician (1.2%, n=2 children).

4.6.1.3 Place and nature of work

The majority of children work with their parents (42.9%, n=69 children) or with either a family's friend (25.5%, n=41) or other relatives (23.6%, n=38). The majority of children (59.7%, n=95 children) reported that they are paid for their work, while (25.1%, n = 40 children) reported that they have unpaid job.

4.6.1.4 Reasons for work and work satisfaction

About half of children (49.4%, n=80 children) reported that helping family was the main reason to work. Other reported reasons were learning new skill (26.5%), gaining additional financial income (21%), forceful obligation to work by others (1.9%), and paying debts (1.2%). Most of children showed satisfaction with their work (either a paid or non-paid). Higher satisfaction with work was rated by children who work for their parents (62.3%, n=43 children). The least satisfied children are those who work with their relatives or family's friend (9.8%, n=4 children).

The majority of children in Palestinian refugee camps work for the purpose of helping their families, to learn a skill, and gaining additional income, and they are satisfied with their work.

4.6.1.5 Desires to pursue education

Regarding children interest to complete education, results showed that most of the children who work (school and non school) have a desire to pursue their education (76.6%, n= 121 children), while over (17.7%, n= 28 children) reported no interest to pursue their education and (5.7%, n= 9 children) do not know whether they wish to pursue their education or not.

4.6.1.6 Working hours and wages

The average number of working hours reported by working children was (36) hours a week, while some of them work for (72) hours per week. In regards to wages, the average weekly wage was (17.5) JD/week and the highest was (78) JD, and the least was (10) JD a week.

4.6.1.7 Family status

Regarding family status of children, the average number of family size was eight members, and the birth order for the working children in the family was almost the thirds. With regards to the source of household income, most of the children reported that fathers are the main source of household income (65.6%, n=335 children) and children only as the main source of income represented (6.6%, n=34 children). About 65% of the children (n = 335) reported that they are coming from middle income families compared to(23% n=118 children) who came from poor families and (10.5% n=54 children) came from families with high level of income.

4.6.2 Physical and psychosocial health

Regarding physical, psychological and social wellbeing, the results has showed that working school-children are more vulnerable to influenza, common cold and visit emergency departments and doctors more frequently for the purpose of treatment. The nonschool working children were the least in terms of the frequency and percentage. The findings of school non working children are similar to working school children except for hospital admission in which they were the lowest among all categories (Table 29).

Nonschool working children in the Palestinian refugee camps were more vulnerable to influenza, common cold and visit emergency departments and doctors for the purpose of treatment.

In terms of physical health concerns, school working children had the highest reports of suffering from dental problems, hearing problems, enuresis, while school non working children are most to suffer from vision problems and headaches. In terms of psychosocial health concerns, school working children had the higher reports of problems at schools, problems with law and police, and to spend times alone. School nonworking children were the most to have feeling of depression, suffering problems at home, and feeling loneliness.

School working children in the Palestinian refugee camps suffering physical health problems and multiple problems at school and with the law and the police, while school non working children suffer from depression and loneliness and problems at home.

In terms of the risk behavior, the results showed that nonschool working children are the most reported smokers, while school working children reported to be the most frequently users of the nonprescribed medications and most of the children reported that their parents smoke and drink alcohol. Among school nonworking children, only two were abusing drugs and none of the nonschool working children was using any type of drugs.

In terms of sexual concerns, school working children were the most to suffer from acnes. Moreover, they are more able to access information about the sexual relationship between as well as they were the most to self check their genitals.

School working children in the Palestinian refugee camps are suffering of health problems related to sexuality and they are more vulnerable to risk behaviors of smoking and the use of nonprescribed medications.

In summary, the analysis showed that school working children had the highest reports of physical, psychological, and social problems unlike nonschool working children. These later children were also the least to suffer these problems compared to school nonworking children. This may indicate a need to better understand the suffering of working children who are at school and the nature and quality of their life, and their psychosocial wellbeing. In addition, there is a need to understand the effects of school and work environment on the psychological, social and physical health of children.

Table 29: Health and physical health concerns in children in refugee camps

Variable	School non working		non school working		School working	
	n	%	n	%	n	%
During the past month how many times did you have common cold	230	67	20	49	73	66.4
During the past month how many times did you have flu	81	23.6	7	14	22	20.4
During the past month how many times did you have checked your doctor for a health problem	132	38.6	9	17.6	54	47.4
During the past month how many times did you have visited an emergency department	36	10.5	8	15.7	26	23.2
During the past month how many times did you have admitted to the hospital, even for one night	21	6.1	3	5.9	11	93.0

Health concerns and risk behaviors						
I have problems with teeth	241	22.7	18	5.4	76	71.8
I have problems with the vision	131	69.5	16	8	53	26.5
I have hearing problems	52	28.9	5	6.3	23	65.5
I have night bedwetting (enuresis)	17	5.0	1	2.9	16	47.1
I have headache	219	67.2	32	9.8	75	23.5
Mental health and social concerns						
I feel lonely	144	72.4	7	3.5	48	24.1
I feel depressed	174	78.4	10	5.4	38	17.1
I have problems at home	153	67.1	23	10.1	52	22.8
I have problems in school / at work	114	22.9	7	4.5	36	72.6
I have trouble with the law and the police	10	5.0	1	5.0	9	45.0
I have intimate friends	99	21.5	44	9.6	317	68.9
I spend times alone	65	21.1	18	5.8	225	73.1
Health concerns and risk behaviors						
I smoke cigarettes	20	34.5	23	39.7	15	25.9
I use non-prescribed medication and drugs	23	22.1	1	1.0	80	67.9
My parents use alcohol/drugs	4	36.4	2	18.2	5	45.5
My father smoke cigarettes	55	21.1	30	11.5	176	67.4
I use drug such as hashish and marijuana	2	100	0	0	0	0
Sexual health concerns						
I have acne	41	27	12	7.9	99	65.1
I can find information and pictures about sexual relationship between couples	27	27.6	20	20.4	51	52
I check my genitals	30	32.3	11	11.8	52	55.6

4.6.3 Child abuse

4.6.3.1 Father's child abuse

Regarding child abuse, results showed that school working children are more vulnerable to physical abuse of all kinds (table 30a). Approximately half of them (48.6%) indicated that their fathers rush

to beat them if they committed a mistake. About (35.5%) reported they were subjected to severe beatings, and that (28.6%) of the children said they were kicked and pushed for any mistake by their fathers. These percentages are similar to school nonworking children, however; nonschool working children had the least rates among all groups of children in this study (43.9%).

In terms of psychological abuse, rates remained the same, where working children who are in school are more vulnerable to psychological abuse of different forms and in a percentage that exceeds all other groups. Except in “being deride in front of strangers”, where nonschool and school working children had almost equal rates (nonschool, 22 %; school working, 20.0%). The neglect also had the most visible attribute to the school working children. About 20-30% of the school working children reported that they have been neglected by their fathers in a various forms of negligence. Regarding sexual harassment, school working children and non working children reported that they are exposed to multiple forms of sexual harassment and that those rates were numerically few but it calls for more in depth analysis and consideration.

Table 30a: Father’s child abuse among children in refugee camps

Type of Abuse	School non working		non school working		School working	
	n	%	n	%	n	%
Physical abuse						
Rush to beat me if I made a mistake	100	30.7	18	43.9	51	48.6
Beat me violently if they do not listen to him	88	27.3	9	22.0	38	35.5
Uses harsh methods to punish me (burning, or hot tools) if I disobeyed him	27	8.4	3	7.3	14	12.8
Kick and push me if I did any mistake	41	12.7	5	12.2	30	28.6
I have injuries and bruises and fractures because of his punishment	28	8.6	5	12.2	20	18.3
Psychological abuse						
Derided me in front of strangers	25	7.7	9	22.0	21	20.0
Cursed me and called me with bad names	22	6.8	9	22.0	29	27.6
Threatening me with death (killing)when I misbehaved	31	9.6	2	4.8	28	26.7
threatening me with a knife to punish me if did wrong	10	3.1	0	0	10	9.5
Derided me when my work does not satisfy him	31	9.6	6	14.6	24	22.6
Neglect						
Do not care for my clothing even if it is a decent	20	6.2	3	7.3	27	26.0
knows that the risk of hardware, tools and equipment around, but do not care for it	18	5.6	2	4.9	25	25.0

I have fallen and wounded several times and did not provide treatment for me.	25	7.7	2	4.9	22	21.4
does not care about me if I get sick or injured or eaten something rotten	20	6.1	1	2.4	32	29.9
does not provide me with food and the appropriate clothing	13	4.0	2	4.9	21	20.2
Sexual Harassment						
Touches me in areas of my body that I do not want anybody to touch it.	6	5.6	0	0	6	5.6
asked me to touch parts of his/her body that I do not want to touch	3	6.9	0	0	7	6.9
asked me to take off my clothes and to reveal parts of my body	3	.9	0	0	3	2.9

4.6.3.2 Mother's child abuse

Results showed that school working children are the most vulnerable to all forms of abuse; physical, psychological, neglect, and sexual abuse by their mothers (table 30b). The most manifested physical abuse exhibited by (28.8%, n=30 children) was "rush to beat me if I did any mistake". The most common form of psychological abuse was "threatened me to death when I misbehave" by up to (19%, n=19 children) and the most form of neglect was the lack of attention to children if they get sick or injured or eat something rotten (25.0%, n=26 children). What calls for attention is the rates of mothers' sexual abuse reported by children, as about (6.7%, n=7) of children reported that they have been asked to touch parts of their mothers bodies that they do not want to touch and being asked to uncover parts of their bodies that they do not want it to be exposed. The study also showed that school nonworking children were at lowest risk to abuse of all forms than school working children. About (30.7%, n=103 children) exhibited that the most form of abuse was "rush to beat me if I do any mistake" (10%), while reports of sexual abuse were at the lowest rate (> 2%). The nonschool working children had the lowest, and some of children reported that they have never been abused in any of the forms. However, being beaten was the highest rate among the nonschool working children (20.4%, n=10 children). In conclusion, school working children are more vulnerable to all forms of abuse and their higher percentages of experiencing abuse are of concern on the health of children. Here, we can say that parents of school working children are engaged in multiple forms of physical, psychological and sexual abuse against their children and that will be reflected on the children health and wellbeing and hinders their normal growth and development. Also, the results of abuse will be evident through children delinquency and antisocial behaviors at school and community.

School working children are exposed to multiple forms of abuse by their fathers and mothers more than the other groups of children in this study

Table 30b: Mother's child abuse among children in refugee camps

Abuse	School non working		non school working		School working	
	n	%	n	%	n	%
Physical abuse						
Rush to beat me if I made a mistake	103	30.7	10	20.4	30	28.8
Beat me violently if they do not listen to him	66	2.0	1	2.0	20	20.0
Uses harsh methods to punish me (burning, or hot tools) if I disobeyed him	17	5.1	1	2.0	8	7.8
Kick and push me if I did any mistake	34	10.2	0	0	10	10.3
I have injuries and bruises and fractures because of his punishment	22	6.6	0	0	10	10.3
Psychological abuse						
Derided me in front of strangers	21	6.3	2	4.1	9	8.8
Cursed me and called me with bad names	17	5.1	0	0	17	16.3
Threatening me with death (killing)when I misbehaved	28	8.3	0	0	19	19.0
Threatening me with a knife to punish me if did wrong	7	2.1	0	0	8	7.9
Derided me when my work does not satisfy him	24	7.2	2	4.1	16	15.8
Neglect						
Do not care for my clothing even if it is a decent	22	6.6	0	0	21	21.0
Knows that the risk of hardware, tools and equipment around, but do not care for it	17	5.0	0	0	23	24.0
I have fallen and wounded several times and did not provide treatment for me.	22	6.6	0	0	17	17.0
Does not care about me if I get sick or injured or eaten something rotten	13	3.9	0	0	26	25.5
Does not provide me with food and the appropriate clothing	10	3.0	0	0	21	20.0
Sexual Harassment						
Touches me in areas of my body that I do not want anybody to touch it.	5	1.5	0	0	3	2.9
Asked me to touch parts of his/her body that I do not want to touch	1	.3	0	0	7	6.8
Asked me to take off my clothes and to reveal parts of my body	1	.3	0	0	5	5.0

4.6.3.3 Teacher's child abuse

Regarding teachers abuse, the study showed that working children and school nonworking children are exposed largely to all forms of abuse by teachers in schools (table 30 c). About (68.8%, n=77) of school working children and (32.2%, n= 109) of school nonworking children reported that their teachers rush to beat them if they do any mistake, and are beaten violently by their teachers (42.6%, 25.6%), respectively. The analysis also showed that (18.4%, n = 46) of school working children are subjected to harsh methods of punishment by their teachers such as burning if they disobey them. In relation to psychological abuse, school working children are facing multiple forms of psychological abuse at school. The analysis showed that at least 25% of the children reported that their teachers deride them if they do something that does not satisfy them, called by bad names or titles, and threatened with death. Moreover, (7.9%, n=8) reported that they are threatened by knife as a means of punishment. As well as, the study showed that neglect rates are quite lower than psychological abuse and ranging from 20- 32%. Moreover, although low number of children agreed to answer the sexual abuse questions, (16.7%, n = 11) of the school working children reported that their teachers touched parts of their body that they do not want anyone to touch, and (5%, n = 5) reported that their teachers asked them to touch parts of teachers' bodies that they children do not want to touch or ask them to revealed parts of their bodies. In summary, the teachers in schools are practicing various forms of abuse to children and particularly, to those who work. Therefore, this call for attention to school life and the sources of psychological and social support available for those at risk for abuse, or been victims of abuse. The school environment has to be enhances and remodeled to provide children with appropriate and health environments that allow children growth and development and prevent children's dropout and an antisocial behaviors.

Teachers in schools practice multiple forms of abuse against children especially those who are school working, and most forms of abuse are physical and psychological with alarming rates of sexual harassment.

Table 30c: Teacher's child abuse among children in refugee camps

Abuse	Nonworking		School working	
	n	%	n	%
Physical abuse				
Rush to beat me if I made a mistake	109	32.2	77	68.8
Beat me violently if they do not listen to him	85	25.6	46	42.6
Uses harsh methods to punish me (burning, or hot tools) if I disobeyed him	15	4.4	19	18.4
Kick and push me if I did any mistake	41	12.1	29	30.2
I have injuries and bruises and fractures because of his punishment	15	4.4	16	15.4
Psychological abuse				
Derided me in front of strangers	34	10.0	34	33.3

Cursed me and called me with bad names	19	5.6	26	25.6
Threatening me with death (killing)when I misbehaved	20	5.9	31	29.5
Threatening me with a knife to punish me if did wrong	6	1.8	8	7.9
Derided me when my work does not satisfy him	24	7.1	29	29.9
Neglect				
Do not care for my clothing even if it is a decent	27	8.0	24	24.7
Knows that the risk of hardware, tools and equipment around, but do not care for it	19	5.7	31	32.3
Do not care for my clothing even if it is a decent	20	5.9	21	21.0
Knows that the risk of hardware, tools and equipment around, but do not care for it	18	5.3	32	32.7
Do not care for my clothing even if it is a decent	34	10.0		
Sexual Harassment				
Touches me in areas of my body that I do not want anybody to touch it.	4	1.2	11	16.7
Asked me to touch parts of his/her body that I do not want to touch	2	.6	5	5.0
Asked me to take off my clothes and to reveal parts of my body	1	.3	5	5.0

4.6.3.4 Employer's child abuse

Results showed that school working children are more vulnerable to all forms of abuse (table 30d). About (32.1%, n=26 children) of school working children and (23.8%, n =10 children) of nonschool working reported that employers rush to beat them if they did any mistake. About (26.2%, n = 22 children) of school working children are beaten violently compared to (7.1%, n = 3) of nonschool working children. In regards to the psychological abuse, results also showed that school working children had higher rates of abuse that nonschool working in almost all forms of psychological abuse. the only forms of psychological abuse that nonschool working children had higher reports than school working is "derided me in front of strangers" as (19 %, n = 8 children) of the nonschool working children reported that compared to (17.3%, n = 14 children) reported by school working children. In all other forms, school working had higher rates as (19.3%, n = 16 children) of them reported that " cursed me and called me with bad names" and (15.6%, n = 13 children) said that they were derided when doing something that does not satisfy them. On the other hand, school working children had also higher rates of neglect that nonschool working. The analysis showed that (24%, n = 17 children) of them reported that their employers know that there is a danger may be inflicted upon them from hardware, tools and equipment, but do not care. Nonschool working children reported that they had never experienced any forms of sexual abuse, while up to (11.1%, n = 9 children) of school working children reported that they were subject to multiple forms of sexual abuse such as being touched by their employers in places of their bodies that they do not want anyone to touch and being asked by their employers to discover parts of their bodies.

In conclusion, school working children reported wide range of abuse that include physical,

psychological, neglect and sexual abuse, while nonschool working children had lower rates. This indicates that psychosocial and physical wellbeing of school working children is compromised, and that will be reflected later on children's willingness to adapt and grow normally.

School working children had higher rates of abuse by their employers compared to nonschool working children who had very low rates

In summary, we can say that school working children were more subject to physical, psychological abuse, neglect and sexual abuse than nonworking children. As well as, it was clearly evident that teachers are the most reported abusers. Therefore, school working children are exposed to various forms of abuse by their teachers, parents and employers. The results infer that school working children are at higher risk for psychosocial disturbances due to lack of social and psychological support and due to loss of security at school, home and work sites. This in turn would lead to the delinquency, involved in risk behaviors and lack trust and confidence in the society. Children in these situations will be also at higher risk for leaving schools and homes and resort to illegal acts such as drugs and crimes.

Table 30d: Employer's child abuse among children in refugee camps

Abuse	Nonschool working		School working	
	n	%	n	%
Physical abuse				
Rush to beat me if I made a mistake	10	23.8	26	32.1
Beat me violently if they do not listen to him	3	7.1	22	26.2
Uses harsh methods to punish me (burning, or hot tools) if I disobeyed him	1	2.4	10	12.3
Kick and push me if I did any mistake	0	0	9	10.7
I have injuries and bruises and fractures because of his punishment	0	0	4	4.9
Psychological abuse				
Derided me in front of strangers	8	19	14	17.3
Cursed me and called me with bad names	6	4.6	16	19.3
Threatening me with death (killing)when I misbehaved	1	2.4	11	13.8
Threatening me with a knife to punish me if did wrong	0	0	5	6.3
Derided me when my work does not satisfy him	4	9.8	13	16.0
Neglect				
Do not care for my clothing even if it is a decent	6	14.3	18	23.1

Knows that the risk of hardware, tools and equipment around, but do not care for it	1	2.4	17	23.9
Do not care for my clothing even if it is a decent	0	0	16	20.5
Knows that the risk of hardware, tools and equipment around, but do not care for it	1	2.4	15	19.2
Do not care for my clothing even if it is a decent	3	7.1	17	21.5
Sexual Harassment				
Touches me in areas of my body that I do not want anybody to touch it.	0	0	9	11.1
Asked me to touch parts of his/her body that I do not want to touch	0	0	6	7.4
Asked me to take off my clothes and to reveal parts of my body	0	0	6	7.4

4.6.4 Clinical and laboratory examination

Examining the findings related to clinical and laboratory examination, the analysis showed that the working and school nonworking children results had normal ranges, in general (table 31). School nonworking children have relatively higher means in most of the laboratory tests. The study showed that (14%, n = 2 children) of school nonworking children had white blood cells (WBC) higher than normal count, and (28%, n = 5 children) of working children had elevated white blood cells count. Also the findings showed that one school nonworking child (7%) had elevated red blood cell count, compared to two school working children (7.1%).

Table 31: Blood tests among children in refugee camps

variable	Working status	n	Mean	SD	Min	Max	F	p
WBC	Nonworking	14	8.1	2.11	3.4	10.1	3.309	.076
	Working	37	6.8	2.3	3.5	11.6		
RBC	Nonworking	14	4.9	.44	4.3	6.2	2.168	.149
	Working	37	5.1	.31	4.7	5.7		
Hb	Nonworking	14	13.2	.54	12.5	14.1	6.325	.016
	Working	37	12.6	.80	10.8	13.7		
PLAT	Nonworking	14	297.7	46.95	236.0	373.0	2.544	.119
	Working	37	263.5	72.82	122.0	392.0		
Ferritin	Nonworking	14	57.5	88.81	4.5	372.1	2.335	.134
	Working	37	31.5	14.18	8.1	61.3		

In regards to hemoglobin and platelets, the results of all children were within normal range, whether they are working or not working. Related to level of Ferritin, which is an indicator of iron storage in

the blood, the results showed that only one nonworking child (6.7%) and two (7.1%) school working children had rates below normal range. The screening of (IgM), which shows whether the child infected with hepatitis type A, showed that one nonworking child and two school working children were tested positive for hepatitis A, and the latter were brothers attending the same school.

4.6.5 Differences between child in and outside of refugee camps

4.6.5.1 Difference in demographic characteristics

In terms of the difference between children who live and/or work in the Palestinian camps and those who are outside the camps, the study showed the following:

1. Type of work: The study showed that there is convergence in terms of the type of work performed by the children. However, children in camps are working at rates slightly higher than the others in the field of vocational jobs (18% compared to 17%) and peddlers (16%, compared to 12%), vehicle repair (19% versus 16.6%). However, this difference is not statistically significant.

2. Work satisfaction: The study showed that there was no difference between children in and outside the camps. The results showed that 88.8% of children in the camps were satisfied about their jobs compared to 87.7% of children outside the camps. This slight difference also was not statistically significant.

3. The desire to pursue education: The study showed that children of Palestinian camps have a more desire than children outside the camps to pursue education, as 76.6% of children in the camps have a desire to pursue education compared to 60.7% of children outside the camps and this difference was statistically significant. ($\chi^2 = 18.3, p < .001$).

4. Payment: The study showed that the average wages of working children outside the camps is higher than the average wages of children in the camps (23.5 JD/week compared with 17.5 JD/week) and this difference was statistically significant ($t = 3.8, p < .001$).

5. Nature of work: In terms of the nature of the work whether are paid or otherwise, the study illustrated that there is great convergence between children within and outside the camps but the biggest difference was in the proportion of children who have unpaid job and work for their families (13.8% inside the camps versus 11.1 for children outside the camps) as well as for children who are self-employed where it appeared that 14.5% of children outside the camps are self-employed compared to 10.7% of children in the camps. However, these differences were not statistically significant.

6. Reasons for work: in terms of reasons for work, the analysis showed some differences concerning the reasons behind the work. While 1.9% of the children inside the camps reported that they were forced to work, about 5.9% of the children outside the camps reported that. However, 49.4% of children in the camps said they are working to help their families compared to 34% of children outside the camps. In addition, 26% of children in camps said that they work to learning a skill, compared to 41.8% of children outside the camps. This makes the main reason to work arranged by the percentage as the following: helping the family, learn a skill, making additional income. Whereas, the reason to work for children outside the camps were learning a skill, help the family, then the making additional income, These differences were found to be statistically significant ($\chi^2 = 25.5, p < .001$).

4.6.5.2 Difference in physical and health concerns

The study showed that children in Palestinian refugee camps suffer more from physical and psychological problems than their peers outside the camps (table 32). children outside the camps had less psychological problems than those outside the camps with the exception of some aspects such as problems with law (8.5% versus 4%), smoking (18.2 % versus 11.5%) and abuse of drugs such as hashish (2.1% versus 0.5%), as well as, access to information about the sexual relationship (3.6% versus 25.5%) and self-examination of the genitalia (30.9% versus 23%). Related to physical and psychological aspects, the children in the camps are suffering more than those outside the camps, especially in the problems such as headaches, depression, problems at home, loneliness, and using nonprescribed medication. These differences are mathematically indicative (Table 31).

Table 32: Differences in physical and health concerns between children in and outside the refugee camps

Variable	% of children	
	in camps	Outside camps
During the past month who many time did you have common cold	65.1	59.8
During the past month how many time you have check your doctor seeking treatment	38.5	31.0
Health concerns and risk behaviors		
I have problems with teeth	66.2	58.7
I have problems with the vision	39.5	24.3
I had headache	64.0	27.6
Mental health and social concerns		
I feel lonely	39.3	29.9
I feel depressed	43.9	31.1
I have problems at home	45.1	32.1
I have problems in school / at work	31.2	27.2
I have trouble with the law and the police	4.0	8.5
I spent times alone	60.4	49.3
Health concerns and risk behaviors		
I smoke cigarettes	11.5	18.2
I use non-prescribed medication and drugs	20.5	14.9
I use drug such as hashish and marijuana	5.	2.1
Sexual health concerns		
I can find information and pictures about sexual relationship between couples	25.5	30.6
I check my genitals	23.0	30.9

4.6.5.3 Differences in psychosocial health

As shown in table 33, children inside Palestinian camps differ from their counterparts outside the camps. The study revealed that there are significant differences between children inside and outside the camps in the following aspects: -

1. **Emotional status:** The average emotional status in children in the camps is higher than in children outside the camps.
2. **Behaviors and conducts:** the average performance of children in the camps was higher than children outside the camps.
3. **Hyperactivity:** children inside the camps had higher reports than those outside the camps.
4. **Prosocial behaviors:** the average performance of children in the camps was higher than for children outside the camps.

Children in the camps had more emotional stability and prosocial behaviors than those children outside the camps. However, they have higher tendency for hyperactivity and certain negative behaviors.

5. **Anger:** It appears that there is convergence in the performance of children in and outside the camps. Although this difference was statistically significant, the difference is not clinically significant and can conclude that both groups had higher level of anger expression.

6. **Difficulty controlling anger:** the study showed that both children (inside and outside the camps) are suffering from higher level of difficulty in anger control. This was obvious as mean scores on the anger as a trait and anger were high for both groups.

7. **Coping:** it has been shown that there is a difference between children in and outside the camps in the ability to cope with problems and this difference is small among children in the camps. Although this difference was statistically significant, the difference was not clinically significant (18.988 out of the camps, 18.084 children in the camps) and it can be concluded hat both groups have the ability to adapt to the problems, and have the capability to cope with their problems and they will succeed in coping with their problems in the future.

Children in the Palestinian refugee camps had higher level of psychological health than those outside. However, coping efficacy among children outside the camps were higher than those inside the camps.

Table 33: Differences in psychosocial health between children in and outside refugee camps

Variable	Children status	n	Mean	t	p
Emotion domain of SDQ	Outside camps	3236	3.0151	-8.32	<.001
	Inside camps	486	3.9938		
Conduct domain of SDQ	Outside camps	3214	2.9188	-2.19	.028
	Inside camps	490	3.1082		
Hyperactivity domain of SDQ	Outside camps	3224	3.2388	-5.41	<.001
	Inside camps	489	3.7485		
peer domain of SDQ	Outside camps	3225	2.8099	1.32	.185
	Inside camps	484	2.6942		

Prosocial domain of SDQ	Outside camps	3274	5.5715		
	Inside camps	496	6.1149	-6.05	<.001
Total SDQ	Outside camps	2862	12.0087		
	Inside camps	453	13.5607	-5.55	<.001
Trait anger subscale	Outside camps	3011	18.8927		
	Inside camps	462	19.8810	-3.03	.002
Anger expression subscale	Outside camps	3069	10.9622		
	Inside camps	472	11.1250	-.89	.374
Anger in subscale	Outside camps	3169	8.4140		
	Inside camps	477	8.9350	-3.42	<.001
Anger control subscale	Outside camps	3100	14.7981		
	Inside camps	460	15.1391	-1.61	.109
Total anger scale	Outside camps	2574	52.7137		
	Inside camps	392	54.5765	-3.10	.002
Total coping efficacy scale	Outside camps	3259	18.9874		
	Inside camps	477	18.0839	3.85	<.001

4.6.5.4 Difference in clinical and laboratory examination

The results showed that there is a statistical significant difference between children working inside and outside the camps related to mean score of height, where it appeared that the average height is higher in children outside the camps than among working children in the camps. As well as there is a difference in the level of hemoglobin (Hb) and platelets, where it was higher in children outside the camps than those inside the camps. All of these means fell within the normal range. Therefore, it could be argued that the children inside and outside the camps have the same level of physical health, and laboratory tests indicating that both groups have normal ranges of laboratory investigations (table 34).

Table 34: Differences in Blood tests between children in and outside refugee camps

Variable	Children status	n	Mean	t	p
Weight	Outside camps	147	49.7		
	Inside camps	42	47.4	.78	.43
Height	Outside camps	147	164.76		
	Inside camps	43	148.16	.84	.040
Hb	Outside camps	111	13.49		
	Inside camps	42	12.84	3.77	<.001
WBC	Outside camps	111	7.30		
	Inside camps	42	7.21	.225	.822
Ferritin	Outside camps	107	43.91		
	Inside camps	43	40.54	.473	.637
Platelets	Outside camps	110	305.36		
	Inside camps	42	274.90	2.51	.013

The results of this study revealed to number of recommendations that can be categorized into four major classes; public health, education, policy and decision making, and research.

5.1 Public Health

1. To emphasize child's physical, psychological, and social health care whether at school or at the work site through periodic health checkups and health care visits
2. To enhancing collaboration between governmental and nongovernmental institutions to provide better economic solutions for poverty; the main reason for child labor. In particular, those families who rely on their children's work as a source of income and those who have disabled parent/s.
3. To develop social and community programs that focus on improving economical status and providing adults with better financial support that, consequently, will be reflected positively on poor family and lower the probability and prevalence of child labor.
4. To increase social and public health awareness to the negative impacts of child labor through appropriate audiovisual media. The programs should aim at eliminating child labor from the Jordanian community.
5. To increase awareness to the negative impacts of child labor among low educated parents and families, and enhance the importance of education for children that will result in eliminating child labor and providing better job opportunities for the children.
6. To provide better job opportunities for women and changing the negative social image toward women's work especially for those who lost their spouses or have disabled spouses. This will prevent withdrawing children from schools to join work market, and will provide those families with better opportunities to support their families instead of using their children.

5.2 Education

1. Enhancing the appropriate education system at schools through developing and using effective curricula that target and develop emotional, cognitive social and psychological abilities of children and through using effective teaching styles.
2. Increase awareness among leaders and decision makers at the education system in Jordan toward the benefits of using interactive model of teaching and toward the negative consequences of using punishment and forms of psychological and physical child abuse at schools.
3. Eliminate all forms of abuse; physical, social, psychological and sexual child abuse by teachers at school through developing an appropriate monitoring system.
4. Enforcing mandated basic education laws and increase awareness toward the impotence of having children finish their basic education. Laws should also emphasize the parents' legal responsibility for their children's education.
5. Improving teaching and education curricula and create a healthy school environment that improves children's belonging to school and prevent delinquency, bullying and child labor among school children.
6. To create and support vocational education and training for children who have learning difficulties or who have low interest in the academic education that will allow a wide range of options for education and professional training for those children.
7. To increase awareness among low educated and poor families about benefits of education through periodic meetings at school with parents and guardians that raises all issues related to benefits of education and negative impact of child labor.

8. To include concepts of child labor in school and university levels' curricula emphasizing the negative impact of child labor on child's health and community development.
9. To create evening school system for those children at work who have no choice or unable to leave work for school. This will allow working children to receive appropriate education and create a positive perception toward schooling and education.

5.3 Decision and policy makers

1. To enhance legislations and national strategies that provide children of poor families with better economic alternatives.
2. To create policies and legislations that facilitate child's work under supervision with appropriate work environment and that is appropriate to his age and level of development. Policies should also identify types of work that is appropriate for children and protect children's civil rights for health and education.
3. Governmental institutions that include Ministry of Labor, Ministry of Social Development, and Ministry of Health should work collaboratively to develop laws and regulations that eliminate child labor and punish employers violating the laws. The legislations and laws should provide social and economic solutions and alternatives for children of poor families, and should in collaboration with Ministry of Education reinforce creating health school environment.
4. To enforcing laws that protect rights of children to education and health through eliminating child labor and accommodating the education system for those at the work sites.
5. To enforcing the power of law and punishment against those who violate the laws related to child labor and children's rights for health and education.

5.4 Research

1. Conducting research studies that examine the effectiveness of the laws and regulations made to eliminate child labor.
2. Conducting comparative-qualitative studies for the reasons of work from child, parent, and employers' perspective using interview approach of data collection at the work site.
3. Using interventional approach of studies to increase the effectiveness of awareness campaigns toward negative impact of child labor and the benefits of education for children and families. These studies will allow identifying better approach for communication with the community, and alternatives that can be used to eliminate child labor.
4. Conducting evaluative studies for the functions, approaches, methods, plans, strategies, and interventions of the governmental and nongovernmental institutions in the field of child labor. Such studies will allow identifying gaps and means of collaboration between these institutions and provide better solutions for eliminating child labor.

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Appendix 7.1: consent forms

consent form of parent/guardian of the child to participate in the study Dear Parent/ guardian

The National Council for Family Affairs is conducting a study titled "physical and psychosocial impact of child labor in Jordan." The main purpose of this study is to assess the physical and psychosocial health status of the working children and compare it with non working children. These effects may range from depression, tension, anger expression, difficulties in building relationships, and physical problems. Data will be collected through a self administered questionnaire using structured format of interviews.

What is required from you and your child?

after you approve your child's participation, your son/daughter will answer the questions of the survey that will be given to them by the research team. It will take about 20 min to be completed. The questions are simple and appropriate to your child's age. There are questions also about anger, tension, emotional expression, and physical problems.

What are the benefits of participating in this study?

This study will help the decision and policy makers to make better planning and decision that will improve the social and economical life of the Jordanian families. These data will also be available to scientist and researchers interested in child labor that in results will enable them to understand the effect of child labor on the child and the society.

Is my consent to my daughter/son's participation in the study voluntarily?

You have the right to agree or not to agree to have your son/daughter participate in the study.

Is the information used in the study confidential?

All information will be treated confidentially by the research team. Your son/daughter name will not be mentioned on the survey or elsewhere in the forms of the study.

For more information, you can contact the National Council for Family Affairs, Tel: 4623490, 4623481, and 4623470, ext: 144 or 111, or the principal researcher Dr. Ayman Mohammed Hamdan-Mansour, Phone (0796383002)

By signing this form, I approve my son / daughter participation in this study.

Name and signature of the parent/guardian of the child
Date:.....



consent form of parent/guardian of the child to participate in the clinical examination and laboratory

Dear Parent/ guardian

Thanks for the approval of the participation of your son/daughter in the first phase of the study "physical and psychosocial impact of child labor in Jordan." which is conducted by the National Council for Family Affairs. We are now in the second phase in which the research team will have a complete physical/medical examination and withdrawal of a small sample of blood to test its components, Ferritin, and hepatitis type A. The goal is to identify the general health status for your son/daughter.

What are the benefits of participating in this study?

You can have the final results of the study and medical examinations and laboratory tests of your son/daughter for free upon completion of the study. Upon consent to have your child participate and complete the second phase of a clinical examination and blood sampling, there will be a symbolic reward of (3) JD for the child.

Is my consent to my daughter/son's participation in the study voluntarily?

You have the right to agree or not to agree to have your son/daughter participate in the study.

Is the information used in the study confidential?

All information will be treated confidentially by the research team. Your son/daughter name will not be mentioned on the survey or elsewhere in the forms of the study.

For more information, you can contact the National Council for Family Affairs, Tel: 4623490, 4623481, and 4623470, ext: 144 or 111, or the principal researcher Dr. Ayman Mohammed Hamdan-Mansour, Phone (0796383002)

By signing this form, I approve my son/daughter participation in this study.

Name and signature of the parent/guardian of the child

Date:



المجلس الوطني لشؤون الأسرة
NATIONAL COUNCIL FOR FAMILY AFFAIRS

Physical and Psychosocial Impact of Child Labor in Jordan

Appendix 7.2: study survey

Hello, my name is work with the National Council for Family Affairs, in a project Physical and Psychosocial Impact of Child Labor in Jordan.

We greatly appreciate your participation in this study as your views are very important for us. We will ask you some questions about psychological and social health status. Please allow me to take a few minutes of your time to fill out the form. All information will be treated confidentially and will not be disclosed to any person other than the research team.

Can I start the interview now?

All data will be handled confidential

1. Serial number	
2. Governorates	_ _ _ _ _ _ _
3. Area	_ _ _ _ _ _ _
4. Neighborhood	_ _ _ _ _ _ _
5. Block number	_ _ _ _ _ _ _
6. Building number	_ _ _ _ _ _ _
7. Name of school or workshop	_ _ _ _ _ _ _
8. Phone number	_ _ _ _ _ _ _
Interviewer visit	
9. Data collector	_ _ _ _ _ _ _
10. Date	____ / ____ / ____
Field Checked by	_ _ _ _ _ _ _
Data checked by	_ _ _ _ _ _ _

Child and Family Data

11. Child's Name:
12. Age: |__|__| years
13. Gender: Male | _1_ | Female | _2_ |
14. Does it work: Yes | _1_ | No | _2_ | work during the holiday: | _3_ | work and study at the same time | _4_ |

If you do not work, go directly to question 24

15. The nature of work:
 1. Vocational (carpentry / blacksmith)
 2. Peddler
 3. Primary jobs
 4. Services
 5. Repair of vehicles
 6. Agriculture
 7. Machine operator
 8. Technician
 9. Transport and delivery
 10. Construction
16. Place of work:
 1. with parent / family
 2. with a relative
 3. with a friend of the family
 4. With someone outside the family
17. The status of work:
 1. Unpaid
 2. Unpaid family
 3. Self-employed
 4. Employer
 5. Paid Employee
18. Cause of work:
 1. Forced
 2. Learn a skill
 3. Help the family
 4. Pay debts
 5. Extra income
19. Work Satisfaction:
 1. Very satisfied
 2. Somewhat Satisfied
 3. Satisfied
 4. I do not know
 5. Dissatisfied
 6. Somewhat dissatisfied
 7. Very dissatisfied
20. The desire to pursue education:
 1. Yes
 2. No
 3. Don't know
21. Number of working hours per week: |__|__|__| per week
22. When did you start working: |__|__| to the nearest number per months
23. Your payment per week: |__|__| JD
24. Health Insurance: Yes | _1_ | No | _2_ | I do not know | _3_ |
25. Number of family members: |__|__|
26. Birth order: |__|__|
27. Your parents
 1. Both parent a live
 2. Father is deceased
 3. Mother is deceased
 4. Both

Physical and Psychosocial Impact of Child Labor in Jordan

parents deceased

28. The working status of parents

28. A: Father: working | _1_ | not working | _2_ |

28. B: mother: working | _1_ | not working | _2_ |

29. Whom you living with?

1. Both parents 2. With the Father 3. With the mother 4. With the grandfather
/ grandmother 5. Relatives of the Father 6. Relatives of the mother

30. Source of household income:

1. Father only 2. Mother only 3. Children only 4. Father and Mother 5. Father
and Mother and boys 6. Relatives 7. Welfare from international institutions or government

31. Monthly family Income: 1. Poor 2. Average 3. High

32. The nature of the housing: 1. Owned 2. Rent 3. Camp 4. Homeless

33. Father's highest level of Educational: (Leave this question if the father was deceased)

1. Illiterate / not read and do not write 2. Primary / basic

3. Secondary 4. Diploma / Community College

5. University / Bachelor degree 6. Master

7. Ph.D. 8. I do not know

34. Mother's highest level of Educational: (Leave this question if the mother was deceased) 1.

Illiterate / not read and do not write 2. Primary / basic

3. Secondary 4. Diploma / Community College

5. University / Bachelor degree 6. Master

7. Ph.D. 8. I do not know

#	35. whom you living with	35. a Gender male/ female		35. b Age in years	35. c. Working status		
		Male	Female	Years	yes	no	Don't know
1		1	2	_ _	1	2	3
2		1	2	_ _	1	2	3
3		1	2	_ _	1	2	3
4		1	2	_ _	1	2	3
5		1	2	_ _	1	2	3
6		1	2	_ _	1	2	3

Health Screening Questionnaire			
#	Item	Yes	No
36	Over the past month, Have you had a cold	1	2
37	Over the past month, Have you had the flu	1	2
38	Over the past month, Have you checked your doctor for a health problem	1	2
39	Over the past month, Have you visited an emergency department	1	2
40	Over the past month, have been admitted to the hospital, even for one night?	1	2

Health concerns and risk behaviors					
#	item	Never	Sometimes	Often	Always
41	I have problems with teeth	1	2	3	4
42	I have problems with vision	1	2	3	4
43	I have hearing problems	1	2	3	4
44	I have night bedwetting	1	2	3	4
45	I had headache	1	2	3	4
46	I feel lonely	1	2	3	4
47	I feel depressed	1	2	3	4
48	I have problems at home	1	2	3	4
49	I have problems in school / at work	1	2	3	4
50	I have trouble with the law and the police	1	2	3	4
51	I have intimate friends	1	2	3	4
52	I spend times alone	1	2	3	4

Physical and Psychosocial Impact of Child Labor in Jordan

53	I smoke cigarettes	1	2	3	4
54	I use non-prescribed medication and drugs	1	2	3	4
55	My parents use alcohol/drugs	1	2	3	4
56	My father smoke cigarettes	1	2	3	4
57	I was told about cigarettes and drugs	1	2	3	4
58	I use drug such as hashish and marijuana	1	2	3	4
For children at age 10-16					
59	I have acne	1	2	3	4
60	I can find information and pictures about sexual relationship between couples	1	2	3	4
61	Female: I have a special relationship with males more than just words	1	2	3	4
	Male: I have a special relationship with females more than just words	1	2	3	4
62	I check my genitals	1	2	3	4
Coping Efficacy					
#	item	Very unsatisfied	Somewhat satisfied	Satisfied	Very satisfied
63	In general, to what extent you are satisfied with the way you deal with the problems you have encountered	1	2	3	4
64	In general, and compared to other children, to what extent you are satisfied with the way you have dealt with the problems you have encountered during the last month	1	2	3	4
		Did not work	Slightly worked	Somewhat worked	Work very well
65	In general, to what extent you think that things you have done during the past month have improved the situation	1	2	3	4
66	In general, do you think that things you have done during the past month make feel better	1	2	3	4
		Not good at all	Slightly	God in general	Very good
67	To what extent you think that in the future you will be to manage problem	1	2	3	4
68	In general, to what extent do you think you will be able to deal with problems in the future in a better way	1	2	3	4

69 in general, do you think you are capable of dealing with your feelings if you encounter a problem in the future

1 2 3 4

Strengths and the difficulty in children				
#	Item	Not true	Somewhat true	Certainly true
70	I try to be nice to other people. I care about their feelings	0	1	2
71	I am restless, I cannot stay still for long	0	1	2
72	I get a lot of headaches, stomach-aches or sickness	0	1	2
73	I usually share with others (food, games, pens etc.)	0	1	2
74	I get very angry and often lose my temper	0	1	2
75	I am usually on my own. I generally play alone or keep to myself	0	1	2
76	I usually do as I am told	0	1	2
77	I worry a lot	0	1	2
78	I am constantly fidgeting or squirming	0	1	2
79	I have one good friend or more	0	1	2
80	I fight a lot. I can make other people do what I want	0	1	2
81	I am often unhappy, down-hearted or tearful	0	1	2
82	Other people my age generally like me	0	1	2
83	I am easily distracted, I find it difficult to concentrate	0	1	2
84	I am nervous in new situations. I easily lose confidence	0	1	2
85	I am kind to younger children	0	1	2
86	I am often accused of lying or cheating	0	1	2
87	Other children or young people pick on me or bully me	0	1	2
88	I often volunteer to help others (parents, teachers, children)	0	1	2
89	I think before I do things	0	1	2
90	I take things that are not mine from home, school or elsewhere	0	1	2
91	I get on better with adults than with people my own age	0	1	2
92	I have many fears, I am easily scared	0	1	2
93	I finish the work I'm doing. My attention is good	0	1	2

Anger expression in children					
#	Item	Almost never	sometimes	often	Almost always
94	I feel angry	1	2	3	4
95	I feel like yelling at someone	1	2	3	4
96	I'm easygoing and don't let things bother me	1	2	3	4
97	I get very impatient if I have to wait for something	1	2	3	4
98	I lose my temper easily	1	2	3	4
99	I feel like breaking things	1	2	3	4
10	I feel grouchy or irritable	1	2	3	4
101	I get in a bad mood when things don't go my way	1	2	3	4
102	It takes a lot to get me upset	1	2	3	4
103	I have a bad temper	1	2	3	4
104	I get very angry if my parent or teacher criticizes me	1	2	3	4
105	I get in a bad mood easily	1	2	3	4
106	I slam doors or stomp my feet	1	2	3	4
107	I keep it to myself	1	2	3	4
108	I control my temper	1	2	3	4
109	I let everybody know it	1	2	3	4
110	I pout or sulk	1	2	3	4
111	I try to be patient	1	2	3	4
112	I argue or fight back	1	2	3	4
113	I don't talk to anybody	1	2	3	4
114	I keep my cool	1	2	3	4
115	I hit things or people	1	2	3	4
116	I feel it inside, but I don't show it	1	2	3	4
117	I stay well behaved	1	2	3	4
118	I say mean or nasty things	1	2	3	4
119	I stay mad at people but keep it secret	1	2	3	4
120	I try to stay calm and settle the problem	1	2	3	4
121	I have a temper tantrum	1	2	3	4
122	I hold my anger in	1	2	3	4
123	I try to control my angry feelings	1	2	3	4

		Abuse of Children								
#	Item	Father		Mother		Teacher		Employer		Other
		Yes	No	Yes	No	Yes	No	Yes	No	
		Physical abuse								
124	rush to beat me if I made a mistake	1	2	1	2	1	2	1	2	
125	beat me violently if I do not listen to him	1	2	1	2	1	2	1	2	
126	uses harsh methods to punish me (burning, or hot tools) if I disobeyed him	1	2	1	2	1	2	1	2	
127	Kick and push me if I did any mistake	1	2	1	2	1	2	1	2	
128	I have injuries and bruises and fractures because of his punishment	1	2	1	2	1	2	1	2	
		Psychological abuse								
129	Derided me in front of strangers	1	2	1	2	1	2	1	2	
130	cursed me and called me with bad names	1	2	1	2	1	2	1	2	
131	threatening me with death (killing) when I misbehaved	1	2	1	2	1	2	1	2	
132	Threatening me with a knife to punish me if did wrong	1	2	1	2	1	2	1	2	
133	Derided me when my work does not satisfy him	1	2	1	2	1	2	1	2	
		Neglect								
134	Do not care for my clothing even if it is a decent	1	2	1	2	1	2	1	2	
135	knows that the risk of hardware, tools and equipment around, but do not care for it	1	2	1	2	1	2	1	2	
136	I have fallen and wounded several times and did not provide treatment for me.	1	2	1	2	1	2	1	2	
137	does not care about me if I get sick or injured or eaten something rotten	1	2	1	2	1	2	1	2	
138	does not provide me with good food and the appropriate clothing	1	2	1	2	1	2	1	2	
		Sexual Harassment								
139	Touches me in areas of my body that I do not want anybody to touch it.	1	2	1	2	1	2	1	2	
140	asked me to touch parts of his/her body that I do not want to touch	1	2	1	2	1	2	1	2	
141	asked me to take off my clothes and to reveal parts of my body	1	2	1	2	1	2	1	2	

Physical and Laboratory Examination

142. Age: _____ year	143. Wt: _____ Kg	144. Ht: _____ cm	145. BMI: _____		
Vital Sign:	146. Pulse: _____	147. B.P _____	148. RR _____	149. Temp: _____	
150. Vision test:	151. Rt eye: _____		152. Lt eye: _____		
	Item	normal	abnormal	Not examined	Notes
152	Eyes				
153	Ears				
154	Nose				
155	Throat				
156	Mouth				
157	Teeth				
158	Neck				
159	Heart				
160	Chest and lungs				
161	Abdomen				
162	Skin				
163	Lymph nodes				
164	Vertebral column				
165	Limbs				
166	Nervous system				
167	Muscular system				
168	Skeletal system				
169	Puberty				
170	General appearance				
	health complains:				
	CBC				
	Hepatitis A	+ VE __		-VE __	
	Ferritin Level: _____				

Appendix 7.3: type of work

The relationship between type of work and psychological, social, physical health for nonschool working children

In this study, the type of work was defined as the role that the children perform within the classification of the Ministry of Labor and Department of Statistics in Jordan (2007). The following analysis illustrate type of work, physical health, health problems, social and psychological health status, laboratory results, and coping among children who work either they are no longer attending school or study and work at same time for 2002 children of the total 4008 sample size.

Type of work and physical health:

Table M.1 shows the type of work as in relation to health problems among working children. The analysis showed that children who work in machinery repair, agriculture, peddlers, and technicians are mostly suffering of cold with rates exceeding 57%, while those children who work in vehicles repair of, services, and primary jobs are suffering of flue. Furthermore, children who work in vehicles repair and services had the lowest rates of flue and cold.

Table (M. 1): Physical health problems in relation to type of work

Work Type	Numbers & Percentages	Cold		Flu	
		Yes	No	Yes	No
Vocational (carpentry / blacksmith)	n	181	129	87	220
	% among workers	58.4	41.6	28.3	71.7
	% in regard to health status	18.0	16.2	19.4	16.4
Peddler	n	132	90	61	160
	% among workers	59.5	40.5	27.6	72.4
	% in regard to health status	13.1	11.3	13.6	11.9
Primary jobs	n	59	48	33	74
	% among workers	55.1	44.9	30.8	69.2
	% in regard to health status	5.9	6.0	7.3	5.5
services	n	319	237	124	429
	% among workers	57.4	42.6	22.4	77.6
	% in regard to health status	31.7	29.7	27.6	31.9
Repair of vehicles	n	134	169	58	244
	% among workers	44.2	55.8	19.2	80.8
	% in regard to health status	13.3	21.2	12.9	18.1
Agriculture	n	31	18	14	35
	% among workers	63.3	36.7	28.6	71.4
	% in regard to health status	3.1	2.3	3.1	2.6
Operation of machinery	n	23	10	11	22
	% among workers	69.7	30.3	33.3	66.7
	% in regard to health status	2.3	1.3	2.4	1.6
Technician	n	37	28	19	45
	% among workers	56.9	43.1	29.7	70.3
	% in regard to health status	3.7	3.5	4.2	3.3

Transport and delivery	n	53	49	27	75
	% among workers	52.0	48.0	26.5	73.5
	% in regard to health status	5.3	6.1	6.0	5.6
Construction	n	37	19	15	41
	% among workers	66.1	33.9	26.8	73.2
	% in regard to health status	3.7	2.4	3.3	3.0
Total	n	1006	797	449	1345
	% among workers	55.8	44.2	25.0	75.0
	% in regard to health status	100.0	100.0	100.0	100.0

Type of work and hearing, vision, dental problems and headache:

In regard to hearing, vision, and dental problems, the study showed (tables m 2 a - d) that children who are working in services, operation of machinery, and technician are suffering more of vision problems, while more children suffering of hearing problems are those who are working in vehicles repair, services, peddlers, and technician. The dental problems were more in children who are working in service, repair of vehicles, and work as technicians. The results also showed that children who are working in the service sector, peddlers, and as technicians were the most to complain of headache. In conclusion, the children who are working in vehicle repair, services, technicians, and peddlers are suffering more of health problems; colds, flu, hearing, vision, dental problems, and headache.

Table (2 M. A): Distribution of vision problems according to type of work:

Work Type	Numbers & Percentages	Never	Rare	Often	Always	Total
Vocational (carpentry / blacksmith)	n	236	43	15	17	311
	% among workers	75.9	13.8	4.8	5.5	100.0
	% in regard to health status	18.1	14.5	14.7	15.2	17.1
Peddler	n	157	51	11	8	227
	% among workers	69.2	22.5	4.8	3.5	100.0
	% in regard to health status	12.0	17.2	10.8	7.1	12.5
Primary jobs	n	68	20	8	11	107
	% among workers	63.6	18.7	7.5	10.3	100.0
	% in regard to health status	5.2	6.8	7.8	9.8	5.9
Services	n	388	87	41	46	562
	% among workers	69.0	15.5	7.3	8.2	100.0
	% in regard to health status	29.7	29.4	40.2	41.1	30.9
Repair of vehicles	n	234	45	7	20	306
	% among workers	76.5	14.7	2.3	6.5	100.0
	% in regard to health status	17.9	15.2	6.9	17.9	16.8
Agriculture	n	35	9	3	1	48
	% among workers	72.9	18.8	6.3	2.1	100.0
	% in regard to health status	2.7	3.0	2.9	.9	2.6

Operation of machinery	n	20	11	2	0	33
	% among workers	60.6	33.3	6.1	.0	100.0
	% in regard to health status	1.5	3.7	2.0	.0	1.8
Technician	n	51	4	5	5	65
	% among workers	78.5	6.2	7.7	7.7	100.0
	% in regard to health status	3.9	1.4	4.9	4.5	3.6
Transport and delivery	n	76	14	8	3	101
	% among workers	75.2	13.9	7.9	3.0	100.0
	% in regard to health status	5.8	4.7	7.8	2.7	5.6
Construction	n	42	12	2	1	57
	% among workers	73.7	21.1	3.5	1.8	100.0
	% in regard to health status	3.2	4.1	2.0	.9	3.1
Total	n	1307	296	102	112	1817
	% among workers	71.9	16.3	5.6	6.2	100.0
	% in regard to health status	100.0	100.0	100.0	100.0	100.0

Table (2 M. B): Distribution of hearing problems according to type of work:

Work Type	Numbers & Percentages	Never	Rare	Often	Always	Total
Vocational (carpentry / blacksmith)	n	271	25	8	3	307
	% among workers	88.3	8.1	2.6	1.0	100.0
	% in regard to health status	16.7	19.4	21.1	13.6	16.9
Peddler	n	198	18	8	3	227
	% among workers	87.2	7.9	3.5	1.3	100.0
	% in regard to health status	12.2	14.0	21.1	13.6	12.5
Primary jobs	n	97	8	1	1	107
	% among workers	90.7	7.5	.9	.9	100.0
	% in regard to health status	6.0	6.2	2.6	4.5	5.9
Services	n	506	40	14	4	564
	% among workers	89.7	7.1	2.5	.7	100.0
	% in regard to health status	31.2	31.0	36.8	18.2	31.1
Repair of vehicles	n	285	13	2	6	306
	% among workers	93.1	4.2	.7	2.0	100.0
	% in regard to health status	17.6	10.1	5.3	27.3	16.9
Agriculture	n	41	3	1	3	48
	% among workers	85.4	6.3	2.1	6.3	100.0
	% in regard to health status	2.5	2.3	2.6	13.6	2.6
Operation of machinery	n	30	2	1	0	33
	% among workers	90.9	6.1	3.0	.0	100.0
	% in regard to health status	1.8	1.6	2.6	.0	1.8
Technician	n	54	8	0	1	63
	% among workers	85.7	12.7	.0	1.6	100.0
	% in regard to health status	3.3	6.2	.0	4.5	3.5

Transport and delivery	n	91	7	2	0	100
	% among workers	91.0	7.0	2.0	.0	100.0
	% in regard to health status	5.6	5.4	5.3	.0	5.5
Construction	n	50	5	1	1	57
	% among workers	87.7	8.8	1.8	1.8	100.0
	% in regard to health status	3.1	3.9	2.6	4.5	3.1
Total	n	1623	129	38	22	1812
	% among workers	89.6	7.1	2.1	1.2	100.0
	% in regard to health status	100.0	100.0	100.0	100.0	100.0

Table (2 M. C): Distribution of dental problems according to type of work:

Work Type	Numbers & Percentages	Never	Rare	Often	Always	Total
Vocational (carpentry/blacksmith)	n	138	112	31	28	309
	% among workers	44.7	36.2	10.0	9.1	100.0
	% in regard to health status	17.5	17.6	15.4	15.0	17.0
Peddler	n	106	70	28	22	226
	% among workers	46.9	31.0	12.4	9.7	100.0
	% in regard to health status	13.4	11.0	13.9	11.8	12.5
Primary jobs	n	39	43	12	10	104
	% among workers	37.5	41.3	11.5	9.6	100.0
	% in regard to health status	4.9	6.8	6.0	5.3	5.7
services	n	233	198	63	71	565
	% among workers	41.2	35.0	11.2	12.6	100.0
	% in regard to health status	29.5	31.2	31.3	38.0	31.2
Repair of vehicles	n	177	79	24	25	305
	% among workers	58.0	25.9	7.9	8.2	100.0
	% in regard to health status	22.4	12.4	11.9	13.4	16.8
Agriculture	n	15	25	5	4	49
	% among workers	30.6	51.0	10.2	8.2	100.0
	% in regard to health status	1.9%	3.9	2.5	2.1	2.7
Operation of machinery	n	11	19	3	0	33
	% among workers	33.3	57.6	9.1	.0	100.0
	% in regard to health status	1.4	3.0	1.5	.0	1.8
Technician	n	21	23	10	11	65
	% among workers	32.3	35.4	15.4	16.9	100.0
	% in regard to health status	2.7	3.6	5.0	5.9	3.6

Transport and delivery	n	32	41	14	13	100
	% among workers	32.0	41.0	14.0	13.0	100.0
	% in regard to health status	4.1	6.5	7.0	7.0	5.5
Construction	n	18	25	11	3	57
	% among workers	31.6	43.9	19.3	5.3	100.0
	% in regard to health status	2.3	3.9	5.5	1.6	3.1
Total	n	790	635	201	187	1813
	% among workers	43.6	35.0	11.1	10.3	100.0
	% in regard to health status	100.0	100.0	100.0	100.0	100.0

Table (2 M. D): Distribution of headache according to type of work:

Work Type	Numbers & Percentages	Never	Rare	often	Always	Total
Vocational (carpentry/blacksmith)	n	140	124	31	13	308
	% among workers	45.5	40.3	10.1	4.2	100.0
	% in regard to health status	18.5	16.3	15.5	14.8	17.1
Peddler	n	95	92	28	11	226
	% among workers	42.0	40.7	12.4	4.9	100.0
	% in regard to health status	12.6	12.1	14.0	12.5	12.5
Primary jobs	n	29	51	16	11	107
	% among workers	27.1	47.7	15.0	10.3	100.0
	% in regard to health status	3.8	6.7	8.0	12.5	5.9
services	n	224	249	61	27	561
	% among workers	39.9	44.4	10.9	4.8	100.0
	% in regard to health status	29.6	32.7	30.5	30.7	31.1
Repair of vehicles	n	158	112	24	10	304
	% among workers	52.0	36.8	7.9	3.3	100.0
	% in regard to health status	20.9	14.7	12.0	11.4	16.8
Agriculture	n	15	23	8	1	47
	% among workers	31.9	48.9	17.0	2.1	100.0
	% in regard to health status	2.0	3.0	4.0	1.1	2.6
Operation of machinery	n	10	17	5	1	33
	% among workers	30.3	51.5	15.2	3.0	100.0
	% in regard to health status	1.3	2.2	2.5	1.1	1.8
Technician	n	27	27	7	4	65
	% among workers	41.5	41.5	10.8	6.2	100.0
	% in regard to health status	3.6	3.5	3.5	4.5	3.6
Transport and delivery	n	39	43	10	7	99
	% among workers	39.4	43.4	10.1	7.1	100.0
	% in regard to health status	5.2	5.6	5.0	8.0	5.5

Construction	n	19	24	10	3	56
	% among workers	33.9	42.9	17.9	5.4	100.0
	% in regard to health status	2.5	3.1	5.0	3.4	3.1
Total	n	756	762	200	88	1806
	% among workers	41.9	42.2	11.1	4.9	100.0
	% in regard to health status	100.0	100.0	100.0	100.0	100.0

Laboratory tests:

According to table M 3, the results showed that all tests were normal except for those children who are working in primary jobs as their white blood cells count was less than average of the study sample. Children who were working as technicians have less average of red blood cells count. The level of hemoglobin was less than normal among children working as technicians', however; it is much closer to that level of the rest of other groups of children in this study. Regarding platelets count, all groups were in normal level. Regarding Ferritin level, working children in the field of primary jobs had the lowest average of readings although the reading is still within normal range.

Table (M. 3): the distribution of laboratory testing, according to the type of work:

Laboratory test	Work type	Average	Standard Deviation	Minimum level	Maximum level
White blood cells	Vocational (carpentry / blacksmith)	8.37	2.1	5.2	10.5
	Peddler	6.48	1.5	4.3	9.5
	Primary jobs	4.96	.2	4.8	5.1
	Services	7.64	2.3	4.9	11.6
	Repair of vehicles	6.30	1.9	3.5	8.7
	Technician	7.85	2.3	6.2	9.5
	Transport and delivery	8.17	1.8	7.0	10.2
	Construction	7.02	1.7	4.8	10.1
Red blood cells	Vocational (carpentry / blacksmith)	5.12	.3	4.57	5.45
	Peddler	5.16	.3	4.76	5.54
	Primary jobs	5.18	.4	4.55	5.51
	Services	7.35	.5	4.40	5.40
	Repair of vehicles	5.04	.5	4.54	5.96
	Technician	4.48	.3	4.29	4.67
	Transport and delivery	4.95	.4	4.58	5.35
	Construction	4.75	.6	4.15	5.81

Hb	Vocational (carpentry / blacksmith)	13.44	1.1	10.83	15.10
	Peddler	13.68	1.2	12.30	15.70
	Primary jobs	12.94	2.1	11.00	15.30
	Services	12.75	.6	11.80	13.50
	Repair of vehicles	13.14	.4	12.70	13.90
	Technician	12.55	.07	12.50	12.60
	Transport and delivery	12.94	.4	12.60	13.40
	Construction	13.03	1.2	11.60	15.10
Platelets	Vocational (carpentry / blacksmith)	256.81	53.9	183.00	336.00
	Peddler	253.60	85.1	122.00	358.00
	Primary jobs	283.80	87.9	228.00	436.00
	Services	331.89	58.9	232.00	435.00
	Repair of vehicles	280.00	91.9	183.00	456.00
	Technician	332.50	34.6	308.00	357.00
	Transport and delivery	334.00	47.3	296.00	387.00
	Construction	275.83	37.3	251.00	340.00
Iron storage in the body	Vocational (carpentry / blacksmith)	43.73	21.9	13.30	73.89
	Peddler	35.82	9.2	21.54	49.40
	Primary jobs	30.78	29.4	8.08	79.89
	Services	41.50	16.6	24.32	95.96
	Repair of vehicles	65.42	91.3	18.45	306.00
	Technician	40.33	7.9	34.70	45.96
	Transport and delivery	43.13	23.9	21.26	68.66
	Construction	49.26	35.4	17.72	110.10

Psycho social health:

The results (table M 4 A - E) showed that children of different types of work are suffering from different psycho-social health problem. Children who work in transportation and delivery, services, vehicles repair and peddlers are had the highest rates of feeling depressed and loneliness (table 4a, table 4 b). These results were an outcome of children's work since they are spending most of their times dealing with adults and had long working hours. Children who are working in agriculture, as technicians and in primary jobs had more emotional disturbances. Children who are working in transportation and delivery, as technicians, and in agriculture had more risk and negative behaviors than other working children (table M4). Furthermore, Hyperactivity was noticed among children working in agriculture. Having an intimate relationship with friends was evidenced among those children who are working in agriculture compared to those children who are working in operation of machines and transport and delivery. Children who are working as vocational (carpentry / blacksmith, agriculture, and repair of machines) had more acceptable social behaviors. In conclusion, children who are working in agriculture, vocational (carpentry / blacksmith), and operation of machines are more emotionally disturbed than children in other types of work.

Table (M. 4 A): Feelings of depression among children in relation to types of work

Work Type	Numbers & Percentages	Never	Rare	Often	Always	Total
Vocational (carpentry / blacksmith)	n	224	62	17	5	308
	% among workers	72.7	20.1	5.5	1.6	100.0
	% in regard to health status	18.1	16.1	14.7	7.8	17.1
Peddler	n	144	54	21	8	227
	% among workers	63.4	23.8	9.3	3.5	100.0
	% in regard to health status	11.7	14.0	18.1	12.5	12.6
Primary jobs services	n	60	27	10	6	103
	% among workers	58.3	26.2	9.7	5.8	100.0
	% in regard to health status	4.9	7.0	8.6	9.4	5.7
Repair of vehicles	n	385	128	29	19	561
	% among workers	68.6	22.8	5.2	3.4	100.0
	% in regard to health status	31.1	33.2	25.0	29.7	31.1
Agriculture	n	230	45	14	12	301
	% among workers	76.4	15.0	4.7	4.0	100.0
	% in regard to health status	18.6	11.7	12.1	18.8	16.7
Operation of machinery	n	30	12	4	1	47
	% among workers	63.8	25.5	8.5	2.1	100.0
	% in regard to health status	2.4	3.1	3.4	1.6	2.6
Technician	n	23	7	3	0	33
	% among workers	69.7	21.2	9.1	.0	100.0
	% in regard to health status	1.9	1.8	2.6	.0	1.8
Transport and delivery	n	35	25	3	1	64
	% among workers	54.7	39.1	4.7	1.6	100.0
	% in regard to health status	2.8	6.5	2.6	1.6	3.6
Construction	n	68	14	7	11	100
	% among workers	68.0	14.0	7.0	11.0	100.0
	% in regard to health status	5.5	3.6	6.0	17.2	5.6
Total	n	37	11	8	1	57
	% among workers	64.9	19.3	14.0	1.8	100.0
	% in regard to health status	3.0	2.9	6.9	1.6	3.2
Total	n	1236	385	116	64	1801
	% among workers	68.6	21.4	6.4	3.6	100.0
	% in regard to health status	100.0	100.0	100.0	100.0	100.0

Table (M. 4B): feeling of loneliness among children in relation to types of work

Work Type	Numbers & Percentages	Never	Rarely	often	Always	Total
Vocational (carpentry / blacksmith)	n	225	59	14	10	308
	% among workers	73.1	19.2	4.5	3.2	100.0
	% in regard to health status	17.6	17.2	13.1	14.3	17.1
Peddler	n	158	45	14	7	224
	% among workers	70.5	20.1	6.3	3.1	100.0
	% in regard to health status	12.3	13.1	13.1	10.0	12.4
Primary jobs	n	74	25	6	3	108
	% among workers	68.5	23.1	5.6	2.8	100.0
	% in regard to health status	5.8	7.3	5.6	4.3	6.0
services	n	371	121	45	26	563
	% among workers	65.9	21.5	8.0	4.6	100.0
	% in regard to health status	28.9	35.2	42.1	37.1	31.2
Repair of vehicles	n	243	41	10	10	304
	% among workers	79.9	13.5	3.3	3.3	100.0
	% in regard to health status	19.0	11.9	9.3	14.3	16.9
Agriculture	n	37	7	3	1	48
	% among workers	77.1	14.6	6.3	2.1	100.0
	% in regard to health status	2.9	2.0	2.8	1.4	2.7
Operation of machinery	n	27	2	2	2	33
	% among workers	81.8	6.1	6.1	6.1	100.0
	% in regard to health status	2.1	.6	1.9	2.9	1.8
Technician	n	39	18	5	0	62
	% among workers	62.9	29.0	8.1	.0	100.0
	% in regard to health status	3.0	5.2	4.7	.0	3.4
Transport and delivery	n	65	21	4	7	97
	% among workers	67.0	21.6	4.1	7.2	100.0
	% in regard to health status	5.1	6.1	3.7	10.0	5.4
Construction	n	43	5	4	4	56
	% among workers	76.8	8.9	7.1	7.1	100.0
	% in regard to health status	3.4	1.5	3.7	5.7	3.1
Total	n	1282	344	107	70	1803
	% among workers	71.1	19.1	5.9	3.9	100.0
	% in regard to health status	100.0	100.0	100.0	100.0	100.0

Table (M. 4C): Difficulty and strengths among children in relation to types of work

Psychological Status	Type of the Work	Freq.	Mean	S.D	Min	Max
Emotional Status	Vocational (carpentry / blacksmith)	199	2.71	2.30	.00	9.00
	Peddler	100	2.21	2.27	.00	9.00
	Primary jobs	38	2.90	2.19	.00	9.00
	Services	199	2.33	2.23	.00	10.00
	Repair of vehicles	253	2.14	2.15	.00	10.00
	Agriculture	13	3.43	1.89	1.00	7.00
	Operation of machinery	24	1.67	1.76	.00	6.00
	Technician	31	3.14	2.40	.00	10.00
	Transport and delivery	66	2.37	2.26	.00	9.00
	Construction	30	1.28	1.68	.00	6.00
	Total	1008	2.37	2.22	.00	10.00
Prosocial behaviors	Vocational	199	2.20	1.95	.00	8.00
	Peddler	100	2.52	1.73	.00	7.00
	Primary jobs	38	2.21	1.74	.00	8.00
	Services	199	2.21	1.79	.00	8.00
	Repair of vehicles	253	2.14	1.81	.00	8.00
	Agriculture	13	2.71	1.60	.00	5.00
	Operation of machinery	24	1.92	1.61	.00	7.00
	Technician	31	2.66	2.31	.00	9.00
	Transport and delivery	66	2.90	1.89	.00	8.00
	Construction	30	1.63	1.54	.00	5.00
	Total	1008	2.28	1.85	.00	9.00
Hyperactivity	Vocational (carpentry / blacksmith)	199	3.22	1.84	.00	8.00
	Peddler	100	3.22	1.79	.00	10.00
	Primary jobs	38	3.70	2.18	.00	8.00
	Services	199	2.86	1.96	.00	9.00
	Repair of vehicles	253	3.26	2.04	.00	9.00
	Agriculture	13	4.62	1.71	2.00	7.00
	Operation of machinery	24	2.52	1.56	1.00	6.00
	Technician	31	3.58	2.08	.00	8.00
	Transport and delivery	66	3.56	1.78	.00	7.00
	Construction	30	2.30	1.89	.00	8.00
Total	1008	3.18	1.93	.00	10.00	

Relationship with friends	Vocational (carpentry / blacksmith)	199	2.97	1.89	.00	8.00
	Peddler	100	3.04	1.80	.00	8.00
	Primary jobs	38	2.50	1.50	.00	6.00
	Services	199	2.83	1.80	.00	8.00
	Repair of vehicles	253	2.74	1.72	.00	8.00
	Agriculture	13	3.92	2.06	1.00	7.00
	Operation of machinery	24	3.42	1.79	.00	8.00
	Technician	31	3.24	1.71	.00	7.00
	Transport and delivery	66	3.32	1.67	.00	8.00
	Construction	30	2.30	1.46	.00	6.00
	Total	1008	2.91	1.78	.00	8.00
Assertive social behavior	Vocational (carpentry / blacksmith)	232	5.65	1.77	.00	8.00
	Peddler	199	4.84	1.81	.00	8.00
	Primary jobs	100	5.05	1.58	2.00	8.00
	Services	38	5.12	2.017	.00	8.00
	Repair of vehicles	199	5.12	2.05	.00	8.00
	Agriculture	253	5.54	1.98	2.00	8.00
	Operation of machinery	13	4.56	1.08	3.00	7.00
	Technician	24	4.67	2.11	1.00	8.00
	Transport and delivery	31	4.35	1.68	.00	8.00
	Construction	66	5.10	1.81	.00	8.00
	Total	30	5.13	1.92	.00	8.00
Strength and difficulty survey	Vocational	199	12.13	6.13	2.00	28.00
	Peddler	100	11.75	4.94	3.00	26.00
	Primary jobs	38	12.03	5.03	4.00	26.00
	Services	199	11.18	5.64	2.00	27.00
	Repair of vehicles	253	11.10	5.22	2.00	30.00
	Agriculture	13	15.83	5.13	6.00	24.00
	Operation of machinery	24	9.10	4.49	5.00	19.00
	Technician	31	13.03	5.49	3.00	23.00
	Transport and delivery	66	12.79	5.07	4.00	24.00
	Construction	30	8.59	4.69	2.00	20.00
	Total	1008	11.58	5.49	2.00	30.00

Anger feeling and expression

The study showed that children working as Peddlers, technicians, in transportation and delivery had higher feeling of anger (table M 4 D), while children who working in construction sector had less feeling of anger. Additionally, children are working as technicians, in transport and delivery, and in agriculture had higher anger expression. It is very obvious that children are working in vocational jobs (carpentry / blacksmith) had higher rate of anger expression toward self, while those children working in primary jobs had the scores of anger expression. Furthermore, children working in construction, vocational (carpentry / blacksmith) and services had higher feelings of anger control, however; those children themselves had high ability to express anger towards others. It is clear that children were not able to distinguish between feeling of anger and method of anger expression. In other words, due to their inability to control their anger; children hold their feelings of anger inside assuming this will help them out. In conclusion, children working in certain sectors such as services, transportation, agriculture and construction had comparable levels of emotional disturbance, feeling and expression of anger that may contribute to psychological deterioration and social problems.

Table (M. 4 D): difficulty and strengths among working children in relation to type of work

Psychological Status	Type of the Work	Freq	Mean	SD	Min	Max
Anger as a trait	Vocational	199	18.45	6.54	10.00	33.00
	Peddler	100	19.06	6.45	10.00	37.00
	Primary jobs	38	18.73	7.82	10.00	39.00
	Services	199	17.88	6.58	10.00	37.00
	Repair of vehicles	253	17.52	6.13	10.00	40.00
	Agriculture	13	18.00	4.94	11.00	27.00
	Operation of machinery	24	18.74	6.17	12.00	35.00
	Technician	31	21.34	7.02	10.00	36.00
	Transport and delivery	66	19.17	5.63	10.00	34.00
	Construction	30	15.88	4.43	10.00	26.00
	Total	1008	18.27	6.41	10.00	40.00
Anger expression	Vocational	199	11.59	3.98	6.00	23.00
	Peddler	100	11.69	3.67	6.00	21.00
	Primary jobs	38	11.92	3.63	6.00	19.00
	Services	199	11.04	3.84	6.00	22.00
	Repair of vehicles	253	11.03	3.74	6.00	23.00
	Agriculture	13	11.92	4.17	6.00	21.00
	Operation of machinery	24	10.52	3.07	6.00	18.00
	Technician	31	12.63	3.41	8.00	21.00
	Transport and delivery	66	12.05	2.75	6.00	18.00
	Construction	30	10.50	2.59	6.00	17.00
	Total	1008	11.38	3.72	6.00	23.00

Anger expression toward self	Vocational	199	9.39	3.17	4.00	16.00
	Peddler	100	7.70	3.26	4.00	15.00
	Primary jobs	38	7.62	3.15	4.00	16.00
	Services	199	7.97	3.11	4.00	16.00
	Repair of vehicles	253	8.46	3.19	4.00	16.00
	Agriculture	13	9.07	3.81	4.00	15.00
	Operation of machinery	24	8.91	3.61	4.00	16.00
	Technician	31	8.44	3.21	4.00	16.00
	Transport and delivery	66	8.36	3.29	4.00	16.00
	Construction	30	7.97	3.94	4.00	15.00
	Total	1008	8.42	3.27	4.00	16.00

Coping efficacy

As shown in table 4 E), children working in the construction and services had better believes that they are able and have the power to cope with their problems as well as having the ability to adapt with it in the future. Interestingly, the rest of other children had comparable levels of ability to cope with their problems. In addition, children reported that coping mechanisms used were successful to deal with their problems that they have confronted with and they have the ability to manage these problems in the future and deal with it successfully.

Table (M. 4E): coping efficacy among working children in relation to type of work

Psychological Status	Type of the Work	Freq	Mean	SD	Min	Max
Coping efficacy	Vocational	199	18.50	4.06	7.00	28.00
	Peddler	100	18.78	4.86	7.00	28.00
	Primary jobs	38	18.59	4.11	10.00	28.00
	Services	199	19.59	4.58	8.00	28.00
	Repair of vehicles	253	18.97	4.48	7.00	28.00
	Agriculture	13	17.00	4.29	11.00	28.00
	Operation of machinery	24	18.58	4.64	7.00	26.00
	Technician	31	15.06	4.54	7.00	24.00
	Transport and delivery	66	18.79	4.66	10.00	28.00
	Construction	30	20.03	4.09	12.00	28.00
	Total	1008	18.82	4.52	7.00	28.00

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