

Health Related Problem among Agricultural child Labor

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Abstract

Background: Child labor is a worldwide phenomenon, which considered inhumane by many international organizations. **Aim:** the aim of study to assess Health related Problems among Agricultural child Labor. **Subjects and methods:** this study was descriptive, Multi stage sample for children in school The subjects of this study were composed of 240 students enrolled in preparatory schools and labor in agriculture selected from the highest density from each grade in the previously mentioned settings with the following inclusion criteria (male students labor in agriculture and their age between 12 to 14 years). **Results:** the results of this study showed that less than half of child 13 years old, as regarded educational grades, more than one third of them were 2nd Preparatory, also less than one third of them was second child, more than half of them live with their parents, more than two third of them live in shared house As regarded family member, more than one third of them was 3 individuals, less than two third of agricultural child labor had unsatisfactory knowledge about Agricultural hazards and more than one third of them had satisfactory knowledge about agricultural hazards and more than two third of agricultural child labor had unhealthy reported practices about Agricultural hazards and more than one third of them had healthy reported practices about Agricultural hazards. **Conclusions:** there were positive significance correlation between Exposure to agriculture hazards score of agricultural child labor and their total reported practices score. **Recommendations:** Preparation of a training program for ACL to increase awareness of health hazards and periodic checkup of health status for children early detection of occupational hazards to monitor their health status physically and psychologically.

Keywords: Agricultural, Child labor, hazard.

Introduction

Children represent a very large group of the Egyptian population pyramid; the distribution of the population by age indicates that a relatively high percentage of the population is young; those below the age of 15 years represent about 37.5 percent of the total population. It was estimated that 7 percent of Egyptian children were engaged in child labor (Ahmed et al., 2016).

phenomenon which is considered inhumane by many international organizations. The term “child labor” is often defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development. In its most extreme forms, child labor involves children being enslaved, separated from their families, exposed to serious hazards and illnesses and/or left to fend for themselves on the street – often at a very early age (Geneva et al., 2014).

Child labor is a worldwide

Child labor means work that is prohibited for children of certain age groups. It is work performed by children who are under the minimum age legally specified for that kind of work, or work which, because of its detrimental nature or conditions, is considered unacceptable for children and is prohibited (ILO et al., 2016).

Throughout the world, around 215 million children work, many full-time. They do not go to school and have little or no time to play. Many do not receive proper nutrition or care. They are denied the chance to be children. More than half of them are exposed to the worst forms of child labor such as work in hazardous environments, slavery, or other forms of forced labor, illicit activities including drug trafficking and prostitution, as well as involvement in armed conflict. (UNDP et al., 2014).

Agriculture is the cultivation and breeding of animals, plants and fungi for food, fiber, befool, medicinal Plants and other products used to sustain and enhance human life. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that nurtured the development of civilization. (Gerardo et al., 2016)

The community health nurse draws on knowledge of community health to meet the needs of the farm work force, uses creative approaches to gather data about the farm work force and the work environment, address the health and safety issues of farmers, agricultural workers, and farm families, serve as a liaison for the agricultural, health and medical, and nonfarm communities. The nurse conduct follow up assessment of injury, disease occurring as a result of an agricultural exposure, build interpersonal communication skills, knowledge of injury prevention principles and measures, ability

to recognize potential hazards within the work and home environment, and demonstrate a strong sense of self (Connon et al., 2014).

Significance of study:

The most common job for child agricultural laborers in Egypt remains the removal of worms that threaten cotton harvests. Children well below the legal minimum age for child labor work during their summer vacations to remove worm eggs from leaves and pieces of infected vegetation. Over their eleven hour work day, children regularly get only one hour off and are lucky to get any water breaks or time in the shade, resulting in severe dehydration, malnutrition and exhaustion. Supervisors abuse their powers further by beating children for slow or sloppy work, in addition to sending children back into the fields only hours after toxic pesticides are sprayed (Cairo, NCSCR, et al., 2013).

Quarrying limestone has been determined by national law a hazardous activity. So this report classified the factors that refer to the labor of children into (socioeconomic context and etiological factors). The socioeconomic context such as (increase of population growth, low income of family, age structure, economically active population, poor technology and migrant labor. The etiological factors include: (poverty, patients wish, school reports and situation at home) (WHO et al., 2016).

In Egypt, the worst forms of child labor stated that “children are engaged in child labor, including in agriculture and domestic service “and that “the government hasn’t addressed gaps in it’s legal and framework to protect children “. In fact, statistics in report show that 6.7 % of Egyptian children aged 5 to 14 are working children and that 55% of them work in agriculture. (UNESCO et al., 2015)

Aim of the study:

This study aims to assess Health related Problems among Agricultural child Labor through:

1- Assessing children knowledge related to agriculture health hazards.

2- Assessing children practices related to protection from agriculture health hazards.

3- Assessing children exposure to agriculture health hazards.

4- Highlight the work related health hazards of the agricultural child labor.

Research questions

What's the children knowledge about agriculture hazards?

- What are the practices of children about agriculture hazards?

- What are the agriculture hazards affecting children?

- What's the relation between the children knowledge and exposure to agriculture health hazards?

Subjects and methods:**Technical design:****Research design:**

A descriptive correlation design was used to conduct this study.

Tools of data collection:

The tools would designed for data collection:

Interviewing Administrated Questionnaire:

this tool was developed by the investigator and written in simple Arabic language based on scientific literature review to assess data about the following **included:**

Part I:-Socio-demographic data include :(Age, educational level and parents occupation, parents education, family income, family size).

Part II: - Children`s knowledge related to agriculture hazards such as:

(definition, causes, risk factors,etc.

- **Scoring System:**

Related to children knowledge assessment, a correct answer scored one and each incorrect answer scored zero, a total of 50% and above were satisfactory and less than 50% were considered unsatisfactory.

Part III:- Children`s reported practice related to agriculture hazards such as: use of protective measuresetc.

- **Scoring System:**

Related to children practice assessment, a correct answer scored one and each incorrect answer scored zero, a total of 60% and above were healthy and less than 60% were considered unhealthy.

Part IV:- Children`s exposure related to agriculture hazards include:

A) work environment hazards they faced during work including:- (physical, chemical, psychological and mechanical hazards).

Content and Face Validity and Reliability:

Content validity was ascertained by a group of three experts in the field of community health nursing to test its content validity and applicability, Reliability was done used test-retest (0.83).

Ethical Consideration:

Research approval was obtained from the ethical committee Faculty of Nursing – Ain Shams University before starting the study. Verbal approval was obtained from the students before starting in the study; a clear and simple explanation was given according to their level of understanding, physical and mental readiness. They assured that all the gathered data was confidential and used for

the research purpose only. The students were informed that they are allowed to choose to participate or not in the study and they have the right to withdraw from the study at any time.

Pilot Study:-

A pilot study was conducted on 5% of total sample of preparatory school children (12 student) working in agriculture in order to test the applicability of the constructed tools and the clarity of the included questions related to health related problems among agricultural child labor. The pilot has also served to estimate the time needed for each subject to fill in the questions. The pilot participants were included in the main study sample.

Results:**Part (I): Demographic characteristics of the studied Students**

Table (1): Frequency Distribution of the studied students according to their socio-demographic characteristic (no=240).

Characteristics	No	%
Age by years		
• 12 years	51	21.2
• 13 years	118	49.2
• 14 years	71	29.6
Mean ± SD		13.2 ± 0.8
Educational grades		
• 1 st Preparatory	89	37.1
• 2 nd Preparatory	96	40.0
• 3 rd Preparatory	55	22.9
Child's birth order		
• First	57	23.8
• Second	74	30.8
• Third	66	27.5
• Fourth	37	15.4
• More than fourth	6	2.5
Child living with:-		
• Parents	139	58.0
• Mother	82	34.2
• Father	3	1.2
• Grandmother/fathers	16	6.6
Type of House		
• Private house	19	7.9
• House for rented	32	13.3
• Shared house	189	78.8
Number of family members		
• 2 individuals	19	7.9
• 3 individuals	85	35.4
• 4 individuals	77	32.1
• ≤ 5 individuals	59	24.6

Table (1): shows that, 49.2% of agriculture child labor their age was 13 years old with a mean age \pm SD 13.2 \pm 0.8, 49.2%. As regarding educational grade, 40% of the agriculture child labor was in second preparatory class and 30.8% of them were the second child in the family. 58% lived with their parents and 78.8% lived in shared house. While 35.4% of agriculture child labor lived in a family consisted of three individuals.

Figure (1): Distribution of the agricultural child labor (ACL) according to their source of family monthly income (no=240).

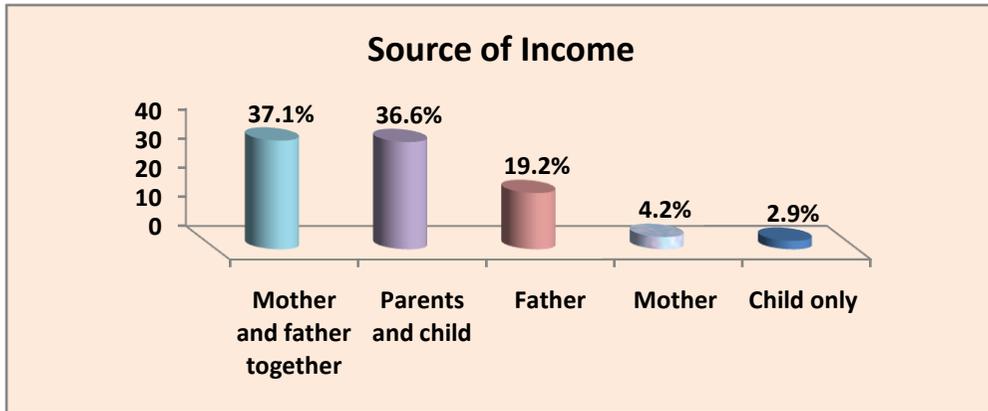


Figure (1):This figure illustrates that, 36.6 % of agricultural child labor their family monthly income based on their parents and child.

Figure (2): Distribution of the agricultural child labor (ACL) according to their sources of information (no=240).

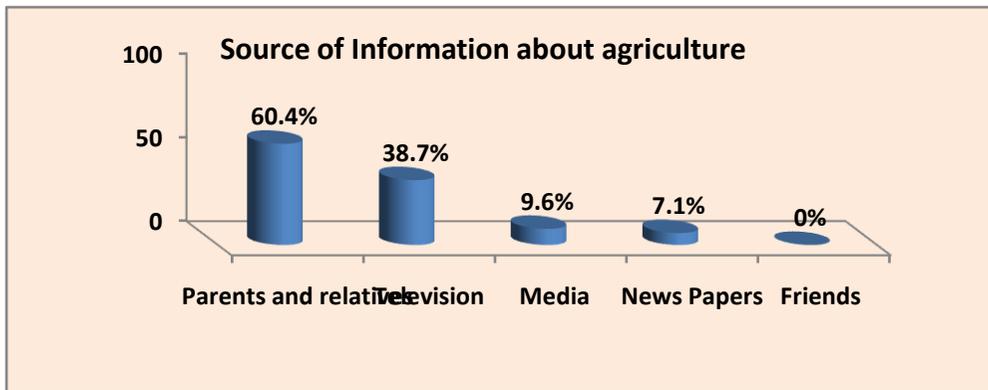


Figure (2): This figure illustrates that, 60.4% of agricultural child labor received information through their parents and relatives.

Table(2): Distribution of the agricultural child labor (ACL) according to their total knowledge related to agriculture hazards (no=240).

Items	No	%
• Satisfactory	82	34.2
• Unsatisfactory	158	65.8

This table shows that 65.8% of ACL had unsatisfactory knowledge about Agricultural hazards and 34.2% of them had satisfactory knowledge about Agricultural hazards.

Table(3): Distribution of the ACL according to their total practices related to agriculture hazards (no=240)

Items	No	%
• Healthy Practices	78	32.5
• Unhealthy Practices	162	67.5

Table (3): This table shows that 67.5 % of ACL had Unhealthy reported Practices about Agricultural hazards and 34.2 % of them had Healthy reported Practices about Agricultural hazards.

Table(4): Distribution of the ACL according to their exposure related to agriculture hazards (no=240).

Items	No	%
• Mild exposure	70	29.2
• Moderate exposure	120	50.0
• Severe exposure	50	20.0

Table(4): This table shows that 50 % of ACL had moderate exposure for Agricultural hazards and 20 % of them had severe exposure for Agricultural hazards.

Table (5): Relation between practices of the ACL and their exposure to agriculture hazards (n= 240).

Exposure to Agriculture Hazards	Total Practices				X ²	P Value
	Healthy Practices		Unhealthy Practices			
	No	%	No	%		
• Mild exposure	19	8.0	51	21.2	15.14	**0.001
• Moderate exposure	52	21.6	68	28.3		
• Severe exposure	7	2.9	43	18.0		

*Significance at p value < 0.05

**Highly significance at p value < 0.001

Table (5): Shows that there were positive significance correlation between Exposure to Agriculture Hazards score of ACL and their total reported practices score.

Discussion:

Regarding demographic characteristics of agricultural child labor, the results of the present study revealed that, almost half of them, their age were 13 years old with a mean age of 13.2±0.8. As regarding educational level,

two fifth of children were in second preparatory class and less than one third of them were second child in the family. More than half of children live with their parents, more than three quarters live in shared house, more than one third of them had a family number consisted of three individuals (**Table 1**). These findings

were supported by **Salem et al. (2010)**, who study the effect of implementing safety education program on the exposure to agricultural work hazards among preparatory school pupils was carried out in three preparatory schools in three villages affiliated to El Mansoura City, reported that, all students have age ranged from 13-15 years with mean of 13.62 ± 0.75 . Another study done by **Ahmed and Mohamed, (2016)**, who study the occupational health program on preventing hazards among child labor was conducted in the Garment factories in north west of Banha City, Qalyubia Governorate, found that, about more than two third of them less than 12 years with the mean age 10.5 ± 2.1 , Regarding birth order, slightly less than half of working children in the present study were the second child, less than half of them can read and write only, while minority of them were preparatory education. In addition, more than half of them live in rural areas; more than half left the school during primary school.

Similarly, with the study conducted by **Kotb et al. (2011)**, who study the agricultural labor among schoolchildren in rural Assiut found that, The age of the respondents ranged from 6 to 17 years with a mean of 11.5 ± 3.2 and more than one third of them were second and third child in the family. The majority of children live with their parents, more than two third of them had a family number consisted from six to nine individuals.

The results of the present study illustrated that, **(Figure 1)**, more than one third of the agricultural child labor their family monthly income based on their mothers and fathers together, The findings of the present study were goes in the same line with **Ahmed and Mohamed, (2016)** in Banha, who reported that, one third having more than

500 pound/month. Similar to study conducted by **Dixon-Roman et al. (2013)**, who point out that, parental income and other indicators such as socio-economic status related to various educational outcomes. These findings of the current study were disagreement with **Salem et al. (2010)** in Mansoura, who found that, more than half of them are belonging to low middle social class.

The findings of the present study were highly supported with the similar study of **Toussaint, et al. (2017)**, who study the characteristics of farm equipment-related crashes associated with injury in children and adolescents on farm equipment indicate that, over half of the children surveyed who acted as sole or partial breadwinners asserted that they worked in order to support their households and meet basic household requirements.

Kotb et al. (2011) in Assuit, who found that, more than half of the student's parents were employers, supported the finding of the present study. Most of the student's mothers were homemakers. Father's work was the source of the family income in less than three quarters and depended on siblings work as a source of the income.

Regarding to the sources of information about agriculture the present study illustrated that, almost two thirds of the agricultural child labor received information through their parents and relatives **(Figure 2)** **Mostafa and Momen, (2014)** Abbasia, Cairo, who studies the knowledge, attitude and practice among technical education students conducted at school of technical education in Abbasia, supported the current study finding; Cairo found that, majority of them received the knowledge from teachers, curriculum and training courses.

Concerning to the agricultural child labor according to their total knowledge related to agriculture hazards the current study illustrated that, less than two thirds of the agricultural child labor have unsatisfactory knowledge related to agriculture hazards (**Table 2**). This finding was supported with **Ahmed and Mohamed, (2016) in Banha**, who found that, relatively high percentages of the studied children had poor knowledge about types of PPE, types of occupational diseases.

Regarding to their total practices related to agriculture hazards of agricultural child labor the result of the current study illustrates that, two thirds of the agricultural child labor have unhealthy practices related to agriculture hazards, while less than one third of them have healthy practices related to agriculture hazards (**Table 3**). This result was incongruent with **Ryan, Lawer, (2014)**, who studies the efficiency of tailored intervention, clarified that, the practice about first aid, and medical emergencies can literally mean the difference between life and death and can help in prevention of disability or injury.

Regarding to exposure related to agriculture hazards the result of the current study illustrated that, half of the agricultural child labor were moderate exposure to agriculture hazards (**Table 4**). These finding was agreed with **Ahmed and Mohamed, (2016) in Banha**, who found that, the majority of study sample having psychological and physical health problems.

Regarding to the relation between practices of the ACL and their exposure to agriculture hazards the result of the current study illustrated that, there is statistical significant relationship total practices level of the agricultural child labor and their frequency exposure to

agriculture hazards (**Table 5**). The current study finding were highly supported with the similar study of **Toussaint, et al. (2017)**, who study the characteristics of farm equipment-related crashes associated with injury in children and adolescents on farm equipment indicate that, more than two thirds of working children started work below age of 10 years.

Conclusion:

Based on the study findings it was concluded that almost two thirds of the agricultural child labor has unsatisfactory knowledge related to agriculture hazards and two thirds of the agricultural child labor has unhealthy practices related to agriculture hazards. Slightly the majority of the agricultural child labor was suffering from effects of agriculture hazards on their circulatory system, digestive system, musculoskeletal system and respiratory system problems, meanwhile, three quarters of them were exposed to chemical hazards and natural hazards respectively.

Recommendation:

- Preparation of a training program for ACL to increase awareness of health hazards.
- Periodic checkup of health status for children to detect agricultural child labor hazards to monitor their health status physically and psychologically.
- Distributing awareness brochures, leaflets and booklets to avoid the dangers of working in agriculture.
- Training workshops for school children to protect them from agricultural hazards.

- Conduct awareness-raising campaigns to know the rights of the child to work at an early age.

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Conflict of interest

No

References:

Ahmed Shafik, Mohamed Abd El-Aal, (2016): Occupational Health Program On Preventing Hazard Among Child Labor, Iosr Journal Of Nursing A Nd Health Science (Iosr-Jnhs) E-Issn: 2320–1959.P- Issn: 2320–1940 Volume 5, Issue 3 Ver. Iii, Pp 70-80.

Dixon-Roman EJ, Everson HT, McArdle JJ (2013): Race, poverty and SAT scores: Modeling the influences of family income on Black and White high school students' SAT performance. Teachers College Record, 115(4): 1-10.

Kotb, Safaa A. M. Asmaa G. Mohamed 1 Ekram M. Abdel Khalek, Doaa A. Yones (2011): Agricultural

Labor Among School Children In Rural Assiut, Egypt, Life Science Journal,;8(2).

Mostafa Ns And Momen M. (2014):Occupational Health And Safety Training: Knowledge, Attitude And Practice Among Technical Education Students, Egyptian Journal Of Occupational Medicine; 38 (2): 153-165.

Ryan, P., & Lawer, D. (2014): The Efficiency Of Tailored Intervention. Journal Of Nursing Scholarship, 43,(4);331-447.

Salem, Nagwa M. D.N.Sc.; Hend H. Mittwaly, D.N.Sc.; Manal A. Aueda, D.N.Sc. And Amel I.Ahmad,Ph.D.(2010): Effect Of Implementing Safety Education Program On The Exposure To Agricultural Work Hazards Among Preparatory School Pupils, Med. J. Cairo Univ.; 78(2): 63-73.

Toussaint, M, Kayla, F, Corinne, P, & Marizen, R, (2017): Characteristics of Farm Equipment-Related Crashes Associated With Injury in Children and Adolescents on Farm Equipment, The Journal of Rural Health 33 127–134.