

Mothers' Knowledge and Perception about Short Stature of Their Children

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Abstract: Normal growth is a sign of good health. Screening for growth interruptions is essential to children's health needs. Early detection and diagnosis of the causes of short stature allows management of underlying medical conditions, optimizing attainment of good health and normal adult height. The aim of this study was to assess mother's Knowledge and perception about short stature of their children. Design of this study was descriptive design. Sample of this study was convenient sample of 400 students aged between 6-10 years old and their mothers were selected to carry out this study. Instruments of this study included a questionnaire sheet that was used to assess mothers' knowledge and perception about short stature, and a chart for children's height was used to assess children's height. The settings this study conducted at health insurance outpatients' clinics for students' at Quesna district, Menoufia governorate. The main findings were, the prevalence of short stature in the studied sample was 8% with the prevalence appeared higher in rural than urban. Three quarters (75%) of mothers had poor knowledge about short stature. The majority (87.5%) of mothers for short stature students felt that their children had normal height. This study concluded that short stature prevalent in the studied sample with low rate (eight percent). Short stature was more prevalent in rural areas. Majority of mothers of short stature children perceived that their children had normal height. Recommendations According the findings of this study attention should be given to national strategies which aim to prevent and treat short stature by increasing mothers' awareness of short stature problems and its consequences. Screening campaign needed for more awareness about the importance of early detection of growth disorders.

Keywords: Short stature, Mothers knowledge & Mothers perception.

1. INTRODUCTION

Short stature is included in most serious challenges facing childhood in the 21st century. The problem is worldwide and is increasingly affecting many developing countries. Short stature is a condition applied to a child whose height is 2 standard deviations (SD) or more below the mean for children of that sex and age. This corresponds to a height that is below the 3rd percentile. Short stature in children is frequently unrecognized in early childhood and thus diagnosed at a late age, which decreases the opportunity to intervene and improve both their health outcomes and stature. Short stature may be either a variant of normal growth or caused by a disease^(1,2)

Short stature is common health problem worldwide. Children even who have average heights are visiting pediatric specialty clinic setting to seek evaluation for short stature. Previous studies reported that only 18%-30% children who visited hospital for concerning about their height were short stature⁽³⁾. A study was done in Cairo, El Marg district showed that 34.1% of preparatory school students were stunted and 73.6% of them were found in public schools⁽⁴⁾.

Short stature may caused by familial agent, endocrine, chronic or chromosomal disorders. Most common cause being idiopathic short stature. Early diagnosis and treatment of curative disorders like malnutrition and vitamin D deficiency, Endocrine disorders like growth hormone deficiency & hypothyroidism can lead to achievement of expected height. Pakistani data shows idiopathic short stature as the most common cause of short stature,⁽⁵⁾

Slowing of growth may derive from underlying pathological processes that ultimately cause more serious problems than just affecting final height attainment. Explanation of the reasons for poor growth is obviously of great importance in order to reverse or eliminate the causative disorders⁽⁶⁾. Short stature can lead to both psychological and social risk. Short stature children may be annoyed and frightened by peers and suffer a lack of self-esteem. These experiences may contribute to developing "...a deep sense of weakness or passivity, or a 'Napoleon complex', always striving for power or control over others⁽⁷⁾. Parents of children with short stature tend to rate their children as having lower social functioning, poorer self-esteem, and more behavioral and cognitive problems than children with average height^(8,9).

Early finding of abnormal growth, and identification of the primary causes, is serious for appropriate management. Poor growth may be the earliest sign of a medical problem. Normal growth is the result of a complex interaction between genetic, hormonal and environmental/ nutritional factors. Improving the pathologic conditions linked to short stature will usually result in normalization of growth. Endocrine disorders are hardly the cause of short stature, but when present are highly treatable, so are particularly important to diagnose early. The possibility for proper treatment depends on both the early identification of these children and on appropriate evaluation by knowledgeable clinicians⁽¹⁾. A study done by Hayek et al., (2016) about awareness campaign for the early detection of growth disorders in public school children in North Lebanon. This study concluded that screening campaign approves the need for more awareness about the importance of early detection of growth disorders⁽¹⁰⁾.

Significance of the study:

Most children with short stature have normal deviations such as familial short stature, constitutional delay of growth and puberty, or idiopathic short stature. Approximately 5% of children referred for evaluation of short stature have an identifiable pathologic cause⁽¹¹⁾. Children with short stature usually enroll later in school compared to their healthy peers, and achieve lower overall years of education. Short stature is still considered to be directly the result of chronic malnutrition⁽¹²⁾; in addition it may be an accurate indicator of childhood health and may reflect a child's nutritional and environmental background adequately. Knowledge of the prevalence of short stature can be considered a first step in addressing childhood health concerns⁽¹³⁾.

1.2. Aim of the study:

To assess mothers' Knowledge and perception about short stature of their children

1.3. Research questions:

- What is the prevalence of short stature in the studied sample?
- What is the mothers' knowledge about their children stature?
- What are the mothers' perceptions of their short stature children?

2. SUBJECTS AND METHODS

2.1. Research design: A descriptive design was used to accomplish the aim of this study.

2.2. Research setting: This study was conducted at health insurance outpatient clinics for students at Quesna district, Menoufia governorate.

2.3. Sample: A convenient sample of 400 students aged between 6-10 years old and their mothers were selected to carry out this study.

Exclusion Criteria: Presence of chronic diseases or handicap.

2.4. Instruments of the study:-

1. A constructed questionnaire for mothers' knowledge about short stature and mothers' perception of the height of their children: it was developed by the researchers after reviewing the related literature and included the following:

A. Socio-demographic data: It was included Socio-demographic data of the students and their mothers. It included questions about the age and sex of the students, residency, mothers' age, level of education and work.

B. A questionnaire about mothers' knowledge about short stature. It contained questions about mothers' knowledge about what is short stature, causes, treatment of short stature and the problems facing short statured persons.

The scoring of knowledge is classified as:-

1. Good knowledge >75%
2. Fair knowledge -50%-75%
3. Poor knowledge < 50%

C. A questionnaire about mothers' perception of the height of their children. It contained questions about mothers' feelings towards child's height, extent of worries about students' height

II. Height assessment: Height of every student was measured using measuring tape.

III. Growth charts (Figure 1, 2): using stature charts -for-age and Weight-for-age percentiles for boys and girls 2-20 years (The National Center for Health Statistics; 2000).

2.5. Validity and reliability of instruments:

Instruments were developed by the researcher after reviewing the related literature and tested for its content validity. Validity indicated the degree to which the instruments measures what it is expected to measure. It was determined by a panel of three experts in community medicine and community health nursing and modifications were carried out according to the panel judgment on clarity of the sentences and appropriateness of the contents. A reliability analysis was carried out in order to examine the internal consistency of its questions and identify the extent to which the items of instruments measured the same concept and correlate with each other. The reliability was measured by using test retest for a group of 10 participants who were asked to fill the questions and were asked to fill the same questions after two weeks. The answers in the two testing were analyzed and computed for reliability .It reaches 80% ($r=.80$) which is considered reliable.

2.6. Pilot study:

Pilot study was conducted on 10 students. The pilot sample was not included in the total sample of the research work. The pilot study was carried out to test the applicability and clarity of the constructed questionnaire and detect any problems that might arise during the actual collection of data. According to the results of the pilot study, the necessary modifications and clarifications of some questions were done. Then the final form was developed and used in data collection.

2.7. Ethical considerations:

Researchers followed all the ethical issues in conducting the research. Informed consent was obtained from the participants mothers' who were willing to participate in the study. The participants were informed that participation in this study is voluntary; they can withdraw at any time during the study without giving reasons. The researchers were explained the aim of the study to all students' mothers in the studied sample. They reassured that any obtained information would be strictly confidential.

2.8. Data collection procedure:

- This study was conducted during the period starting from October 2015 to the end of March 2016.
- Necessary approval was obtained from director of health insurance for students' outpatients' clinics at Quesna district explaining the aim of the study in order to obtain permission and help.
- After obtaining approval and informed consent to conduct the study, the researchers were initiated data collection from mothers who fulfilled the criteria a day per week for six months.
- Mothers were individually interviewed to fill the data collection instruments. Data collection for each mother lasted about 10-15 minutes. Students whose mothers accepted to participate in the study were heighted using a graduated

measuring tape while being bare footed, bare headed and standing straight, allowing the back of head, buttocks, shoulder and heel to touch the wall. Data collection for each student lasted about 5-10 minutes.

- Comparing the children's height with standardized growth charts to identify potential deviations from normal. Growth deviations may be expressed as SD from the normal population mean for children of comparable age and sex; children with heights >2 SD below the mean are generally classified as short stature.

Statistical Analysis:

Data was coded and transformed into specially designed form to be suitable for computer entry process. Data was analyzed by using SPSS statistical package version 22. Quantitative data was expressed as mean(X) and standard deviation (SD) by student t- test. Qualitative data was expressed in the form of number and percentage. It was analyzed by chi-square (χ^2). Level of significance was set as P value < 0.05.

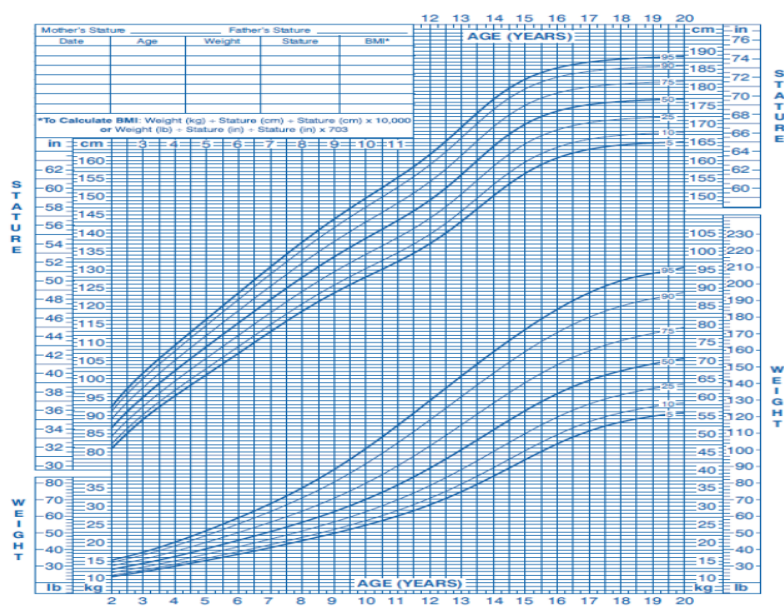


Figure 1: Stature-for-age and Weight-for-age percentiles for boys 2-20 years (The National Center for Health Statistics; 2000)

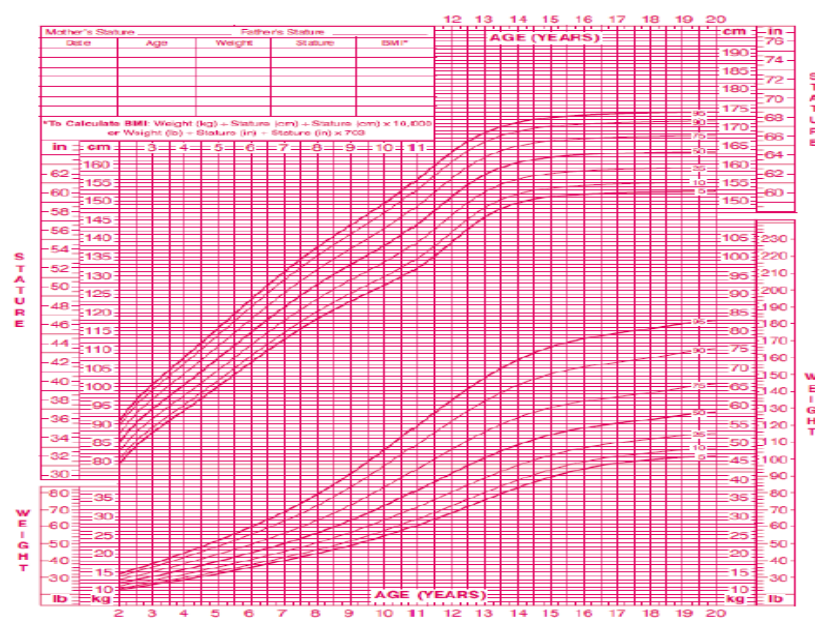


Figure 2: Stature-for-age and Weight-for-age percentiles for girls 2-20 years (The National Center for Health Statistics; 2000)

3. RESULTS

Table (1): Characteristics of studied students distributed by residence (n=400)

Children Characteristics	Residence		Total N=400		X ²	
	urban N=196	Rural N=204				
	N	%	N	%		
Age						
6-	2	1.0	44	21.5	27.04** T=4.4	
7-	30	15.0	42	20.5		
8-10	164	84.0	118	58.0		
mean± SD	7.2 ±0.7		6.6±1.1			
Gender					0.18**	
Male	92	47.0	102	50.0		
Female	104	53.0	102	50.0	206	51.5

** Not significant

Table (1) showed the characteristics of the studied students distributed by their residence. As indicated in the table, the mean of children's age in urban area was (7.2 ±0.7) compared to (6.6±1.1) in rural areas. In urban area, females were more than males (53%, 47%). Whereas, in rural areas number of females and males was equal.

Table (2): Characteristics of Mothers distributed by their residence (n=400)

Mothers' Characteristics	Residence		Total N=400		X ²	
	urban N=196	Rural N=204				
	N	%	N	%		
Age						
20-	132	67.3	122	59.8	23.7** T=2.7	
30-	16	8.1	36	17.6		
≥40	48	24.5	46	22.5		
mean± SD	32.0 ±6.6		29.9±4.4			
Education					22.9**	
Illiterate	4	2.04	24	11.7		
Elementary	8	4.08	18	8.8		
Secondary	88	44.8	120	58.8		
University	96	49.0	42	20.5	138	34.5
Work					13.9**	
Work	98	50.0	50	24.5		
Not Work	98	50.0	154	75.5	252	63.0

** Not significant

Table (2) showed the characteristics of mothers distributed by their residence. As pointed out in the table the mean and standard deviation of mothers age in urban area was (32.0 ±6. 6) and (29.9±4.4) in rural areas. As regards mothers' education, in urban area the highest percentage of mothers (49.0%) had university education. Whereas, in rural areas the highest percentage of mother had secondary education, and approximately three quarters of mothers (75.5%) didn't work. Meanwhile, in suburban area only half of mothers (50.0%) didn't work.

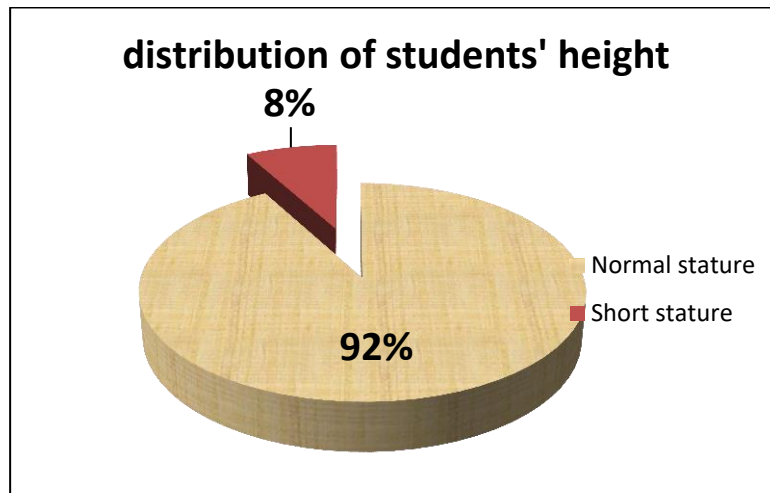


Figure (3): Distribution of the studied students' height (n=400)

Figure (3) illustrated distribution of the studied students' height. It clarified that 8% of all students were had short stature and 92% of them were had normal stature.

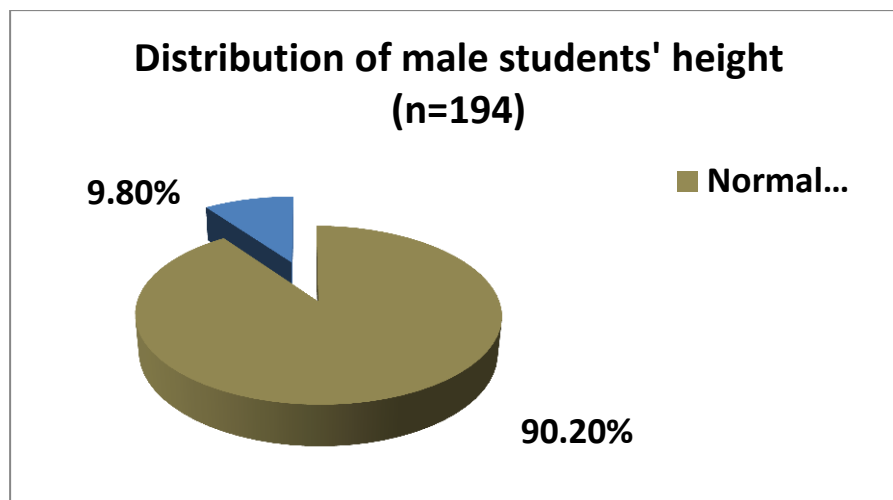


Figure (4): Distribution of male students' height

Figure (4) showed distribution of male students' height. It clarified that the percentage of short stature was 9.8 % of male students.

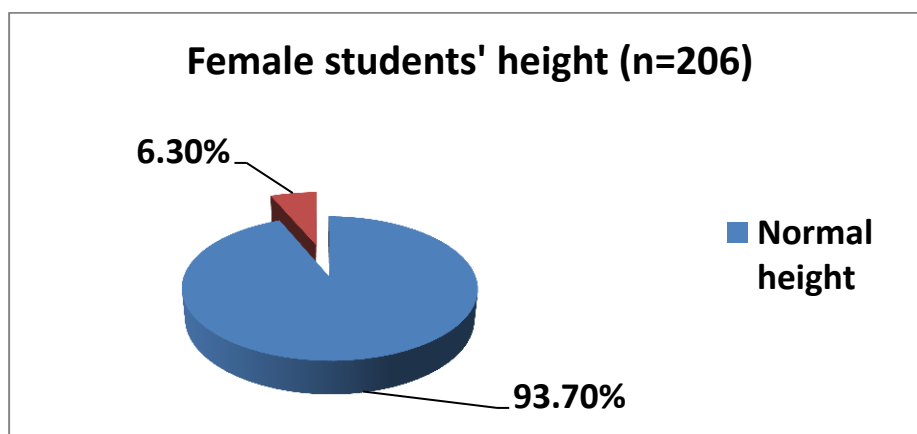


Figure (5): Distribution of female students' height

Figure (5) demonstrated distribution of female students' height. It clarified that the 6.3 % of studied female students had short stature.

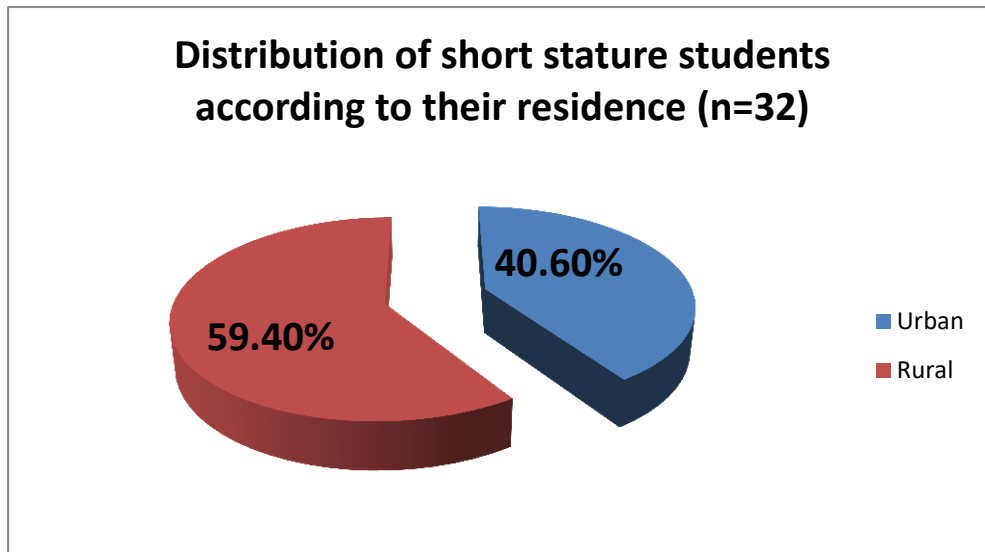


Figure (6) distribution of short stature students according to their residence (n=32)

Figure (6) this figure showed that the prevalence of the short stature was higher in rural than urban area.

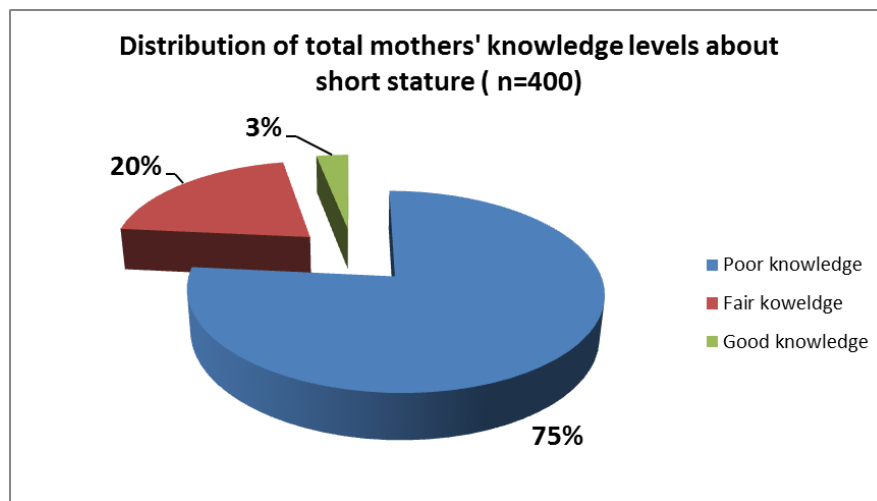


Figure (7): Distribution of total mothers' knowledge levels about short stature (n=400)

Figure (7) revealed distribution of total mothers' knowledge levels about short stature. It clarified that only 3% of studied mothers had good knowledge about short stature. While 75% had poor knowledge about short stature.

Table (3): Mothers' perception of their children's height according to their gender

Gender	Mothers' perception of their children height				Total		X ²
	Short Stature N=6		Normal stature N=394		N=400		
	No	%	No	%	N	%	
Male	4	66.7	190	48.2	194	48.5	0.79**
Female	2	33.3	204	51.8	206	51.5	

** Not significant

Table (3) showed mothers' perception of their children's height according to their gender. It reflected that there was no statistically significant difference between mothers' perception and children's gender.

Table (4): Students' stature according to mothers' perception

Mothers' perception	Students' stature				Total		X ²
	Normal stature N=368		Short stature N=32		No=400		
	N	%	N	%	N	%	
I feel my child is							0.001 *
1-Normal stature	366	99.5	28	87.5	394	98.5	
2-Short stature	2	0.5	4	12.5	6	1.5	
Mother anxious							0.05 *
1-Un anxious	198	53.8	24	75.0	222	55.5	
2- anxious	170	46.2	8	25.0	178	44.5	

*significant

Table (4) explained students' stature according to mothers' perception. This table showed that the majority of (87.5%) of mothers for short stature students felt that their children had normal height. There was a statistically significant difference between mothers' feelings of their children's height and their actual height. Also, there was statistical significant difference between mothers' worries of their children's height and their actual height.

4. DISCUSSION

Short stature is a common problem worldwide. Child with slow growth rate, height below 3rd percentile, or height noticeably below the genetic potential requires further investigations. Evaluation of growth requires reliable growth measuring instrument with data compared with suitable growth charts ⁽¹⁴⁾.

Regarding to prevalence of short stature the present study showed that, only eight percent of the studied sample had short stature. The prevalence was 9.8% in male students and 6.3 in female. This result was nearly in accordance with El Mouzan, et al., (2011) ⁽¹⁵⁾ who studied prevalence of short stature in Saudi children and adolescents and found that, the overall prevalence of moderate and severe short stature in boys was 11.3% and 1.8%, respectively; and in girls, 10.5% and 1.2%, respectively. Contrast to this finding study done by Mohammad, et al., (2016) ⁽¹⁶⁾ who examine underweight and Short Stature among Upper Egypt school children using national and international growth charts. They highlighted that, "on a closer look to Egyptian growth charts, girls were significantly shorter than boys in age group 6 and 12". In addition, Neyzi et al (2015) ⁽¹⁷⁾ who found that girls were shorter than boys at age 12, but no difference was found at age 6. In addition, study done by Zayed et al., (2016) ⁽¹⁸⁾ for Prevalence of short stature, underweight, overweight, and obesity among school children in Jordan, revealed that prevalence of short stature in Jordan was 4.9% with no significant differences in the among gender or school stratum.

In the current study the findings revealed that, short stature was prevalent in rural (59.4) than urban (40.6). This result was in the same line with Farouk, et al., (2014) ⁽¹⁹⁾ who study socio-demographic characteristics of a group of adolescents attending stunting outpatient clinic - national nutrition institute in Cairo. They revealed that there was more than third of study participants from rural areas. Also, study done by Zayed et al., (2016) ⁽¹⁸⁾ showed that there was an increased prevalence of short stature and underweight in rural areas. In addition, Egypt demographic and health survey (2008). "The survey found that children in rural areas were somewhat more likely to be stunted than urban children (30 percent and 27 percent, respectively for under five years children)" (El-Zanaty & Way, 2009) ⁽²⁰⁾. That can be explained by poor sanitation, lack of access to health services and consanguineous marriages in rural areas.

Concerning mother' knowledge about short stature the findings showed that, three quarter of the studied mothers were had poor knowledge about short stature. It may be related to lack of awareness about short stature and its consequences. Most

of studies done in Egypt on stunting concentrate on the causes, risk factors, and parents perception but not emphasized on parents' knowledge.

In regard to, mother' perception about their short stature children, the current study showed that the majority of mothers for short stature students felt that their children had normal height, with Mothers were unconcerned about the effect of short stature problems on their children. This result was contracted with Hwang & Seo (2015) ⁽²¹⁾ who studied Parents' perception about child's height and psychopathology in community children with relatively short stature. They stated that in Korea, children and their parents in local communities did not show any psychopathological or life value differences based on height. However, when children were short, their parents tended to regard relatively short children as having health problems. The difference may attribute to mother misconception about their short stature children as they still under growth and development.

5. CONCLUSION

This study concluded that, the prevalence of short stature in the studied sample was eight percent, with more prevalent in rural areas. Three quarters of mothers for short stature children perceived that their children had normal height.

6. RECOMMENDATIONS

According the findings of this study attention should be given to national strategies which aim to prevent and treat short stature by increasing mothers' awareness of short stature problems and its consequences. Screening campaign needed for more awareness about the importance of early detection of growth disorders.

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