

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

Nashwa Mahmoud Ahmed Abotyor¹, Doaa Mohamed Sobhy Elsayed², Basma Mohamed Abd-Elrahman³

(1) M.Sc. student of Community Health Nursing, Faculty of Nursing, Benha University, Egypt,

(2) Assistant Professor of Community Health Nursing, Faculty of Nursing, Benha University, Egypt

and (3) Lecturer of Community Health Nursing, Faculty of Nursing, Benha University, Egypt.

Abstract

Background: Stunting is a condition of failure to thrive in children under five due to chronic malnutrition and psychosocial stimulation and exposure to repeated infections, especially in the first 1000 days of birth. **The aim** of this study was assess awareness of maternal and child health centers nurses regarding stunting among children under five years. **Research design:** A descriptive research design was utilized in this study. **Setting:** The study was conducted at Qalyobia Governorate which includes 11 health administrations, 25% of them were selected randomly, it included 3 administrations namely; Benha Administration, Kafr Shokr administration and Toukh administration. One MCH center was taken randomly from each administration, it included the general medical MCH center at Benha, Kafr Shokr MCH center and Alamar MCH center. **Sample:** Convenient sample of 118 nurses who were working in previously mentioned settings. **Tools:** Two tools were used, **I):** Structured interviewing questionnaire was used, it consisted of two parts : A) Socio-demographic characteristics of nurses. B): Knowledge of nurses regarding stunting among children under five years. **II):** Observational check list to assess nurses' practices regarding stunting. **Results:** 16.1% of the studied nurses had good total knowledge level, 51.1% had average total knowledge level regarding stunting. 82.2% of the studied nurses had satisfactory total practices level regarding stunting. **Conclusion:** There were highly statistically significant relations between studied nurses' total knowledge level and age, level of education, years of experience, residence and monthly income. Also, there were highly statistically significant relations between studied nurses' total practices level and their age. There was a highly statistically significant relation between studied nurses total knowledge level and total practices level. **Recommendations:** Health education program to improve nurses' knowledge and practices regarding stunting among children under five years.

Key words: Children under five years, Nurses Awareness, Maternal and Child Health Centers, Stunting.

Introduction

The first five years of a child's life is a golden period for their growth and development, fostering their future learning skills and social and emotional abilities due to rapid gains in physical and cognitive growth

and development. Under five children, not only constitute a large group but they are also vulnerable or high-risk group. The risk relates to growth, development, and survival. First five years are full of health hazards. Since they are high risk group, under five children are exposed to many nutritional and

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

environmental factors leading to diseases in children (Tohidi et al., 2021).

The World Health Organization (WHO) highlights stunting is the most predominant form of under nutrition among children under-5 and it is estimated that globally around 161 million under-5 are stunted. In 2015, about 24% of children under 5 years old were stunted globally. Estimates show that 144 million children (21.3%) under the age of five years were stunted in 2019. Although childhood stunting is ubiquitous round the world, it is particularly prevalent in low- and middle-income countries (Amoako, 2022).

Early childhood malnutrition can have lasting effects on growth and functional status. Anthropometric measurements remain the most practically useful means for the assessment of the nutritional status of a population. Weight, height and mid arm circumference are considered as the most sensitive parameters for assessing nutritional status of under-five children. The use of appropriate anthropometric indicators allows the identification of the nature and extent of protein energy malnutrition in the country. The inadequate energy and protein intake leads to malnutrition in the form of stunting, wasting and underweight occurring primarily in the first 5 years of life (Vyas et al., 2021).

Child stunting has both short-term and long term negative effects on children's health and long-term negative effects such as exposure to infection and death; poor cognitive development and academic performance with later effects on economic productivity, reproductive health issues and increased risk of nutrition-related chronic diseases such as diabetes mellitus, lower social status, occupational status, wages, and other standards of living indices (Matema, 2021).

Preventing and mitigating stunting include adequate maternal nutrition before and during pregnancy and lactation, optimal breastfeeding in the first two years of life, access to and consumption of nutritious, diverse, and safe foods. A healthy environment, including access to basic health care and opportunities for safe physical activity, to date suggests long-term integrated, multisectoral programming that is both nutrition specific and nutrition sensitive are needed. Also, programmatic efforts that integrate agricultural and community education and behavior change interventions show promise and suggest greater impacts on child nutritional status when programs incorporate health (Yorick et al., 2021).

Community Health Nurse (CHN) considers as first-line healthcare providers that provides maternal and child health center nurses with appropriate knowledge regarding the nutritional assessment, diagnosis, support and care is necessary to improve the children's nutritional status and to prevent stunting, particularly in children aged under five years. (Dimo et al., 2022). Community health nurse forms positive behaviors in term of improving maternal nutrition and health, educating and empowering future mothers to make a good economic and health choices for themselves and their children (Yunitasari et al., 2020).

Significance of the Study:

Stunting in Egyptian children younger than 5 years of age decreased from 35% to 20% between 1995–96 and 2003. However, from 2005 to 2008, a rise in national stunting levels from 24% to 31% occurred. Stunting levels peak at 18–23 months (41%) in Egyptian children. The stunting rate in Egypt is higher than in other low- to middle-income

countries and is similar to that of low-income countries (UNICEF et al., 2016).

Aim of the study:

This study aimed to assess awareness of maternal and child health centers nurses regarding stunting among children under five years

Research questions:

1. What is nurses' knowledge regarding stunting among children under five years?
2. What are nurses' practices regarding stunting among children under five years?
3. Is there a relation between nurses' knowledge regarding stunting among children and their socio- demographic characteristics?
4. Is there a relation between nurses' practices regarding stunting among children and their socio- demographic characteristics?
5. Is there a relation between is nurses' knowledge and practices regarding stunting among children?

Subjects and Methods

Research design:

A descriptive research design was used in this study.

Setting:

The study was conducted at Qalyobia Governorate which included 11 health administrations, 25% of them was selected randomly, it included 3 administrations namely; Benha Administration, Kafr Shokr administration and Toukh administration. One MCH center was taken randomly from each administration. the general medical MCH center at Benha, Kafr Shukr MCH center and Alamar MCH center.

Sampling:

Convenience sample was utilized in this study. the sample of the study included all nurses who were working at the previously mentioned maternal and child health centers it include, 35 nurse from the general medical MCH center at Benha, 33 nurse from Kafr Shukr MCH center and 50 nurse from Alamar

MCH center. The total number of nurses in the selected MCH centers was 118 nurses.

Tools of data collection:

Tool (I): A structured interviewing questionnaire: It was developed by the researchers after reviewing related literature. It was written in Arabic and was consisted of two parts: **First Part:** Was concerned with socio-demographic characteristics of nurses which included eight closed ended questions as; age in years, level of education, marital status. **Second Part:** Nurses knowledge about stunting and include A- It was concerned with nurses' knowledge regarding stunting among children under five years which included thirteen closed ended questions (multiple choice type) as definition of stunting, causes of stunting related to mothers, causes of stunting related to nutritional practices. .B- It was concerned with nurses' knowledge regarding growth charts. It consisted of five closed ended questions (multiple choice type) about definition of growth measurement, aim of growth charts, benefits of growth evaluation, onset of growth evaluation and child age for growth evaluation.

Scoring system:

The scoring system for the nurses' knowledge was calculated as follows (2) score for correct and complete answer, (1) score for correct and incomplete answer and (0) score for don't know. The total knowledge score = 36. The total Knowledge score was considered good if the score of the total knowledge >75% (>27 points), while considered average if the score is 50-75% (18-27 points) and considered poor if it is <50% (<18 points).

Tool II: observational check list was concerned to assess nurses' practices regarding stunting among children under five

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

years which included eleven procedures (Measuring infant weight, included 8 items. Measuring child weight included 10 items. Measuring infant length using length board included 9 items. Measuring child height using height board which included 7 items. Measuring head circumference included 8 items. Interpreting growth indicators which included 11 items. practice about using listening and teaching skills during counseling which included 10 items. Counseling about building confidence and giving support skills which included 6 items. Counseling about women's nutrition which included 3 items. Counseling about Breastfeeding which included 7 items, Counseling about Complementary Feeding and counseling about Nutrition in Special Circumstances which included 3 items).

Scoring system

The scoring system for nurses practices was calculated as follow (1)score for done and (0) score for not done.

The total practices score = 82

The total practices score was considered satisfactory if the score $\geq 75\%$ (≥ 49 points) and considered unsatisfactory if it $< 75\%$ (< 32 points).

Content validity and Reliability

The tools validity was done by five of faculty's Staff Nursing Expert in the field of the Community Health Nursing who reviewed the tools for clarity, relevance, comprehensiveness and applicability and Reliability of the tool was done by Cronbach Alpha test Cronbach alpha for knowledge was 0.972. A Cronbach Alpha for practices was 0.978.

Ethical considerations:

All ethical issues were assured, oral consent has been obtained from each nurse before conducting the interview and given them brief

orientation about the purpose of the study. They were also reassured that all information gathered would be treated confidentiality and used only for the purpose of the study. Nurses were also informed about their ability to withdraw from the study at any time without giving any reasons.

Pilot study:

The pilot study was carried out on 10% (12 nurses) of the sample. The pilot study aimed to assess the tool clarity, applicability and time needed to fill each sheet as well as to identify any possible obstacles that may hinder the data collection. No modification was done, so the pilot study sample was included to the total sample.

Field work:

The actual field work was carried out over a period of 6 months which started from the beginning of May 2021 to the end of October 2021 after taking the official permission from the Dean of Faculty of Nursing Benha University and approval of directors of previously mentioned MCH centers. The investigator visited the maternal and child health centers, from 9 am to 12 pm, two days per week (Saturday and Tuesday) to collect the data and interviewed the MCH nurses at the room of immunization. The average time needed for each sheet was around 30- 45 minutes, the nurses average number interviewed at the MCH centers were 2-3 nurses/day depending on their response and understanding.

Statistical analysis:

Statistical analysis was done by using the Statistical Package for Social Science (SPSS) version 21. All data were collected, revised, coded, organized, tabulated and

analyzed using frequencies, numbers and percentages. Data were presented in the form of tables and figures. Quantitative data was presented by mean (\bar{x}) and standard deviation (SD). Qualitative data was presented in the form frequency distribution tables, number and percentage. It was analyzed by Chi-square test (χ^2) to detect the relation between the variables of the study (P-value). Statistical significance was considered as following:

Highly significant P-value < 0.001,
Significant P-value < 0.05, Not significant P-value > 0.05

Results:

Table (1): Shows that 34.7% of studied nurses aged from 40 to less than 50 years old with mean age 35.64 ± 10.24 , while 69.5% of the nurse's education was nursing school and, 86.4% of the nurses were married. 39.8% of them had equal 15 years of experience or more with mean years 15.89 ± 7.85 , 69.5% of them were from rural areas, 59.3% of them didn't have enough monthly income and 67.8% of them received training courses about children follow up.

Figure (1): Clarifies that 16.1% of the studied nurses had good total knowledge level, 51.1% had average total knowledge level and 32.2% of them had poor total knowledge level regarding stunting

Figure (2): Shows that 82.2% of the studied nurses had satisfactory total practices

level and 17.8% of them had unsatisfactory total practices level regarding stunting.

Table (2): Shows that there were a highly statistically significant relations between studied nurses' total knowledge level and age, level of education, years of experience, residence, and monthly income ($P \leq 0.001$). While there was a statistically significant relation between the nurses' total knowledge level. Also, there were no statistically significant relations between the nurses' total knowledge level and marital status (P -value > 0.05).

Table (3): Shows that there were a highly statistically significant relations between studied nurses total practices level and their age (P -value ≤ 0.001). While there were statistically significant relations between the studied nurses' total practices level and their years of experience and residence (P -value ≤ 0.05). While there were no statistically significant relations between the studied nurses' total practices level were no statistically significant relations between the studied nurses' total practices level and their level of education, marital status, career progression and monthly income (P -value > 0.05).

Table (4): Shows that there was a highly statistically significant relation between studied nurses total knowledge level and total practices level (P -value ≤ 0.001

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

Table (1): Frequency distribution of studied nurses regarding to their socio demographic characteristics (n=118).

Socio demographic characteristics	No	%
Age in years		
≤ 20	10	8.5
21 > 30	16	13.6
30 > 40	36	30.5
40 > 50	41	34.7
≥50	15	12.7
Mean ±SD 35.64±10.24		
Level of education		
Nursing schools	82	69.5
Health technical institute	6	5.1
Technical institute of nursing	4	3.4
Bachelor degree	16	13.6
Post graduate studies	10	8.5
Marital status		
Single	6	5.1
Married	102	86.4
Widowed	10	8.5
Years of experience		
1 < 5	11	9.3
5 < 10	16	13.6
10 < 15	44	37.3
≥ 15	47	39.8
Mean ±SD 15.89±7.85		
Residence		
Rural	82	69.5
Urban	36	30.5
Monthly income		
Enough	48	40.7
Not enough	70	59.3
Training Courses about the children following up.		
Yes	80	67.8
No	38	32.2

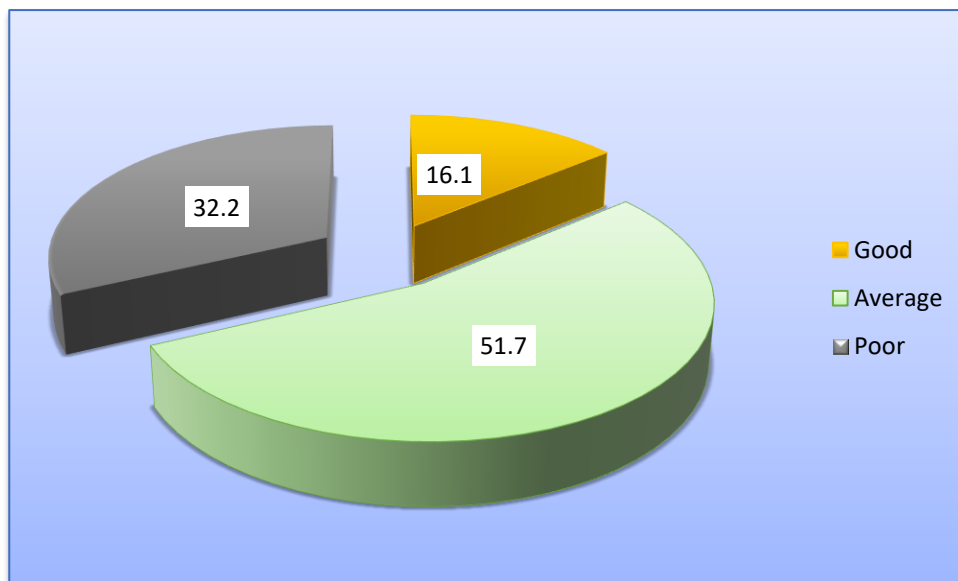


Figure (1): Percentage distribution of studied nurses regarding to their total knowledge level about stunting among children under five years (n=118).

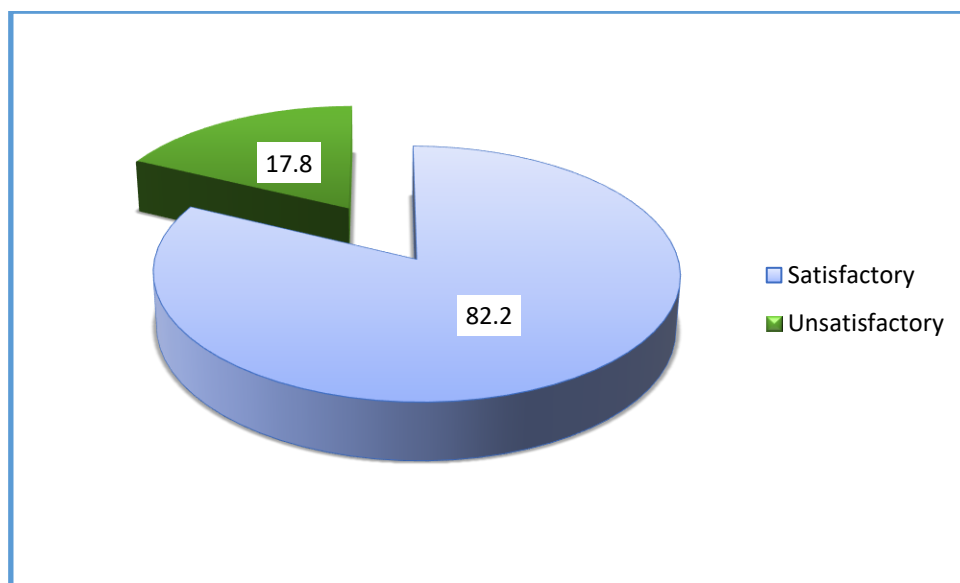


Figure (2): Percentage distribution of studied nurses regarding to total practices level regarding stunting n=(118).

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

Table (2): Statistically relation between nurses total knowledge level and their socio demographic characteristics

Socio demographic characteristics	Total knowledge level						X ²	p-value
	Poor (n=38)		Average (n=61)		Good (n=19)			
	No.	%	No.	%	No.	%		
Age in year								
≤ 20	8	21.1	0	0.0	2	10.5	54.329	0.000**
21 > 30	13	34.2	0	0.0	3	15.8		
30 > 40	13	34.2	18	29.5	5	26.3		
40 > 50	0	0.0	34	55.7	7	36.8		
≥50	4	10.5	9	14.8	2	10.5		
Level of education								
Nursing schools	30	78.9	38	62.3	14	73.7	29.044	0.000**
Health technical institute	5	13.2	0	0.0	1	5.3		
Technical institute of nursing	3	7.9	0	0.0	1	5.3		
Bachelor degree	0	0.0	14	23.0	2	10.5		
Post graduate studies	0	0.0	9	14.8	1	5.3		
Marital status								
Single	0	0.0	5	8.2	1	5.3	3.638	0.457
Married	34	89.5	51	83.6	17	89.5		
Widowed	4	10.5	5	8.2	1	5.3		
Years of experience								
1 < 5	9	23.7	0	0.0	2	10.5	45.057	0.000**
5 < 10	13	34.2	0	0.0	3	15.8		
10 < 15	7	18.4	31	50.8	6	31.6		
≥ 15	9	23.7	30	49.2	8	42.1		
Residence								
Rural	13	34.2	55	90.2	14	73.7	34.764	0.000**
Urban	25	65.8	6	9.8	5	26.3		
Monthly income								
Enough	11	28.9	57	93.4	12	63.2	44.832	0.000**
Not enough	27	71.1	4	6.6	7	36.8		

** Highly Statistically Significant (P ≤ 0.001)

Table (3): Statistically relation between nurses total practices and their socio demographic characteristics

Socio demographic characteristics	Total practices				X ²	p-value
	Unsatisfactory (n=21)		Satisfactory (n=97)			
	No.	%	No.	%		
Age in years						
≤ 20	4	19.1	6	6.2	23.413	.000**
21 > 30	5	23.8	11	11.3		
30 > 40	12	57.1	24	24.7		
40 > 50	0	0.0	41	42.3		
≥50	0	0.0	15	15.5		
Level of education						
Nursing schools	21	100.0	61	62.9	11.215	0.024
Health technical institute	0	0.0	6	6.2		
Technical institute of nursing	0	0.0	4	4.1		
Bachelor degree	0	0.0	16	16.5		
Post graduate studies	0	0.0	10	10.3		
Marital status						
Single	0	0.0	6	6.2	4.007	0.135
Married	21	100.0	81	83.5		
Widowed	0	0.0	10	10.3		
Years of experience						
1 < 5	5	23.8	6	6.2	9.789	.020*
5 < 10	5	23.8	11	11.3		
10 < 15	5	23.8	39	40.2		
≥ 15	6	28.6	41	42.3		
Residence						
Rural	10	47.6	72	74.2	5.765	.016*
Urban	11	52.4	25	25.8		
Monthly income						
Enough	11	52.4	37	38.1	1.45	0.229
Not enough	10	47.6	60	61.9		

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

Table (4): Statistically relation between studied nurses total knowledge level and total practices level regarding to stunting among children under five years

Total knowledge level	Total practices level				X ²	p-value
	Unsatisfactory (n= 21)		Satisfactory (n=97)			
	No.	%	No.	%		
Poor (n=38)	17	81.0	21	21.6	32.196	0.000**
Average (n=61)	0	0.0	61	62.9		
Good (n=19)	4	19.0	15	15.5		

**** Highly Statistically Significant(P ≤ 0.001)**

Discussion:

Stunting is the most prominent physical manifestation of chronic malnutrition. It is largely an irreversible outcome of inadequate nutrition and repeated bouts of infection during the first five years of a child's life. Health workers have a vital role to play in promoting good nutrition and maintain the health of children. Capitalizing on health care providers to provide correct and adequate nutrition advice/counseling to caregivers is one of the best strategies to improve children's nutritional status (Ali, 2021). So, the current study aimed to assess awareness of maternal and child health centers nurses regarding stunting among children under five years .

Regarding the socio demographic characteristics of the maternal and child health centers nurses, the present study revealed that more than one third of nurses aged from 40 to less than 50 years old with mean age 35.64±10.24 (table 1). This finding disagreed with Abrão et al. (2016), who studied "Nursing education at the brazilian new state era: the case of the medalha

milagrosa school in Spain" (N=39) and stated that the age of all studied nurses was ranged from 27:56 years. Also this finding comes inconsistent with Mogre et al. (2017).

The present study showed that less than one fifth of the studied nurses had good total knowledge level. While more than half of studied nurses had average total knowledge level regarding stunting. This finding disagreed with Dimo et al. (2022), who studied "Nursing practices associated with diagnosis of malnutrition in children under 5 years in West Rand District ,Gauteng, South Africa" (N= 36) who stated that less than three quarters (79%) of the studied nurses had adequate knowledge regarding stunting. But this finding agreed with Hammond (2014), who studied "Evaluating the knowledge, attitude and practice of Rural Guatemalan healthcare providers regarding chronic malnutrition in children" (N= 122) and reported that more than three quarters (78%) of the studied sample had inadequate knowledge regarding stunting. This might be due to limited health education regarding nutritional problems as stunting .

The present study showed that the majority of the studied nurses had satisfactory

total practices level and less than one fifth of them had unsatisfactory total practices level regarding stunting. These findings disagreed with **Dimo et al. (2022)**, (N=36) who reported that the most of the studied nurses (92.2%) had good practices regarding stunting. This might be due to long period of nursing experience and continues training session that the studied nurses received to improve occupational performance.

The current study showed that there were a highly statistically significant relations between studied nurses' total knowledge level and age, level of education, years of experience, residence and monthly income ($P \leq 0.001$). These findings agreed with **Zamir et al. (2021)**, who reported that there were statistically significant relations between studied nurses' total knowledge level and age, level of education, years of experience. These findings disagreed with **Mogre et al. (2017)**, who reported that there is no statistical significance differences between the studied nurses knowledge and their socio-demographic data. This might be due to the educational level and age is a main factor that detects the staff nurses ability to acquire knowledge.

The present study showed that there were highly statistically significant relations between studied nurses total practices level and their age (P - value ≤ 0.001). While there were a statistically significant relations between the studied nurses total practices level and, years of experience and residence (P -value ≤ 0.05). These findings agreed with **Dudala et al. (2021)**, who studied "Assessment of gaps of knowledge and practices of frontline community workers in Chandragiri Mandal, Chittoor district, Andhra Pradesh: maternal and child health services in

India" (N=31) who reported that there were a highly statistically significant relations between studied nurses total practices level and their age and years of experience. This might be due the age the nurses' ability to perform their duties perfectly and years of experience had a great impact on nurses practices.

The current study showed that there was a highly statistically significant relation between studied nurses total knowledge level and total practices level (P - value ≤ 0.001). This finding was confirmed with **Yalcin et al. (2013)**, who studied 'Nutrition knowledge level of nurses , Zonguldak , Turkey '(N=302) who reported that there were a highly statistically significant relation between studied nurses total knowledge level and total practices level. This finding agreed with **Ahmed (2018)**, who reported that the performance of the health care provider in maternal and child health centers were affected by their knowledge level. This might be due to the fact that the nurses practices are based on their knowledge, so the high level knowledge will be associated with competent practices.

Conclusion:

Less than one fifth of the studied nurses had good total knowledge level and more than half of them had average total knowledge level regarding stunting. While less than three quarters of the studied nurses had satisfactory total practices level, while less than one fifth of them had unsatisfactory total practices level regarding stunting. There were highly statistically significant relations between studied nurses' total knowledge level and age, level of education, years of experience, residence, and monthly income. Also, there were highly statistically significant relations between studied nurses

Awareness of Maternal and Child Health Centers Nurses regarding Stunting among Children under Five Years

total practices level and their age. There were statistically significant relations between the studied nurses' total practices level and years of experience and residence. There was a highly statistically significant relation between studied nurses' total knowledge level and total practices level.

Recommendations:

1. Providing health education program for maternal and child health center nurses to improve their knowledge regarding stunting.
2. Conducting regular and continuous training courses to improve MCH center nurses' practices regarding child follow up and stunting.
3. Performing continuous evaluation for MCH center nurses concerned with knowledge and practice about stunting.
4. Further studies in other maternal and child health centers about awareness of nurses regarding stunting should be conducted

References:

- Ahmed, W. (2018).** Nurses' Knowledge regarding Kwashiorkor at Al-Hassahisa pediatric Teaching Hospital, Gezira State, Sudan (2017), University of Gezira. knowledge level of nurses in Zonguldak in Turkey, Health science journal; 7(1): 99 .
- Abrão, S., Santos, F., Góis, S., and Oliveira, R. (2016).** Nursing education at the Brazilian new state era: the case of the medalha milagrosa school, texto & contexto-enfermagem; 25.
- Ali, A. (2021).** Current Status of Malnutrition and Stunting in Pakistani Children: What Needs to Be Done?, Journal of the American College of Nutrition; 40(2): 180-192.
- Amoako Johnson, F. (2022).** Spatiotemporal clustering and correlates of childhood stunting in Ghana: Analysis of the fixed and nonlinear associative effects of socio-demographic and socio-ecological factors. Plos one, 17(2), e0263726.
- Dimo, R., Madiba, T. and Bhayat, A. (2022).** Nursing practices associated with diagnosis of malnutrition in children under 5 years in West Rand District primary healthcare facilities: 1-5.
- Dudala, S., Ponna, S., Upadrasta, V., Bathina, H., Sadasivuni, R., Geddam, J., and Kapu, A. (2021):** Assessment of gaps of knowledge and practices of frontline community workers in Chandragiri Mandal, Chittoor district, Andhra Pradesh: maternal and child health services, International Journal of Community Medicine and Public 8(3): 1299.
- Hammond, J. (2014).** Evaluating the knowledge, attitude and practice of rural Guatemalan Healthcare Providers regarding chronic malnutrition in children. Emory University; 3(4): 1133
- Matema, R. (2021):** Predictors of Stunting in Children Under 5 Years of Age in Zimbabwe (Doctoral dissertation, Walden University); 5(1) 45
- Mogre, V., Yakubu, A., Fuseini, M., Amal, A., and Aguree, S. (2017):** Nurses' knowledge and attitudes regarding malnutrition in children and its management in Ghana. Curationis; 40(1): 1-8.
- Tohidi Noroodi, H., Mirhadyan, L., Mosaffa Khomami, H., & Kazemnezhad Leili, E. (2021).** Risk of Child Abuse and Its Predictors in Mothers with Children Under 5

Years Old. *Journal of Holistic Nursing And Midwifery*, 31(2), 104-113.

UNICEF. (2016). Egypt Nutritional Landscape Analysis Report 2012, Government of Egypt: Cairo, Egypt .

Vyas, S., Sonkar, S., Sharma, N., Srivastava, A. K., Sharma, P., & Srivastava, K. (2021). The role of familial characteristics on the nutritional status of preschool children: A comparative study on rural and urban children. *Journal of Public Health and Primary Care*, 2(1), 15

Yalcin, N., Cihan, A., Gundogdu, H., and Ocakci, A. (2013): Nutrition knowledge level of nurses in Zonguldak in Turkey, *health science journal*; 7(1): 99.

Yorick, R., Khudonazarov, F., Gall, A. J., Pedersen, K. F., & Wesson, J. (2021). Volunteer community health and agriculture

workers help reduce childhood malnutrition in Tajikistan. *Global Health: Science and Practice*, 9 (Supplement 1), S137-S150.

Yunitasari, E., Winasis, N., and Suarilah, I. (2020). The analysis of stunting event factors in children aged 24-59 months based on transcultural nursing. *EurAsian Journal of BioSciences*;14(2): 2715-2720.

Zamir, S., Sarwar, R., Ahmed, S., Ali, S., and Tariq, U. (2021). Stunting Amongst Pakistani Children Under Five: Status of Knowledge, Attitude and Practice of Health Care Workers at Basic Health Units and Rural Health Centers in Raiwind, Lahore. *Journal of Sheikh Zayed Medical College (JSZMC)*; 12(3): 27-22.

وعي ممرضات مراكز صحة الأم والطفل عن التقزم لدى الأطفال دون سن الخامسة

نشوى محمود احمد ابوطيور - دعاء محمد صبحى السيد - بسمة محمد عبد الرحمن

التقزم هو حالة من عدم القدرة على النمو عند الأطفال دون سن الخامسة بسبب سوء التغذية المزمن والتحفيز النفسي والاجتماعي والتعرض للعدوى المتكررة ، خاصة في الأيام الألف الأولى من الولادة. لذا كان الهدف من هذه الدراسة تقييم وعي ممرضات مراكز صحة الأم والطفل فيما يتعلق بالتقزم بين الأطفال دون سن الخامسة. و تم استخدام تصميم بحث وصفي في هذه الدراسة. وقد أجريت الدراسة في محافظة القليوبية التي تضم 11 إدارة صحية ، 25% منها اختيرت عشوائياً ، وشملت 3 إدارات هي: إدارة بنها وإدارة كفر شكر وإدارة طوخ. تم أخذ أحد مراكز صحة الأم والطفل بشكل عشوائي من كل إدارة تضمنت المركز الطبي العام لصحة الأم والطفل في بنها ومركز كفر شكر لصحة الأم والطفل ومركز العمار لصحة الأم والطفل على عينة ملائمة من 118 ممرضة كانوا يعملون في البيئات المذكورة سابقاً. حيث كشفت النتائج بوجود علاقة ذات دلالة إحصائية عالية بين مستوى المعرفة الكلية للممرضات ومستوى الممارسات الكلية. واوصت الدراسة بتنفيذ برنامج التثقيف الصحي لتحسين معرفة الممرضات والممارسات المتعلقة بالتقزم لدى الأطفال دون سن الخامسة.