

Mothers' Awareness toward Chickenpox Disease for Preschool Children at Nursery School in Benha City

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Abstract: The purpose of this study was to assess mothers' awareness toward chickenpox disease for preschool children. Research design: A descriptive research design was utilized in this study. Setting: This study was conducted in Revolution Nursery School, Omar Ben Abdul-Aziz Nursery School, Amr Ben El-Aas Nursery School. The sample: A convenient sample included 126 mothers and their preschool children, who were attending at the previously mentioned setting. Two instruments were used A structured interviewing questionnaire sheet for mothers awareness and Observational checklist to assess Nursery School Environment. Results of the study revealed that 64.3% of mothers of preschool child had average total knowledge score about chickenpox disease and 73.8% of mothers of preschool child had satisfactory total practice scores. Conclusion: The study conclude that three fifths of mothers of preschool child had average total knowledge score about chickenpox disease. Less than three quarters of mothers of preschool child had satisfactory total practice scores. Recommendations: Educational guidelines about management of chickenpox should be distributed between mothers of children. Further studies need to focus on improving knowledge and practices of mothers of child with chickenpox disease.

Key words: *Chickenpox, Awareness, Preschool children, Nursery School.*

Introduction

Preschool child is a child between 3 and 6 years of age, This child is able to establish relationships outside the narrow circle of the family and able to acquire independent behavioral and learn how to live with the psychological and social characteristics had acquired from family education. Preschool child has a physical, cognitive and emotional development different from of other developmental stages(**IbnKhalidun,2015**). Chickenpox represents the primary form of Varicella-Zoster Virus (VZV) infection and appears most commonly in

preschool. Chickenpox is a febrile rash illness characterized by pruritic itchy rash, typically consisting of 250 to 500 lesions, and eventually into dried crusts over 5–6 days, and covered parts of the body, with the highest concentration on the trunk, can also occur on mucosal surfaces, such as the mouth and the throat. Prodromal symptoms, such as low-grade fever, malaise. The disease is usually milder among children, and immunity following chickenpox infection is considered to be long-lasting. (American Academy of Pediatrics, 2015).

Central of Disease Control and Prevention (CDC) reported about 4 million child ages 5 to 9 years got chickenpox, over 10,000 were hospitalized, and 100 to 150 died each year. Abo-El majed and Ministry of Health (2016) reported that 4876 of children were infected with chickenpox in Egypt (**Central for Disease Control and prevention (CDC), 2012**).

Varicella Vaccine is the best means for prevention of chickenpox, which its effective rate reaches to 99% for prevention of the disease. Varicella vaccine gives to children at age of 12-15 months, with booster dose at age 4-5 years. If child vaccinated and still get chickenpox symptoms are often mild, with fewer blister, and mild fevers (**National Center for Immunization & Respiratory Diseases, 2017**).

Nursery School is a school for children usually under six years old who are too young for kindergarten with the characteristics of social, physical, emotional and mental development to this stage. Nursery school is very important in child's life, not only because reduce the burdens or be asolution while mothers at work, but also in child reintegration which is consider as the first test in the face of life and dealing with people alone (**Stephens, 2013**).

The Community Health Nurse (CHN) play key role in disease and injury prevention, disability alleviation and health promotion, as well as managing and providing care and follow-up across a broad range of settings. The CHN promotes and protects the health through combination of knowledge derived from nursing, social and public health. The CHN play important role in prevention spread of chickenpox disease through assess mothers knowledge and practices (**Dohrn, 2017**).

Purpose of the study:

The purpose of the study is to assess mothers' awareness toward chickenpox disease for preschool children at nursery school through:-

- 1) Assessing mothers' knowledge and practices toward chickenpox disease.
- 2) Developing guidelines instructions to mothers regarding awareness of chickenpox disease .

Research questions

- 1) Is there a relationship between socio demographic characteristics of mothers and their knowledge about chickenpox disease?
- 2) Is there a relationship between knowledge of mothers and their practices about chickenpox disease?
- 3) What is the awareness of mothers toward chickenpox disease for preschool children at nursery school?

Methods:-

Research design

A descriptive research design was used in carrying out this study.

Setting

The study was conducted in 20% of all Nursery School in Benha City which included 3 Nursery Schools from 15 Nursery Schools and by using simple randam method; three Nursery School selected which namely Revolution Nursery School, Omar Ben Abdul-Aziz Nursery School and Amr Ibn El-Aas Nursery School.

Sampling

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A convenient sample included 126 mothers and their preschool child at Nursery School in Benha City with the following criteria, mother accepted to be involved in the study which take two months.

Instruments of data collection:- Two instruments were used in the study

Instrument one: - A structured questionnaire sheet:-

It was developed by the researcher, based on reviewing related literature, It was written in a simple Arabic language; it contained four parts to assess the following:

Part I: Socio-demographic

characteristic of the studied mothers and their preschool children, this part included two items:

- A. Socio-demographic characteristic for the studied mothers. It consists of 8 items closed ended questions (Question No. 1-7) such as age, education, job, place of residence, social status, family numbers, family income, and source of mother's information about chickenpox.
- B. Child characteristic data consist of 3 items (Question No. 8-10) such as age, sex, and ranking of child.

Part 2:- Medical history for child as

stated by the mothers. It included:

The past medical history for child as past disease child exposed, previous exposure to chickenpox, previous surgery exposed, previous accidents and injuries and all available vaccination.

The present medical history for child as foods caused allergies to child, chronic disease child suffering, and child follow up to doctor and family history with disease.

Part 3:- Mothers knowledge regarding chickenpox disease.

It was included 10 questions (Question No. 21-30). These questions covered areas such as, definition, mode of transmission, signs and symptoms, complications, prevention of chickenpox, treatment, foods and drinks for infected child, procedure of mothers to help infected child and mother's procedure with infected child with chickenpox disease (Reliability= 0.085).

Scoring system for each item:

Compleat	2
Incomplet	1
Wrong	0

Total scoring system.

Good	> 75%
Average	> 50-75%
Poor	< 50%

Part 4:- Reported practices of studied mother.

Mothers' nutritional practice and food cleaning include 12 items as giving child vegetables and fruits, give child foods rich with protein, give child foods rich with calcium, prevent child from eat foods with industrial colors, wash hands before preparing food, wash fruits and vegetables before giving to child, interested in preparing food in home, good cooking for food, good storing for foods and interested in drinking child clean water . Mother's practices for house and environment cleaning include 8 items as used antiseptic to clean home bathroom and places of animals, collect garbage in container, spoiling house and exposed covering to sun, used one shoes in entering bathrooms for all family members throw unclean water outside house, prevent family members from spitting ground and closes all holes from which insects enters. Mother and child personal hygiene include 9 items as exposed cloths to sun, wash affected cloths separated, take care of child

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showery, exposed clothes to sun, child wash teeth with brush and paste, exposed clothes of infected child to sun, child wash hands before and after eating and toilet, child walk barefoot in house and wear shoes outside house. Mothers provide treatment to child include 5 items as give treatment regular to child, give double dose when mother forget, give child right dose of treatment, observe effect and side effect of treatment.

Done	1
Not done	0

The scoring system for each item:

Satisfactory	> 60%
Unsatisfactory	< 60%

Total scoring system.

Instrument two:- Observational checklist to assess Nursery School Environment, It included 12 items such as site, lighting, ventilation, source of water, sewage, garbage collection, secure electricity, fire and window, rooms number in Nursery School, number of children in each room and bathrooms of nursery school

Sanitary	1
Unsanitary	0

The scoring system for each item:-

Data collection instruments were revised by five expertise (2 professors in Community Health Nursing and 2 professors in Pediatrics Nursing and one professor in Pediatric Medicine).

Results:

Table 1: Frequency distribution of the studied mothers regarding socio-demographic characteristic (No.=126)

Certain modifications were done by removing unnecessary details.

Pilot study:-

The pilot study was carried out in 10% of the study sample 14 mother and their preschool children were excluded from the study sample due to modifications in tools. The pilot study was done to assess feasibility; clarity and time needed to fill each sheet, Each mother sheet lasted about 30-45 minutes to be fill data collection sheet.

Ethical considerations:-

All ethical consideration was issued; the purpose of the study was explained for each participant, They were also reassured that all information gathered would be in confidential manner and used only for the purpose of the study. The mother's right to withdraw at any time without giving any reasons.

Statistical design:

Computerized data entry and statistical analysis were fulfilling scored using Statistical Package for Social Science (SPSS). Descriptive statistic was done (frequency, percentage) then other statistical tests such as, Chi-square and using mean and standard deviation.

The correlation – coefficient was used (r)

Statistical significance difference was considered if:-

$p < 0.05$. A highly statistical significance difference was considered if $p < 0.001$

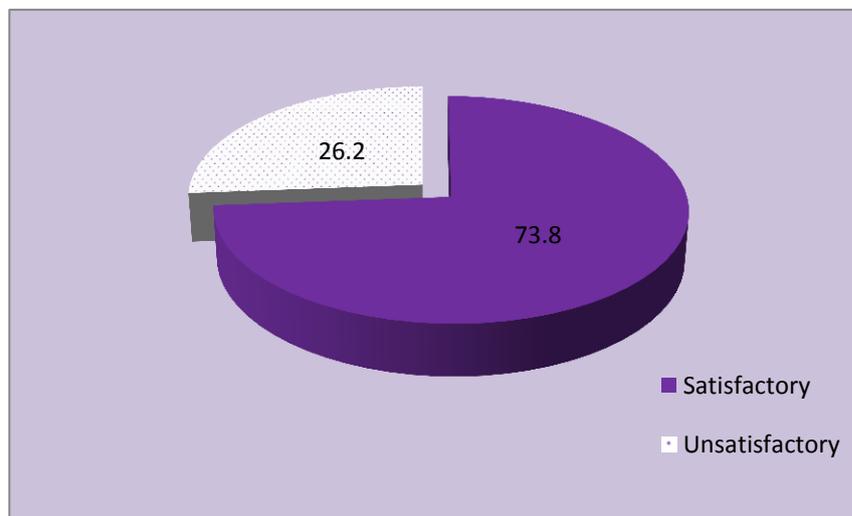
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Items	No.	%
Mother age		
20 -	53	42.1
30 -	57	45.2
40 +	16	12.7
X ±SD		30.52±5.77
Mother's education		
Illiterate		
Read and write	6	4.8
Primal education	2	1.6
Intermediate education	33	26.1
High education	85	67.5
Occupation		
Governmental work	89	70.6
Private work	6	4.8
Free work	3	2.4
House wife	28	22.2
Social status		
Married	119	94.4
Divorced	6	4.8
Widowed	1	.8

Shows that 45.2% of mother's ranged from 30 to less than 40 years with X±SD 30.52±5.77, 67.5% had high education,

70.6% of them have governmental work, while 94.4% of them were married.

Figure 1: - Frequency distribution of total knowledge score of the studied mothers regarding chickenpox disease..

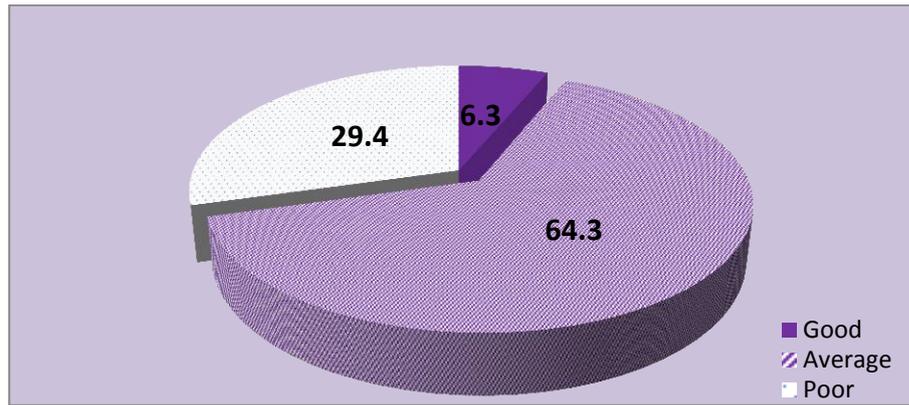


Reveals that 64.3% of the studied mothers had average total knowledge score about chickenpox disease, while 29.4% of them

had poor total knowledge score about chickenpox disease and 6.3% of them had good total knowledge score.

Figure 2 : - Frequency distribution of total practices score of the studied mothers regarding dealing with their preschool children.

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Shows that, 73.8% of the studied mothers had satisfactory total practices regarding dealing with their preschool children,

while 26.2% of them had unsatisfactory total practices regarding dealing with their preschool children.

Table2:-Social characteristics of mothers having different level of education

Socio-demographic Characteristic	Total Knowledge Score						Chi-square	
	Average		Poor		Good		X ²	p-value
Mother age	No.	%	No.	%	No.	%		
20 -	31	38.3	18	48.6	4	50.0	1.86	0.76
30 -	38	46.9	16	43.2	3	37.5		
40 +	12	14.8	3	8.1	1	12.5		
Mother education								
Illiterate	6	7.4	0	0.0	0	0.0	5.94	0.43
Primary education	2	2.5	0	0.0	0	0.0		
Intermediate education	22	27.2	10	27.0	1	12.5		
High education	51	63.0	27	73.0	7	87.5		
Mother's occupation								
Governmental work	53	65.4	30	81.1	6	75.0	4.77	0.57
Private work	4	4.9	2	5.4	0	0.0		
Free work	3	3.7	0	0.0	0	0.0		
House wife	21	25.9	5	13.5	2	25.0		
Place residence								
Rural	8	9.9	2	5.4	2	25.0	2.96	0.22
Urban	73	90.1	35	94.6	6	75.0		
Social status								
Married	76	93.8	35	94.6	8	100.0	3.48	0.48
Divorced	5	6.2	1	2.7	0	0.0		
Widowed	0	0.0	1	2.7	0	0.0		
Family income								
Enough	64	79.0	28	75.7	5	62.5	5.96	0.20
Enough and save	6	7.4	1	2.7	2	25.0		
Not enough	11	13.6	8	21.6	1	12.5		

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Table 2:- Reveals that there was non-statistically significant difference between

social characteristics of mothers having different levels of knowledge ($p > 0.05$).

Table 3:- Correlation between total knowledge score and total practices score

Total Practices Score	Total Knowledge Score	
	P	r
	0.000	0.41

Illustrates that there was a positive correlation between total knowledge score and total practices score ($p < 0.01$).

Procedure:-

- 1) An official letter was sent from Dean of Faculty of Nursing, Benha University to ask for permission for conduction of this study from Directors of Nursery Schools.
- 2) Aim and importance was clarified to mothers to gain their support and cooperation. The researcher explained the study purpose to each mother.
- 3) Data were collected from the study sample starting from the beginning of March 2017 to the end of May 2017. The researcher visited the selected Nursery Schools from 7am to 9 am and from 1 pm to 3 pm, three day/week (Sunday, Monday, and Thursday) to collect mother's data.
- 4) An assessment for nursery schools selected for its seats, light, ventilation, source of water drinking, number of rooms and bathroom and number of children in each room was done.

Discussion

Chickenpox is a common childhood infection caused by the varicella-zoster virus. Chickenpox is very dangerous for children with immune system problems like leukemia, or for child taking medications that weaken the immune system. Chickenpox begins with a fever, aches and pains, and within 1 or 2 days child get a rash. The rash is usually itchy and can make child uncomfortable. Most preschool children lose appetite and have a headache during the first few days.

Chickenpox may result in complications include encephalitis, pneumonia, bronchitis, Mollaret's meningitis, and inflammation of arteries in the brain leading to stroke (Nordqvist, 2017).

This study was aimed to assess mothers' awareness toward chickenpox disease for preschool children at Nursery School. This aim was achieved through, assessing mothers' knowledge and practices toward chickenpox disease and developing guideline instructions to mothers regarding awareness of chickenpox disease.

Concerning to total knowledge scores, the result revealed that three fifths of studied mothers had average total knowledge score regarding chickenpox disease, while slightly more than tenth had good knowledge score. This finding was disagreement with Wilson et al. (2015), who reported that 80% of parents of children had poor knowledge. It may be due to about two third of the studied mothers had high education and two fifths of them had information from family and neighbors.

According to the studied mother's total practices score, the present study revealed that less than three quarters of studied mothers had satisfactory total practice score, while one quarter had unsatisfactory total practices score regarding their preschool children. This finding was disagreement with study about "Knowledge and practices regarding dealing with chickenpox" conducted in Singapore by Weisheng (2012), who

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reported that 75% of parents had been difficult to dealing with their children with chickenpox disease. This may be due to most of mothers had high education and lived in urban areas.

Also the present study relieved that more than three quarter of the studied mothers in the age group of 30 years, had high education, had governmental work, married, lived in urban, and family enough were having average knowledge with non-statistical significant relation, while less than quarter of those mothers were have good knowledge with non-statistical significant relation. This result was not supported by study about "Knowledge, attitude and practice of mothers regarding varicella vaccination among the children under the age of five years" conducted in Lahore by Samina (2015), who reported that 80% Of uneducated mothers had good knowledge about chickenpox and its vaccination. This could be attributed to the effect of health education for chickenpox in Egypt.

Further more the results revealed that there were positive correlation between total knowledge scores of the studied mothers and their total practices. This finding was in agreement with Wilson et al. (2015), who reported that 80% of mothers had poor knowledge and good practices regarding chickenpox. This finding may be due to high practices level by mothers effect on health status of their preschool child.

Conclusion

Nearly three fifths of the studied mothers had average total knowledge score regarding chickenpox disease, while slightly more than tenth had good knowledge score. Less than three quarters of the studied mothers had satisfactory total practice scores, while one quarter had unsatisfactory total practices score regarding their preschool children. There were no statistically significant relations between socio-demographic characteristics of mothers of preschool child and total

knowledge score. Also the results showed that; there were positive correlation between total knowledge scores of the studied mothers and their total practices, while there was no statistically significant relation between total knowledge scores of the studied mothers and their total practices.

Recommendation

- 1) Environment of nursery school should be suitable and safe for preschool children.
- 2) Educational guidelines about management of chickenpox should be distributed between mothers of children.
- 3) Further studies need to focus on improving knowledge and practices of mothers of child with chickenpox disease.

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