Health Practices of Teenage Mothers Regarding Health Care of Their Infants

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Abstract

Background: The care the infant receives depends a lot on the knowledge, skills of the mother. The teenage mothers are supposed to be lacking in knowledge, practices of infant care need to promote their knowledge and practice for their infants. Aim: The aim of this study was to assess teenage mothers health practices regarding the health care of their infants. Design: A descriptive study was used. Setting: the study was conducted in:-MCH centers(Health Center El Azab) located in Cairo governate. The study sample: A purpose sample of 124 teenage mothers and infants were selected randomly by specific criteria. Tools: three tools were used for data collection: the first tool was an interviewing questionnaire, which consists of three parts includes socio-demographic data of teenage mothers and the characteristics of infants, second part included questions about teenage mothers' knowledge about their health care infant(feeding, vaccination, weaning, sleeping, bathing,), third part includes questions about Infant medical history, second tool includes a checklist of teenage mothers practices related to the care of their infants(breastfeeding, measuring auxiliary temperature, infant bath,), and third tool include infant physical assessment Result: The main result of study revealed that more than half of teenage mothers had poor knowledge and less than two third of them poor practices toward their infant care. There were statistically significant teenage mothers' knowledge and teenage mothers' practice regarding their infants care p=0.93** As well as between teenage mothers' practice towards their infants care and infants' health problems p=0.94** Conclusion: That most of teenage mothers had inadequate knowledge and poor practice regarding the care of their infants. Recommendation: The results of this study stresses on the need for a health education programs for teenage mothers who should be informed about all aspects of infants care and the study suggests that health educational programs should focus on teenage mothers in antenatal clinics, antenatal counseling, post natal classes, mass media companies for raising the awareness of teenage mothers and correct their knowledge and their practice toward infants' care.

Keywords: Health Practices, Teenage Mothers, Infants.

Introduction

A teenage mother is an adolescent or teenage female who age ranges between 13-19 years with a live baby. Teenage mothers are concern for public health globally, and the occurrence of teenage pregnancy and birth is a problem in many countries (Barnet et al., 2015).

Teenage motherhood is a global phenomenon affecting both developed and developing countries and constrains girls and young women become pregnant and become teen parents at births to teens ages 15-19. Teenage mothers had difficulty in taking care of their children. These

difficulties contribute to inadequate parent-child interactions and diminished infant development (Stapleton, 2018).

Teenage mothers are not ready to deal with motherhood. Teenage mothers want specific needs to know regarding the care of their infants and how to become an effective parent. Teenage mothers must devote their entire time and effort to infant care, which includes feeding, physical care, mental development, and protection from hazards (Hockenberry & Wilson, 2015).

EDHS, **(2016)** reported that annually 20 million infants are born to women under age 20 worldwide, more than 90% in developing countries. In Egypt, according to Egypt Demographic health survey (2016) (EDHS), there are 13.971.100 teenager aged 15-20 years in relation to the total number of population 84.065.000 most mortality, in adulthood has its roots in teenager period. In Egypt, approximately 10% of women marry before the age of 20 years.

Infancy is characterized by the need to establish harmony between the self and the world. This harmony is achieved through satisfying the helpless infant's need such as food, warmth, comfort, oral satisfaction, environmental stimulation and chances to explore and express self. These challenges make infancy an exciting yet demanding period for infant and parents, so that, infants are the most vulnerable and high-risk group who need special health care especially at home (James et al., 2017).

An infant health depends upon factors includes the teenage mother's practice about their health care needs, the infant environment after birth, and availability of essential services such as physical examination and receiving appropriate immunization. It also depends on proper nutrition and other nurturing care (James and Rebort, 2016).

Improved infant's care substantially improves survival. Evidence suggests that essential infant care practices, for example, feeding, hygiene, and recognition of danger signs and illness are clearly associated with major causes of infant mortality. So, improved care practices for infant, postnatal contact with health providers and increased to care seeking for illness has demonstrated a significant reduction in infant mortality (Jokhio et al., 2016).

Community health nurses can play a unique role in helping teenage mothers learn about their infant's care and providing interventions. Nurses must work to understand the infant's practices better, so they can help mothers interact with their infants. Teenage mothers' confidence is often lacking and the educational program is therefore particularly important in providing information to enhance

the mother knowledge and practices and health promotion to emphasize the community-based practice of health promotion, community participation, and health promotion practice base on social and health policies and implement health promotion in nursing (Allender & Spradlelg, 2017).

Significance of the Study

In Egypt early marriage is one that takes place a child has reached the age of 18-20 years. In Egypt, especially Upper Egypt; are often married, and their pregnancies welcomed by family and society. Children of teenage mothers who childbearing before age 20(Abalkhail, 2014). Found that, annually, 13 million children are born to women aged under 20 worldwide, more than 90% in developing countries (UNICEF, 2015).

Aim of study:

The aim of study was to assess health practices of teenage mothers regarding health Care of Their Infants.

Subjects and Methods Research questions:

1- Is there relation between the teenage mother's knowledge and their practice regarding their infants care?

2-Is there relation between the teenage mother's practices and health problems of their infants?

Research Design:

A descriptive study was adopted in the study.

Sampling:

The study sample was selected purposive sample from MCH center.

Setting: This study was conducted in:-Maternal and Child Health Centers ((Health Center El-Azab at El-Sharabia) located in Cairo governorate, where it's more randomly place, because there is a high density of attendance and also serves the mothers with low-socioeconomic status.

Subjects: The sample composed of one hundred and twenty-four (124) teenage mothers and their infants in MCH center to receive BCG

vaccine, DPT, poliomyelitis vaccine, hepatitis B vaccine, and measles vaccine regularly during 3 days/ week. The mothers' age ranged from $16 \le 20$ years with a mean age. The size of the study samples is 124 teenage mother selected randomly from permission MCH, where the number of teenage mothers in the previous year was about 1,240 in the year 2016 and 10% of total mothers will be selected in the study.

Tools of data collection: The following three tools were be used for data collection from

First tool: **consisted from three parts as following:**

A interviewing Questionnaire It was written in the simple Arabic language by investigator after reviewing related literature and guided by the supervisors to assess teenage mothers health practices related to health care of their infants and included the following parts.

Part I: To assess the socio-demographic characteristics of the teenage mothers, their fathers as regards mothers', fathers' age, occupation, their educational level, and their infants as Regards age of the infant, gender, and infant rank.

Part II: Assessment of teenage mother's knowledge by using close and open-ended question designed by the investigator based on reviewing the relevant literature and guided by the supervisors, this tool includes questions (1- 50) about the breastfeeding, Artificial feeding, vaccinations, weaning, hygiene, sleeping pattern and accidents and diseases happen.

Knowledge scoring system:

Teenage mothers were adapted from the questionnaire sheet answer was predetermined according to the literature review. Each question was allotted two points to correct answer; if the answer is incomplete, it received one point, no points to the wrong answer. The total knowledge score of the questionnaire responses was two score levels were made accordingly.

- •Less than 50% considered poor
- From 50-65% considered average
- More than 65% considered good

The total score of knowledge test expressed as follow:

 \geq 60 % considered satisfactory level of knowledge.

< 60 % considered unsatisfactory level of knowledge

Part III: Infant medical history

It was the review of the infant medical record to collect vital signs, laboratory investigation (Hemoglobin ratio) and the infant exposed to accidents and health problems. Medical records include questions (1-5) about anormal vital signs as regards temperature, pulse, respiration, according to Akre et al (2017), it was adapted by investigator to assess health infant condition of the infant medical record b-Hemoglobin ratio which was measured in standardized methods, the infant exposed to home accidents, type of accidents and health problems, and the investigator followed the itemized assessment of the total infant health condition stated in infant medical history in MCH Centers.

Second Tool: Observational checklist. For assessment of teenage mother practices about the care of their infant. A check list sheet used by El Sharkawi et al. (2015), it was modified by the investigator to assess teenage mother's practices related to infant's care. a-Breastfeeding checklist contains 12items (breast care before and breastfeeding, the technique of breastfeeding, put the infant after feeding), b- Artificial feeding checklist contains 13 items (the care of instrument, the technique of bottle feeding). cinfant's bath contain 14items, dmeasuring auxiliary temperature checklist contains11 items e- diaper care checklist contains 8 items Scoring system for observational check list:

- Zero =not done.
- (1) = done incorrect
- (2) = done correctly

Each checklist is considered satisfactory if the total score (\geq 60%) and unsatisfactory if the total score (< 60%) as follows.

Third Tool: **Physical assessment sheet** including questions (1-13). It was adapted for **Ricci and Kyle (2016),** to assess infant growth rates from the medical record as regards to assess infant weight, height, head and chest circumference which were measured in standardized methods. The investigator observed general condition as regards the eye, ear, nose, mouth, skin, extremities, body movement and followed the itemized assessment of the total infant health condition stated in the health condition sheet in MCH Centers.

Ethical consideration

Each study subject was informed that, nature of the study will be harmless, all data will be confidential and will be used only for research purpose and each study subject is free to withdraw at any time throughout the study subject will be informed about nature process of expected out come of the study.

Operational design:

The study, to be completed has passed through different phases as follows. The preparatory phase, then the pilot study phase and lastly the field work phase.

- 1)Preparatory phase: This phase included the following; Reviewing the available literature and different studies related to research problem, and theoretical knowledge of its various aspects of the study, using textbooks, evidence-based articles, internet periodicals and magazines in order to collect tools of this study.
- 2) A pilot study: was carried out on 10% (12) teenage mothers with their infants of the studied subjects, who were included in the main study. The pilot study was done to test the applicability of the tools (the interviewing Questionnaire and check list sheet). It was applied randomly on ten teenage mothers with their infants in MCH centers. The results of the data obtained from the pilot study helped in modifications of the tools. Then items were corrected or added as needed and necessary changes were introduced as revealed from the pilot study. The tools were revised, redesigned and rewritten. Teenage mother excluded in pilot study was included in the sample.

3) field work: The purpose of the study was explained by the investigator to all teenage mothers included in the study before starting the interview questionnaire.

Questionnaire schedules were completed by investigator herself and the average time needed for the completion of each form was around(45 minutes and the stress tool 10 minutes) The check list sheet was checked by the investigator as reported from the teenage mothers practice toward their infants' care at MCH centers.

This phase aimed to identify the teenage mothers learning needs, toward health care of their infants. This was done after agreement of teenage mother. Data were collected over 9 month period from November 2017 to last July 2018, this period contained one month vacation, the field work has been performed in the following sequence: the investigator visited the select MCH centers from 9.00 a.m. to 1.00p.m. For 3 days per week.

During the preparatory phase, a formal letters were issued from the faculty of Nursing; Ain Shams University to the head of MCH approved it. Reviewing of relevant literature and getting expert's opinions were helpful to assist in designing and processing of the data collection instruments. Structure questionnaire took about 45 minutes, to be filled while the physical assessment for infant was accomplished with in 45 minutes. The teenage mothers were briefed about study, encouraged to participate and motivated to complete a structure questionnaire. All questionnaires were closed-ended some with yes/no response and some with 4 or 5 possible responses.

The work started by MCH Centers in Cairo Governorate. Assessment and data collection phase started by the investigator introducing herself, to the teenage mothers and showing faculty of Nursing, Ain Shams University official letters issued for the health center. Then, the investigator gave them a brief idea about the study and its aim. Data was collected using the constructed tools. Any clarifications needed for teenage mothers were done by the investigator. Take into consideration using simple and clear Arabic language. Its aim was to assess health needs and problems of teenage mothers regarding health care of their Infants through assessing knowledge their about breastfeeding, Artificial feeding, vaccinations, weaning, hygiene, sleeping pattern and accidents and diseases happen.

Administrative Design: Approval to carry out this study was granted from the Dean of Faculty of Nursing, Ain Shams University, and Head of MCH approved it. The researcher was visited the setting and done interview with the teenage mothers to explain the objectives and the nature of the study and then carry out the study with minimum resistance.

Statistical analysis:

The collected data organized, coded, computerized, tabulated, and analyzed by using

the statistical package for social science (SPSS), version (20). Data analysis accomplished by the use of the numbers, percentages distribution, mean, standard deviation, correlation, paired t-test, and multiple linear regression analyses used to test the significance of some variances.

Significance of the results

No statistical significance difference is considered at P > 0.05

Statistical significance difference is considered at P < 0.05

High statistical significance difference is considered at P < 0.01

Results

Table (1): Frequency and percentage distribution of teenage mothers according to sociodemographic characteristic (n = 124).

Item	No	%
Age of mother		
< 16	18	14.5
16< 18	45	36.3
18 ≤20	61	49.2
\overline{X} ±SD	17.8±1.3	
Mothers' education		
Cannot read and write	48	38.7
Reading and writing	45	36.3
Secondary school	31	25.0
Mothers' job		
Worker	48	38.7
Housewife	76	61.3
Age of the infant's father		
Below 20 years	44	44
20-30 years	54	54
35 years and above	26	26
\overline{X} ±SD	26.0±7.7	
Fathers' education		
Cannot read and write	46	37.1
Reading and writing	43	34.7
Secondary school	23	18.5
High level	12	9.7
Father s' job		
Worker	57	46.0
Employee	49	39.5
Family income/month		
<500 EP	18	14.5
500<1000 EP	23	18.5
>1000 EP	33	26.6

Table (1) shows that the teenage mother's mean age were 17.8 ± 1.3 . Regarding educational level, 38.7% cannot read and write. As regards teenage mothers' job, 61.3% were housewives. Also, this table shows that the mean age of fathers was 26.0 ± 7.7 . Regarding the educational level of the father, 37.1% cannot read and

write. As regards fathers' job, 46.0% were the worker. Concerning family income of teenage mothers, 26.6% had >1000 EP /month.

Table (2): Frequency and percentage distribution of the infants according to their personal characteristic (n = 124).

Item	N	%
Age of infants	·	
< 4 months	23	18.5
4 < 6 months	44	35.5
6 -18 months	57	46.0
$\overline{X} \pm SD$	7.9	±3.9
Sex of infant		
Males	56	45.2
Females	68	54.8
Infant rank		
1 st	43	34.7
2 nd	65	52.4
3^{rd}	16	12.9

Table (2): reports that the infants of the teenage mothers ranged from < 4-18 months with the mean age were 7.9 \pm 3.9. Regarding infants' gender, the table shows that 54.8% of them were females. As regards infants order, 52.4% were the second infant.

Table (3): Frequency and percentage distribution of infants according to their vital signs and investigation from medical record (n = 124).

Item	N	%
Vital signs :		
Temperature		
Normal	111	89.5
High	13	10.5
Pulse		
regular	121	97.6
Irregular	3	2.4
Respiration		
Normal	120	96.8
High	3	2.4
Low	1	0.8
Investigation:		
Hemoglobin level		
Normal	108	87.1
Abnormal	16	12.9

Table (3): presents that the infants of the teenage mothers had high 10.5% temperature 2.4% had an irregular pulse and high respiration. Regarding the investigation as hemoglobin level as doctor order; hemoglobin level was decreased at 12.9% of them.

Figure (1): Percentage distribution of teenage mother's total knowledge about care of their infants (n= 124).

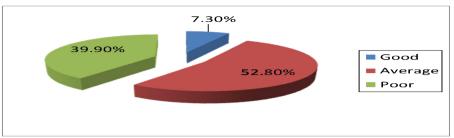
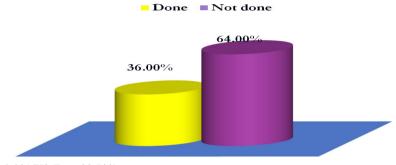


Figure (1) illustrates that more than half of teenage mothers' knowledge (52.8%) are scored poor as regards the total knowledge about care of their infants while those scored average and good are (39.9%) and (7..3%) respectively.

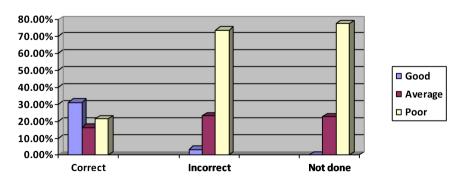
Figure (2): Percentage distribution of teenage mothers according to their total level of practices toward infant care ((n=124).



*High significant <0.001(X2-Test=32.7**)

Figure (2) shows that less than two third of teenage mothers' practices (64.0%) were not done, while more one third of them (36.0%) can done the practice acceptable.

Figure (3): Correlation between teenage mothers' total knowledge and their total practice regard care of their infants (n=124).



*High significant < 0.001

Figure (3) demonstrates that there was a highly statistically significant positive correlation between teenage mothers' knowledge and their practices regarding their infant care. p=0.93**

Discussion

Teenage mothers need extra guidance, education, and support, as well as acceptance and reassurance. Teenage mother specific need and want to know regarding how to care for their infant and how to become an effective parent and addition the educational program is therefore particularly important in providing information to enhance the mother knowledge and practices and health promotion to modify practices increase skills change attitudes, increase knowledge and health care practices (Mercer, 2017).

Infant health depends upon various factors, including infant care practices such as feeding, personal hygiene (eye care, bathing, and diaper care), immunization, safety promotion recognition of danger signs and illness which are clearly associated with major mortality. Proper maternal-infant care practices during the first year of life are very important for proper growth and development, maintain a healthy life for infant's and decrease the liability of morbidity and mortality(Kahreman et al, 2017).

Community health nurses play important roles in promoting and maintaining the health of teenage mothers and their infants through understanding the local knowledge and care practices related infancy period is very important to improve their interventions of infants' health promotion and maintenance proper infant care with the aim of reducing infant morbidity and mortality(Janice& Carolina, 2018).

This study aimed to Assess health practices of teenage mothers regarding the health care of their infants The present study findings revealed that the teenage mother's knowledge and practices care of their infants were statistically significantly developed.

The discussion will proceed to cover the following: **Study-Questions:**

1- Is there relation between the teenage mother's knowledge and their practice regarding their infants care?

2-Is there relation between the teenage mother's practices and health problems of their infants?

The results of this study discussed within the frame of the references that study the assessing health practices of teenage mothers regarding the health care of their infants. The present study showed that the mean age was 17.8±1.3 ranged from sixteen to nineteen years old (table1). This result was in the same line with a study conducted by **Gibbs et al (2015)**, on "The impact of early age at first childbirth on maternal and infant health" who stated that the teenage mothers are defined as a teenage woman, usually within the ages of 13-19, becoming pregnant.

According to the characteristics of infants, the present study revealed that more than half of infants were females and the mean age was 7.9±3.9(table 2). The same conclusion was supported by **Kennell and Klaus(2017)**,who stated in the study "Effect of an Educational Program about Newborn Care on Practice and Confidence of Pregnant Teen Mothers in Mansoura" that infant sex has no effect on aging. As regards the characteristics of teenage mothers.

As regards the teenage mothers' knowledge about the care of their infants. The current study showed that nearly half of teenage mothers had poor knowledge. While more than third of them had average knowledge and less than one quarter of teenage mothers had good knowledge (fig1). In accordance with **Hildebrand (2017)** stated that factors influencing the etiology of teenage mother's knowledge deficit includes anxiety, lack of interest or motivation and cultural language differences that interfere with the use of learning resources. So, subjective and objective assessment of teenage mothers and accurate use of the etiology knowledge deficit are important.

Regarding teenage mothers' practice to their infants care. The present study revealed that more than half of teenage mothers not done the care of their infants and only few of them had done it correctly (fig 2). Lancaster (2015) mentioned that nurses should be prepared to instruct, reassure and support parents regarding infant's care practices as cleaning, sleeping, diapering, calming and feeding

methods including appropriate techniques, care of breast, length of feeding. In addition assess the teenage mothers feeling about nursing her infant providing support and encouragement.

Regarding to the relation between teenage mother's knowledge and practices about the care of their infant. The result of present study clarified that there were a highly significant difference between teenage mother's knowledge and practices regarding care of their infant. This can be explained since teenage mother having infants are needed to learn more about the care of their infant.

On investigating relation between teenage mothers' age and their knowledge and practice. Findings, of the present study indicated that there was a highly statistical significant

The present study revealed that there was a highly statistical significant difference between teenage mothers' level of education and their knowledge and practice. This result in agreement with (WHO, 2017) who reported that teenage mothers' education was found to infant morbidity and mortality to a large extent where significant excess risks were observed as teenage mothers' education decreased, better education means usually better occupation, higher income, more health and nutritional consciousness and getting better help not only during pregnancy but throughout the teenage mother's life, this will reflect it self by better reproductive capacity and more mature healthy babies.

Health education which means persuading teenage mothers to feed, cloth and care for their infant better in difference. The teenage mother is almost never psychologically prepared parenthood, the social and economic systems of communities make teenage parenthood difficult, have little experience and awareness, low income, lost educational opportunities and little infant care assistance are realities and even greater risks for baby. The finding was agreement with the study of Heinig et al (2010) who reported that the young mothers had poor or incorrect knowledge and practice about infant care they didn't learn how to care their infants and teenage mothers were lacking the experience toward this age. their homes, can be carried out not only if local customs, both good and bad are known. In fact health education consists of trying to discourage or modify bad customs, while encourage those that are good. At the same time, the community, and institutions also have a very essential role in preparing and helping young mothers before and after delivery **Wharton**, (2017).

Maxwell & Hammond (2016), recommended that the nurse should help teenage mother to increase her competence in caring for her infant. The observation has widely confirmed that most changes in knowledge and practice result mostly from person to person communication. Improvement in maternal and infant health practices are usually the result of education by health worker or indirectly form someone who has been informed by a health worker.

Hockenberry et al (2017), mentioned that continuous health education programs targeting all teenage mothers recommended to sustain the achieved goals and to tackle areas of deficiency. Public cooperation with health institution is still lacking people understanding and awareness of health care is below average some places, health education program will make use of the mass media to the general public with carefully selected and a well-targeted mass end will make full use of all the possibilities offered by the formal education system.

Health teaching to the teenage mother is the main objective of the nurse plan for infant's life. The impact of health education was evident in some of infant care such as advantages of breast feeding, care of breast, care of bottle, formula calculation, important of infant's burping, bathing, sleeping position, and fever or secretions from eyes. Although, it is agreed that nurses have to exert additional effort to fulfill the obligation of their occupational and home visit activities, they must be keen to offer more activities and information. Home visit and health education reflects the nursing role played by nurses **Karp and Lutenbacher (2016)**.

Conclusion

Based on results of the present study, the following can be concluded:

- The results of the study show that teenage mothers' had a lack of knowledge & inappropriate practices as regard care of their infants
- There were statistically significant difference between teenage mothers' knowledge and teenage mothers' practice regarding their infant care

Recommendation

- More attention should be given to teenage mothers, health education program regarding pregnancy and neonatal care should be given during this phase of life, antenatal counseling, and post natal classes.
- A home visit and health education at an infant clinic or child health service should be made periodically after birth about all aspects of infants care.

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