Self-Care of Women during Postpartum period in Rural Area

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Abstract

Background: The postpartum period is the period when women adjust physically and psychologically after the delivery of the baby. It is the period after the end of labor during which special attention of a community health nurse is required on the women's and the baby's health. **Research Design**: a quasi-experimental design was used. **The aim** of this study was to Assess postpartum women's knowledge and practice related to self-care in rural area. **Setting:** This study was conducted at family medicine centers affiliated to shesht El- Enaam health unit at El-Behara Governorate and postpartum women's homes. **Sampling:** purposive sample of 67postpartum women were included, Primipara and multipara postnatal mothers, during first two weeks from postpartum period, women who delivered normally or by cesarean section and women free from any medical or gynecological disease or disability and their babies free from anomalies. **Tools:** for data collection three tools were used,**1st tool**: an interviewing questionnaire for the postpartum women includes five parts; **Part one:** socio-demographic characteristics, **Part two:** obstetric history, **Part three:** Postpartum woman's cultures and beliefs about postpartum period, **Part four:** Postpartum woman's knowledge regarding postpartum self-care, **Part five:** Postpartum woman's self-care during postpartum period, **2nd tool:** review of infant's growth and development measurements sheet, **3rd tool:** home environmental assessment observational checklist. **Results:**the current study revealed thatless than three quarter of postpartum women had negative total cultures and beliefs regarding postpartum self-care, more than two fifth of postpartum women had satisfactory knowledge toward total postpartum self-care, also majority had inadequate self-care. With a highly statistically significant difference between knowledge and self-care practice **Conclusion**: the total score level for self-care practice revealed that the majority of study sample unaware of adequate self-care practice in rural areas. **Recommendations:** applying health education programs about maternal health issues through ministry of health.

Introduction:

The postpartum period begins with the birth of the baby, comprises both physiological and psychological components and lasts for approximately six weeks. During this period, the reproductive organs recover from pregnancy and delivery. In general, this time period is the physiologic stabilization of the mother's body to the pre-pregnant state. It is time period where the mother and infant need the assistance from health care workers and family to ensure successful transition **(Robin, et al., 2019)**.

Postnatal care is regarded as one of the most important maternal health care services for the prevention and impairment and disability resulting from child birth. The postnatal care includes systematic

examination of the mother and baby and appropriate advice given to the mother during postpartum period. Lack of appropriate care at postnatal period may result in death or disability as well as missed opportunity to promote healthy behavior, affecting mother and newborn **(Dutta, 2018)**.

Although women are often the focus of interventions to improve maternal and newborn health, they make decisions within the larger context of family and community. Women's choices are influenced by social networks, cultures, beliefs and myths that convey behavioral norms, health information, social support, and other resources that impact women's and new born health. Therefore, comprehensive reviews of strategies to improve maternal and newborn health have concluded that community-based interventions encouraging healthy behaviors and appropriate utilization of health services can be an effective way to reduce morbidity and mortality **(Johnson, 2018)**.

The maternal self-care broadly defined by **Trevino & Smith (2019),** as the mother's ability and willingness to take care of herself both physically and emotionally, Proper nourishment, taking time out for one's self when necessary, attention to hygiene and adequate sleep, the ability to care her baby and willingness to delegate and ability to set boundaries are practical applications of self-care in motherhood.

Add to that **Michele (2018),** postpartum care at home is a post-delivery care method that can be provided by public health nurses, trained health workers, or midwifery nurses. This type of maternal and neonatal care includes mother and neonate health problems assessment and training for self and child care and also, under particular conditions, refers them to specialized maternal and neonatal service centers. This service helps mothers to better cope with their new, stressful life and empowers them to better manage taking care of themselves and their infants.

The puerperium being a period of risk, skilled nursing care is then essential, based upon the prevention of complications, physical comfort and emotional and educational activities that will endow women with tools to take care of herself and her child. These actions might be alternated by careful listening and appreciation of the specific demands of women who are influenced by social expectations concerning the pursuit of motherhood. Careful attention must be taken, as in many cases, nursing care is focused only on the newborn and the mother, who until now received full care and attention, has a supporting role position, where taking care of the child is the main function **(Belleza, 2018)**.

Significance of the study:

According to **WHO (2018C),** every day, approximately 830 women die from preventable causes related to pregnancy and childbirth and 99% of all maternal deaths occur in developing countries. Maternal mortality is higher in women living in rural areas and among poorer communities. Between 2016 and 2030, as part of the sustainable development goals, the target is to reduce the global maternal mortality ratio to less than 70 per 100 000 live births.

In 2017, 4.1 million (75% of all under-five deaths) occurred within the first year of life. The risk of a child dying before completing the first year of age was highest in the WHO African Region (51 per 1000 live births), over six times higher than that in the WHO European region (8 per 1000 live births). Globally, the infant mortality rate is 29 deaths per 1000 live births in 2017 **(WHO, 2018).**

Egypt has achieved success in reaching international health benchmarks set by the WHO, including substantially reducing child and maternal mortality rates. Maternal mortality rate in 2018 was down to 33 deaths/100,000 live births, similarly, deaths for children under the age of one per 1000 live births declined significantly from 63 in 1990 to 18.53 in 2019. Mortality rate for under age 5 is 22.11 per 1000 live births and in 2017; neonatal mortality rate was 11.6 deaths per 1,000 live births **(Central Agency for Public Mobilization and Statistics, 2018).**

However, Egypt has not yet closed the gap between its level of access to quality health care and the best possible level of provision. The discrepancy between urban and rural access and quality persists, as well as access based on economic means **(Sayed, 2018)**. **CAPMAS (2018),** added that in 2017, Beheira government is the fifth government in population size is 6.2 million and achieved an annual growth rate of 2.7%. Also, mentioned that the rural illiteracy rate was 32.2% compared to 17.7% in urban areas. The highest rates for illiteracy in Lower Egypt governorates were 32.9% in Beheira governorate which effect on their cultures and beliefs.

Aim of the study:

This study aims to assess postpartum women self-care regarding postpartum period in rural area through:
1. Assessing postpartum women's knowledge related to self-care.
2. Assessing postpartum women's practice related to self-care.

Research questions:

Are there association between Knowledge of postpartum women and their self-care practice?

Methodology

1. **Research Design:-**

This study is a descriptive analytic study to assess postpartum women self-care regarding postpartum period in rural area.

2. **Technical Design:**

The technical design includes; the setting, subject & tools were used in the study.

Setting:

The study was conducted at family medicine centers affiliated to shesht El-Enaam health unit at El-Behara Governorate and postpartum women's homes which include seven family medicine centers, 50% was chosen approximately four centers. The study was conducted at shesht El- Enaaam center, Abo Shady center, El- Hawata center and EL- Shaira center in a rural area in Egypt.

Sampling:

Type: Purposive sample.

Size: The study sample included 67 postpartum women representing 10% from the total number of postpartum women of attending during the year of 2017 was (674 postpartum women) registered in previous family medicine centers (affiliated to the ministry of health) and were attending the center to vaccinate their infants on the assigned vaccinated days for hepatitis B and T.B and thyroid test. Pilot study was included in the sample size.

Family health centers	Total number	Sample
Shesht El- Enaaam	226	23
El- Hawata center	221	22
EL- Shaira center	124	12
Abo Shady center	103	10

Criteria: Postpartum women were Primipara and multipara postnatal mothers, during first two weeks from postpartum period, women who delivered normally or by cesarean section and women free from any medical or gynecological disease or disability and their babies free from anomalies.

Tool of Data Collection:

First tool: An interviewing questionnaire: it was used to *assess the following parts:*
Part one: postpartum woman's socio-demographic characteristics such as age, marital status, educational level, occupation, husband's occupation, family members and monthly income per-capita (Q 1-7).

➢ **Scoring system:**

According to **CAMPS (2016),** people whose income is less than 1.25$ a day for person are poor people and their income are not enough (Dollar equal 18 Egyptian pounds at 2018). Family's income which exceeds 22.5 Egyptian pounds for each member per day, its monthly income is enough.

Part two: Obstetric history such as gravidity, parity and mode of delivery (Q 8-10).
Part three: It was concerned with postpartum woman's cultures and beliefs related to postpartum period as: drinking water, eating fish, eating cold vegetables and fruits, drinking khallba with honey, taking shower during postpartum, rest during postpartum period and usefulness of colostrums (Q 11-34).

➢ **Scoring system:**

Related to postpartum woman's cultures and beliefs related to postpartum period; a correct answer scored one and each incorrect answer scored zero, the whole cultures and beliefs questions scored 34 points, a total of 50% and above (12-24 points) were considered positive and less than 50% (0-11 points) were considered negative.

Part four: Postpartum woman's knowledge (Q 35- 147) pre and post self-care program regarding to normal physiological changes during postpartum period, postpartum nutrition, personal hygiene, breast feeding, minor discomfort, family planning methods, baby's growth and development during first year of life, etc……

➢ **Scoring system:**

The whole knowledge questions regarding postpartum self-care scored 217 points, a total of 50% and above (19 -217 points) were considered satisfactory and less than 50% (0 -108 points) were considered unsatisfactory.

Part five: Postpartum woman's self-care during postpartum period pre and post self-care program (Q 148- 192). This part was developed to assess the following; postpartum nutrition, postnatal clinic follow up, exercise, family planning, personal hygiene, breast feeding, baby care, immunization and etc……………

➢ **Scoring system:**

Total self-care included 88 statements for woman who delivered normal as the highest score, 90 statements for woman who delivered normal with episiotomy and 92 statements for woman who delivered cesarean section. The final score of woman responses was either 60% and above

representing adequate (53-88 points) for normal delivery, (54-90 points) for normal with episiotomy and (55-92 points) for cesarean section or less than 60% denoting in adequate (0- 52points) for normal delivery, (0- 53points) for normal with episiotomy and (0- 54points) for cesarean section.

Second tool: Review of Infant's Growth and development measurements sheet:

This includes infant's weight, height and chest and head circumferences which available at family medicine centers records.

➢ **Scoring system**:

The infant's growth and development took 2 times at birth and at age four months from measurements records during four months immunization then taken Mean ± SD for each measurement and determine normal and abnormal according to **(WHO. 2018)** child growth standard according to their age.

Third tool: Home environmental assessment observational checklist:

It was abstracted from **(Department of Housing and Urban Development. 2012)** and modified by investigator to assess home environment of postpartum woman such as crowding index, lighting, ventilation, cleanliness, sanitary condition, etc………… by using an observation checklist the investigator arranged for home visit with postpartum women under study.

➢ **Scoring system**

Family Crowding Index **(FCI)** formula adapted from **American Association of public Opinion Research (2007),** Family Crowding Index= number of persons in a household/number of rooms used for sleeping, less than 3 (<3) was considered not crowded family and more than 3 (>3) was considered overcrowded family.

The investigator give score one for good sanitation and zero for poor sanitation for each item. The total score of environtment checklist were 34 points, The tool rated on a 2-point scale, "1"good, "0"poor.Home was considered good sanitary if the percent score equal and more than (≥ 60%) 20- 34 points, and poor sanitary if the percent score less than (60%) 0- 19 points.

Administrative Design

An official permission including the title and aim of the study were submitted from the dean of faculty of nursing Ain Shams University and forwarded to the director of the shesht El- Enaam health unit then forward to Abo Shady center, El- Hawata center and EL- Shaira center, to get an approval for data collection to conduct the study.

Operational design:

The study to be completed passed through different phases included: preparatory phase, pilot study and field work phase.

A. Preparatory phase:

A review of the past and current available related literatures covering all aspects of the research subject, using the available books, journals, articles and nursing magazines**.** In order to get a clear picture on the research problem, as well as, to design the study tools for data collection. Then tools of data collection were tested for content validity through pilot study.

B. Pilot study:

It was conducted on 7 postpartum women representing 10% of the total study

sample and conducted in shesht El- Enaam family centers in order to its containing of highly study sample, the aim of the pilot study was to evaluate clarity, visibility, applicability and content validity, as well as the time required to fulfill the developed tools. According to the obtained results, modifications such as omission, addition and rewording were done.

Content validity:

The tools were tested through five experts from community health nursing department, Faculty of Nursing, Ain Shams University.

The reliability:

It was done by Cronbach's Alpha coefficient test which revealed that the tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool. The questionnaire was tested to be reliable with Cronbach's alpha coefficient of 0.78 for items showed tool proved to be strongly reliable.

Field Work:

- An official permission including the title and purpose of the study were submitted from the Dean of Faculty of Nursing Ain Shams University and directed to the director of Shesht El- Enaam health unit then to get an approval for data collection to conduct the study that forwarded to the directors of Shesht El- Enaam, Abo Shady center, El- Hawata center and EL- Shaira centers where the study was conducted.

- After obtaining a permit the researcher meet the head nurses of previous family medicine centers and explain the aim of the study.

- After permission the researcher started with introducing herself to the selected family member of postpartum women came to immunized newborn with hepatitis B and T.B and tested thyroid test and explaining the aim of the study, take permission to visit postpartum women at home, assured that data collected will be confidential and will used only to achieve the purpose of the study.

- The researcher visit the pre-mentioned setting three days per week during immunization of Hepatitis B and T.B and thyroid test to take permission from family member of postpartum women to visit home, then visit postpartum women at the same time or the next day to take oral consent from her to participate in the study after explaining the aim of the study, assured that data collected will be confidential and will used only to achieve the purpose of the study and to fill questioner sheet was about 30 to 45 minutes by asking her and assess their home environment was about 10 minutes.

- The study work was carried out within duration of 8 months starting from beginning of January 2018 till the end of August 2018.

- The researcher got infant's growth and development measurements at birth from family medicine centers records.

Ethical consideration

Issues of ethical consideration were discussed with the director of health unit then the directors and head nurses of each setting then with the family member of postpartum women who attend to vaccinate baby, to visit them at their home and finally with postpartum women herself at home including; privacy of information collected from them & freedom to withdraw from the

study at any time. Then oral approval obtained from postpartum women to apply the study.

Statistical data analysis:

Collected data were coded and tabulated using personal computer. Statistical package for social science (SPSS) version 20was used. Descriptive as well as inferential statistics were used to answer research question. Statistical significance was considered at p-value <0.05

Results:

Table (1): Distribution of Postpartum Women According to Socio Demographic Characteristics (N= 67).

Items	NO	%
Age		
≤20	19	28.3
20 ≥30	32	47.8
30 > 35	12	17.9
≥ 35	4	6
Mean ± SD = 24.8 ± 5.61		
Marital status		
Married	61	91
Divorced	6	9
Educational level		
Illiterate	11	16.5
Secondary education	48	71.6
highly education	8	11.9
Occupation		
House wife	51	76.1
Employed	16	23.9
Husband work		
Employed	30	44.8
Free work	37	55.2
Monthly family salary per capita		
1000 ≤ 2000 L.E	2	3
2000 ≥ 3000 L.E	19	28.3
3000≥ 4000 L.E	32	47.8
4000> 5000 L.E	12	17.9
≥ 5000 L.E	2	3
Mean ± SD = 3161.19 ± 699.99		
Family income:		
Enough	20	29.9
Not enough	47	70.1

Table (1): shows that the postpartum women in the age of 20 ≥30 years representing 47.8% with a mean ± SD age 24.8 ± 5.61 years, 91% of them were married, 71.6% of studied sample are secondary education. Regarding to occupation the same table reports that 76.1% of postpartum women were house wife and had equal or more than five family numbers while 55.2% of husband works were free work. This table also shows that 47.8% of studied sample had 3000≥4000

L.E/month per capita and the mean ± SD monthly family salary 3161.19 ± 699.99. In relation to family income 70.1% were not enough.

Figure (1): Distribution of Postpartum Women According to Their TotalScore Level of Cultures and Beliefs Regarding Postpartum Self-Care (N=67).
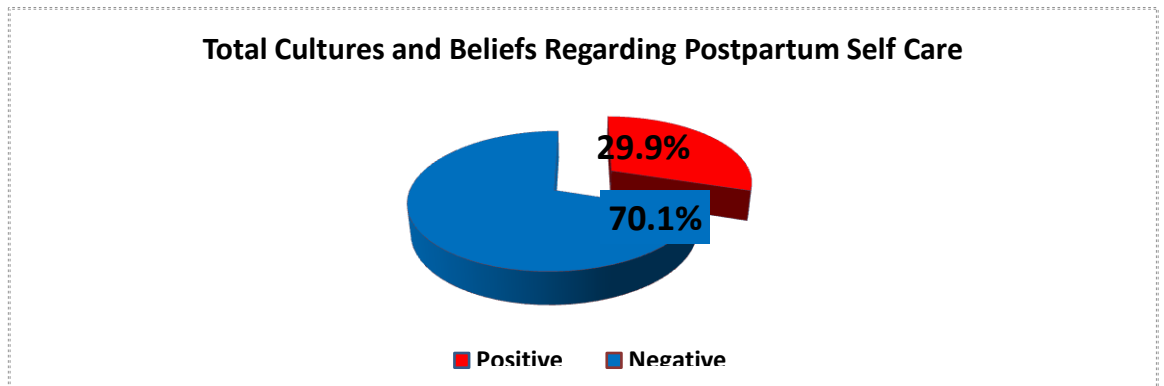
Total Cultures and Beliefs Regarding Postpartum Self Care

29.9%

70.1%

■ Positive   ■ Negative

Figure (1): reveals that 70.1% of postpartum women had negative cultures and beliefs regarding postpartum self-care.

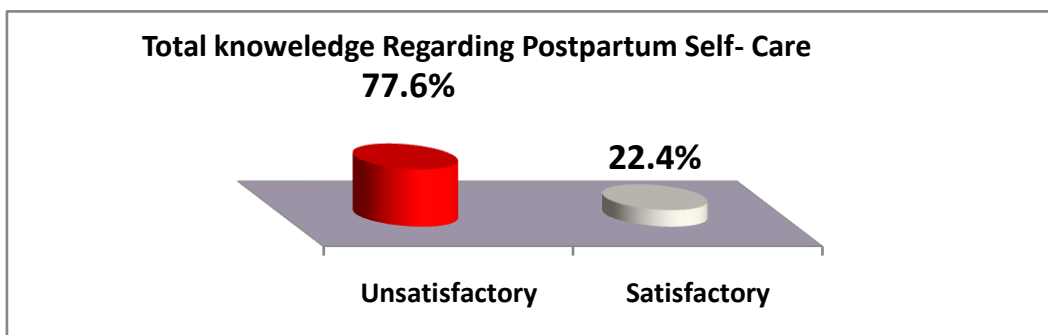**Figure (2):** Distribution of postpartum women related to their Knowledge Regarding Postpartum Self-Care (N= 67).

Total knoweledge Regarding Postpartum Self- Care
77.6%

22.4%

Unsatisfactory   Satisfactory

Figure (2):discusses that 22.4% of postpartum women had satisfactory knowledge regarding postpartum self-care.

Figure (3): Distribution of postpartum women related to their practice regarding Postpartum Self-Care (N= 67).
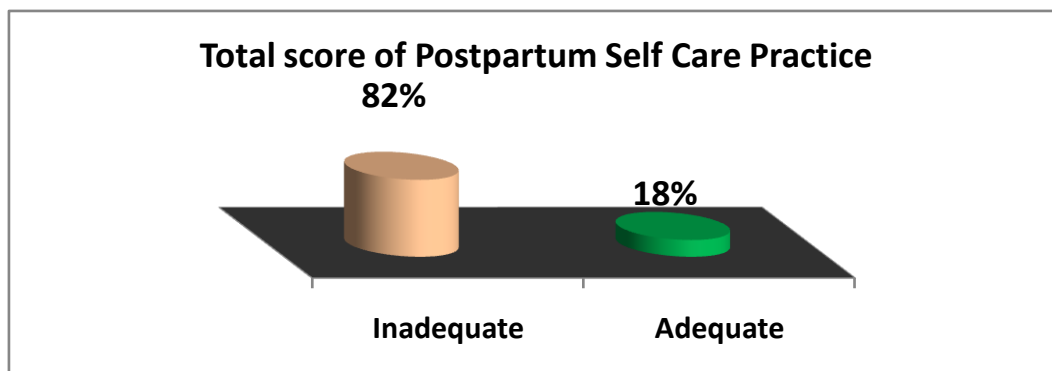

Figure (3): describes that According to total postpartum self-care practice of postpartum women, 17.9% of them had adequate self-care practice.

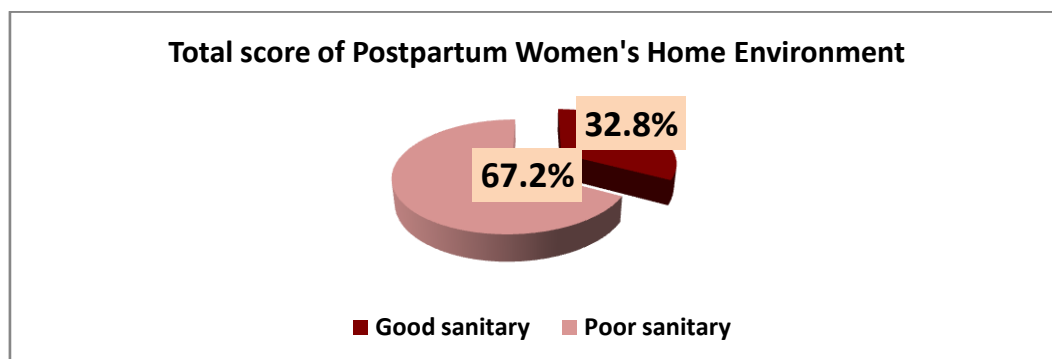**Figure (4):** Distribution of Postpartum Women's Home Environment According to Their Total Cleanliness (N=67)

Figure (4): demonstrates that 32.8% of postpartum women had good sanitary home environment.

Table (2): Association between Post Postpartum Women's Total Knowledge & Their Total Post Self-Care Practice (N= 67).

Total Knowledge	Self-care practice				Chi square test	
	Adequate (N=12)		Inadequate(N=55)			
	N	%	N	%	X^2	P
Satisfactory (N=15)	9	75	6	10.9	23.287	<0.001**
Unsatisfactory (N=52)	3	15	49	89.1		

P value   < 0.001   ** HS

Table (2):illustrates that there is highly statistically significance between postpartum women's total knowledge & their total self-care practice P value < 0.001.

Discussion:

Postpartum time is a critical physiological adaptation phase and therefore has a meaningful impact on the future of maternal and neonatal health. Its importance is also due to the risk level of mortality and morbidity in this period. In the postpartum period, the mother is faced with many physical and emotional challenges. She also should learn about the infant-care behaviors in addition to her health problems. Hence, the mother needs more social, educational, and medical support (**Seyedeh, et al. 2014).**

The findings of this study reported that the mean age of postpartum women were 24.8 ± 5.61 years, less than fifty of them were aged 20 ≥30 years old and had 3000 ≥ 4000 L.E monthly family salary (equivalent to approximately 164   ≥219 US dollars), more than one quarter were aged ≤ 20 years old, less than three quarter were secondary education, approximately three quarter were house wife, more than half of husband work were free work, and less than one third had enough family income (**Table 1**).

These findings are opposite of the study conducted about the relationships among postpartum fatigue, depressive mood, self-care agency, and self-care action of first-time mothers in Bangladesh by **Khatun, et al. (2018),** who revealed that the mean age of postpartum women were 22.40± 3.98 year, 64.5% were 20 to 29 years old, 47.6% had secondary school, 90.3% were house-wives, 41.1% were of low in-come and 88.7% were less than 20,000 Bangladeshi Taka (equivalent to approximately 280 US dollars).

The present results are in disagreement with the study conducted about enhancement of mother's self-care practices for relieving minor discomfort during postpartum period in Egypt by **AbdElrazek (2013),** who reported that 67.5% of studied sample aged from 20 to 30, 27.5% had secondary education and 83.5% were house wife. Also, **Hamed, et al. (2018)**, who conducted the study in Egypt about Egyptian status of continuum of care for maternal, newborn, and child health: Sohag Governorate as an example, are inconsistent with these findings, they reported that 24.5% of studied sample were < 20 years old, 16% secondary education, 69.7% not working and 31.8% of them were low socioeconomic status.

(**Figure 1**), reflected that less than three quarter had negative cultures and beliefs regarding postpartum self-care. These findings may due to the highest rates for illiteracy in Lower Egypt governorates were 32.9% in Beheira governorate which effect on cultures and beliefs of studied sample. Also, These findings make it imperative that appropriate knowledge about cultural values are included in the education of midwives, nurses and other health care professionals to increase their cultural awareness and their possibilities to provide culturally congruent care.

These findings are on the opposite of the study conducted in Bengaluru by **Lalitha (2016)**, who investigated beliefs and practices of women related to maternal care and newborn care in selected areas of rural Bengaluru, the researcher mentioned that the overall classification of women's beliefs revealed that 64% of the rural women had positive beliefs as compared to 36% who had negative beliefs on maternal care and newborn care. This indicates the importance of taking into account traditional belief when assessing and managing mothers in maternal and child health services, which is not yet emphasized in the standard care provided by the country's health services.

According to total knowledge of postpartum self-care **(Figure 2),** discussed that more than one fifth of postpartum women had satisfactory knowledge **Asgharnia, et al. (2015),** who assessed women's knowledge regarding postpartum complications and cares in Iran; concluded that an evaluation of their knowledge about postpartum care showed that 5.7% of them had poor knowledge and suggested that increasing knowledge levels by means of holding different classes and counseling sessions and also continuous home visiting of the mothers which can help them to reach this goal.

Moumita, et al. (2018), who studied assessment of knowledge regarding post natal care among antenatal mothers in India; stated that awareness program is required to improve maternal knowledge on different aspects of postnatal care. So that further studies should be conducted to make more clear views, to plan for future on reproductive rights and to utilize the reproductive health services by people.

On the other hand **Abdul Ghani & Salehudin (2018),** who investigated traditional belief and practice on postpartum recovery among mothers in east coast of peninsular Malaysia; revealed that the good postpartum care practices should be encouraged among mothers particularly those that can reduce the complications during confinement. Hence, appropriate postpartum practice lead to the reduction of postpartum complications which can indirectly reduce the number of deaths among the mothers to achieve goal of sustainable development goals aim to decrease global maternal mortality rate to less than 70/100.000 live birth by 2030.

Figure (3) described that according to total postpartum self-care practice of postpartum women, less than one fifth of them had adequate self-care practice. **Pradan & Rani (2018),** who studied knowledge and practice on selected aspects of postnatal care among postnatal mothers, indicated that 8.34% of mothers had adequate practices on selected aspects of postnatal care.

According to postpartum women's home environment **(Figure 4),** reflected that approximately two third of postpartum women had good sanitary home environment. **Esther, et al. (2014),**who studied impact of home environment measurements on postpartum rural mother and their newborn health in Nigeria, mentioned that 27.6% of rural postpartum women had good home environment. This result suggests that the post women rural environment may have played a more important role during postpartum period in promoting mothers and their newborn health.

According to **Built Environment Deprivation Indicator (2016),** in El-Beheira governorate in which our study was conducted, 9.2% of its population has durable housing, 8.3% of them have safe water and 38% of them have improved sanitation. This data showed that this governorate requires governmental efforts to improve its environmental sanitation which help in improving population health and decrease morbidity especially in its rural areas.

Related to association between post postpartum women's total knowledge & their total self-care practice post self-care program, **(Table 26),** mentioned that there is highly statistically significance P value < 0.001. This result is in the same line with **Pradan& Rani (2018),** who explained that there was a positive correlation between level of knowledge and practice of postnatal mothers regarding selected aspects of

postnatal care. **Muthulakshmi (2016),** who assessed the knowledge and practice on selected aspects of postnatal care among primi mothers in Aravindan Hospital, Coimbatore, reflected that there was a positive correlation between knowledge and practice of postnatal mothers regarding selected aspects of postnatal care.

This result reflected that more effort is required for improving postpartum women knowledge which in turn improve their self-care practice and reduce morbidity and mortality rate among mothers and their infant and to help in achieving goal 3 & 4 of sustainable development goals which concerning with reduce morbidity and mortality for mothers and infant.

Conclusion

On the light of the results and answers on research hypothesis the study was concluded that:

The study sample age ranged between less than or equal20 to more than or equal 35 years, with mean age (24.8 ± 5.61years). There was a highly statistically significant difference between postpartum women's knowledge and self-care practice related to postpartum self-care in rural areas. Less than three quarter of postpartum women had negative total cultures and beliefs regarding postpartum self-care which include nutrition, exercise, personal hygiene, breast feeding, sexual activity and baby care. More than two fifth of postpartum women had satisfactory knowledge toward total postpartum self-care. The total score level for self-care practice revealed that the majority of study sample unaware of adequate self-care practice.

The findings of this study highlight the following recommendations:

1. Applying health education programs about maternal health issues through ministry of health.

2. Continuity of health education programs about cultural values for nurses and other health care professionals in rural areas to increase their cultural awareness and their possibilities to provide culturally congruent care.

3. Health educational package on postpartum self-care should be given on discharge plan and should written in clear, simplified and comprehensive explanation about postpartum issues supported by drawing pamphlets especially for illiterate one to raise the awareness of postpartum women about these issues especially in rural communities of Egypt.

4. Raising public awareness through home visit and educational campaigns about postpartum self-care especially in rural areas.

5. Policy makers must build up a national strategy for enhancement health services provided about perinatal care into family centers especially in rural areas through coordination with the related ministries of higher education and scientific research and youth.

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