

Assessment of Knowledge about Postpartum Care among Women at Women's Health Hospital, Assiut University

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Abstract

Background: Postpartum period is a crucial time for the body to adjust, and the mother goes through a lot of physical and mental struggles during this time, which can have an intensive impact on the health of the mother and newborn in the future. **The aim:** This study aimed to assess the knowledge about postpartum care among women at Women's Health Hospital, Assiut University. **Research design:** A Descriptive, cross sectional design was used to achieve the objective of this study. **Setting:** This study was conducted at emergency unit & postpartum department at Women's Health Hospital, Assiut University. **Sample:** convenient sample on 300 post-partum women. **Data collection:** Data were collected by structured interview questionnaire consisted of three parts: **Part 1:** Included sociodemographic data, medical history and obstetric history **Part 2:** knowledge about maternal care, **Part 3:** knowledge about neonatal care. **Results:** The current study findings showed that only 8% of the studied postpartum women had good while 59.7% had poor knowledge regarding postpartum care. There were a high significant relation between total score of women's knowledge and their residence, educational level and employment status. **Conclusion:** About more than half of the postpartum women had poor knowledge regarding postpartum care. **Recommendation:** give health education supported by drawing pamphlets about postpartum self and neonatal care on discharge for postpartum the women.

Keywords: *Assessment, knowledge, postpartum care & postpartum women.*

Introduction:

Postpartum period is a transitional period in a mother's life that is characterized by physical, emotional, and social changes. It typically begins shortly after childbirth and can last for up to six months. Postpartum period is typically divided into three distinct stages: acute (6–12 hours postpartum), subacute (2–6 weeks postpartum), and delayed (up to 6 months). (Al Rehaifi et al., 2023).

The primary objective of postnatal care is to ensure the physical health of both mothers and new-borns, as well as to foster the development of a bond between the child and their parents and siblings. Additionally, it contributes to the development of infant feeding skills and strengthen the mother's confidence in herself. (Beraki et al., 2020).

It is essential to enhance women's awareness of the importance of self-care during the postpartum period in order to reduce maternal mortality and disability. Self-care rudiments during the postnatal period include: general hygiene; perineal care; episiotomy care; checking the fundus; lochia assessment; nutrition; exercise; sleep; early ambulation; breastfeeding; immunization; baby cord dressing; and awareness of risk signs during the post-partum period. (Ellpody et al., 2023)

Due to a lack of understanding about postpartum issues and care for mothers, particularly nulliparous mothers, who are not trained enough to adjust to new situations and have the self-assurance to take care of themselves and their new-borns, postnatal care education helps women to develop motherhood skills to fulfil their role as mothers within their family.

Word Count (Adams et al., 2023).

The role of nursing in the postpartum period immediately following childbirth is distinct due to the fact that parturition is one of the most vulnerable periods in a woman's life. During this period, nurses are required to focus on serving, protecting, uplifting, and motivating women. This includes monitoring the health of both mother and infant to ensure the child's development and the mother's recovery. (Said et al., 2022)

Significant of the study:

The rate of maternal mortality during the postpartum period is largely attributed to postpartum-related complications. The maternal mortality rate during pubertal period is the yearly number of women who die from any cause related to childbirth due to complications that are exacerbated by the birth. However, it is important to note that the majority of postpartum related complications can be avoided if

there is adequate knowledge and proper tone-care is employed. (Amin et al., 2021)

Every day, 830 women die from avoidable causes related to pregnancy and childbirth. 99 of these deaths occur in developing countries. Motherhood mortality is higher in women who live in pastoral areas and in poorer communities. (WHO, 2023).

Globally motherly mortality rate in 2021 was 211 per 100,000 live births. during the first week of the postnatal period, severe hypertension, severe bleeding, and infection are the most common contributors to motherly deaths, while the cardiovascular cause is the leading cause of late deaths. (Florio et al., 2021).

In low- and middle-income countries, about two-thirds of all maternal deaths occur during the postpartum period due to inadequate postnatal care. In 2020, the motherly mortality rate in Egypt during postpartum was 17 per 100,00 live births. Egypt's motherly mortality rate decreased at a moderate pace between 2001 and 2020, decreasing from 76 per 100,00 in 2001 to 17 per 100,000 in 2020. (WHO, 2023)

Aim of the study:

Assess the knowledge about postpartum care among women at Women's Health Hospital, Assiut University.

Research questions:

What are the levels of knowledge about postpartum care among women who delivered, at Women's Health Hospital Assiut University?

Subjects and Methods

Research design:

Descriptive, cross sectional design was used to achieve the aim of this study.

Study Setting

This study was conducted at emergency unit & postpartum department at Women's Health Hospital, Assiut University.

Description of the setting:

- Emergency unit composed of five rooms, examination room where the first observation of women in it with capacity of (2) beds, fetal monitoring room that serve emergency unit and outpatient clinics, pre-and post-operative room which include (4) beds for antenatal care and (4) beds for post-partum care, (2) labor rooms where the care of the 2nd and 3rd stage of labor are provided, one bed of each.
- Postpartum department composed of five rooms each with capacity of (8) bed, first four rooms for post-partum care and the fifth room for post-partum women with sepsis, the unit contained bathrooms.

Study Sample:

Current study was conducted on a convenience sample of 300 post-partum women who delivered at woman's Health Hospital, Assiut university. The sample size was calculated according to the following equation:

$$n = [DEFF * Np(1 - p)] / [d^2 / Z^2 * 1 - a / 2 * (N - 1) + p * (1 - p)]$$

DEFF (Design effect) = 1

N (population) = 1000000

p (Hypothesized %) = 28.4% +/-5

d (tolerated margin of error) = 0.05

Z (level of confidence) = 1.96

α (Alpha) = 0.05

$$n = [1 * 100000 * 28.4\% +/- 5 (1 - 100000) / [(0.05^2 / 1.96^2) * 100000 * (1 - 28.4\% +/- 5) * (1 - 28.4\% +/- 5)]]$$

n=300 post-partum women

Inclusion criteria:

Women who delivered normally or cesarean section.

Exclusion criteria:

Women who were not willing to participate in the study.

Tools of the study

A structured Interview Questionnaire was developed by the researchers after reviewing the related national and international literature, (Mwilike et al., 2018)

The tool was divided into three parts: -

Part 1: - It includes questions regarding

Sociodemographic data: age, residence, educational level, marital status, employment status.

Medical history: hypertension, diabetes mellitus, cardiac disease, anemia, Kidney problems and liver disease.

Obstetric history: number of gravidity, number of parity, gestational age and number of abortion.

Mode of delivery: vaginal delivery, vaginal with episiotomy, vaginal with instrument, CS.

Part2: - It consisted of eleven (11) questions to assess the knowledge about maternal care, it divided into (5) closed ended questions, it included Presence of knowledge about care, source of knowledge, time of starting empty bladder after giving birth, the time of starting sexual activity after childbirth and Duration of delayed menstruation in exclusively in breast feeding and (6) open ended questions, it included definition and duration of postnatal period, definition and types of lochia, maternal danger signs, the proper nutrition needed during postpartum, knowledge about contraceptive methods and knowledge about personal hygiene during postpartum period.

Part3: - It consisted of eight (8) questions to assess the knowledge about neonatal care, it divided into (4) closed ended questions, it included time for starting

bath for newborn after birth, time for starting breast feeding after delivery, number of breastfeeding times per day, duration of exclusive breast feeding) and (4) open ended questions, it included knowledge about methods of prevention heat loss for newborn after delivery, knowledge about methods of umbilical care, knowledge about purposes of vaccination and neonatal danger signs.

Scoring system

Each correct answer will be given (2) mark, incorrect and don't know answer will be given (1) mark. The score of each item summed up and then converted into percent score it will be categorized as follows:

- **Poor knowledge** <60% of total knowledge score.
- **Fair knowledge** 60-75 % of total knowledge score.
- **Good knowledge** ≥75% of total knowledge score.

For maternal post-partum care:

It involved 39 items, total score ranged from 1-78, the level considered poor if <60% (<48), fair if 60-75% (48-58) and good if ≥ 75% (58)

For neonatal care:

It involved 21 items, total score ranged from 1-42, the level considered poor if <60% (<24), fair if 60-75% (24-32) and good if ≥ 75% (32)

For overall maternal and neonatal care:

It involved 60 items, total score ranged from 1-120, the level considered poor if <60% (<72), fair if 60-75% (72-90) and good if ≥ 75% (90)

Validity and reliability of the tool:

Content validity

The tool was reviewed to ascertain its content validity by three experts from nursing staff of obstetrics and gynaecology. The experts evaluated the tool for its clarity, relevance, comprehension, applicability, and ease of use, and, in their opinion, modifications were made.

Reliability

The internal consistency of the tool was calculated by using Cronbach's Alpha test; and it was **0.893**

Pilot study:

A pilot study was conducted on a sample of 10% (30 women) prior to the initiation of the study, to evaluate the feasibility and usability of the study tools. The results of pilot study were evaluated and no alterations were made, thus the sample of the pilot study was incorporated into the main study.

Procedure:

1. Reviewing the available literature concerning the topic of the study.
2. The study was officially approved by the President of Woman's Health Hospital.
3. Data collection of the study was conducted over 6 months started from the period of beginning of March 2023 to August 2023.

4. The researcher was available three days a week at each study setting starting from 9:00 am to 1:00 pm until a sample size was reached.
5. The researcher interviewed each woman through face-to-face communication, great them, introduced herself, explained the purpose of the study, and obtained verbal consent from the women.
6. The women were informed that the study would be completely voluntary and that their consent (oral consent) was required.
7. Each post-partum woman was interviewed individually to collect the necessary data. The interviewer read the interview questionnaire to the participants and filled it out in 15 minutes.
8. After completing this questionnaire, the researcher provided postpartum women with oral guidance on post-natal care, which took 15 minutes for each postpartum woman using the images provided in the brochure (breast feeding, diet, physical activity, perineal care, cesarean wound care, Maternal danger signs).
9. Confidentiality of the data was assured.

Ethical considerations

The research proposal has been approved by the Ethics Committee of the Faculty of Nursing on November 2022. Verbal consent has been obtained from the women participating in the study, following an explanation of the purpose and nature of the study. There is no risk to the study subject during the implementation of the study. The study adheres to the accepted ethical principles of clinical research. The confidentiality and anonymity of the participants have been safeguarded. The participant has the right to withdraw from the study at any time without any justification. The privacy of the participant has been taken into consideration during the collection of data.

Statistical analysis:

The statistical data entry and analysis was conducted using the SPSS version 26 statistical package. The data was presented as numerical values, percentage means, and standard deviations. The Chi-squared test was used to demonstrate the relationship between the variables. The P-value was deemed statistically significant when it was less than 0.05.

Results

Table (1): Distribution of the studied women according to their socio-demographic characteristics:

Socio-demographic characteristics	N (300)	%
Age/ years		
17 to < 25 years	106	35.3
25-35 years	123	41.0
More than 35years	71	23.7
Age (Mean±SD)	29.5±7.25	
Marital status:		
Married	296	98.7
Divorced	4	1.3
Residence:		
Urban	79	26.3
Rural	221	73.7
Educational level:		
Illiterate	65	21.7
Primary education	63	21.0
Secondary	116	38.6
University.	56	18.7
Employment status:		
Employee	85	28.3
House wife	215	71.7

Table (2): Distribution of the studied women's according to their knowledge about maternal care:

Item	N (300)	%
Definition & duration of post-natal period:		
Correct answer	239	79.7
Incorrect answer	42	14.0
Don't know	19	6.3
Definition of lochia and its types:		
Correct answer	145	48.3
Incorrect answer	115	38.4
Don't know	40	13.3
Time of starting empty bladder after giving birth:		
Correct answer	70	23.3
Incorrect answer	176	58.7
Don't know	54	18.0
Time for starting sexual activity after childbirth:		
Correct answer	241	80.3
Incorrect answer	50	16.7
Don't know	9	3.0
Duration of delayed menstruation in exclusively in breast feeding:		
Correct answer	78	26.0
Incorrect answer	213	71.0
Don't know	9	3.0

Table (3): Distribution of the studied women according to the knowledge about proper nutrition essential for the mother during postpartum:

Item	N (300)	%
Carbohydrate		
Yes	280	93.3
No	11	3.7
Don't know	9	3.0
Fluids		
Yes	42	14.0
No	249	83.0
Don't know	9	3.0

Item	N (300)	%
Proteins		
Yes	246	82.0
No	45	15.0
Don't know	9	3.0
Vitamins		
Yes	42	14.0
No	249	83.0
Don't know	9	3.0
Fats		
Yes	18	6.0
No	273	91.0
Don't know	9	3.0
Minerals		
Yes	275	91.7
No	16	5.3
Don't know	9	3.0

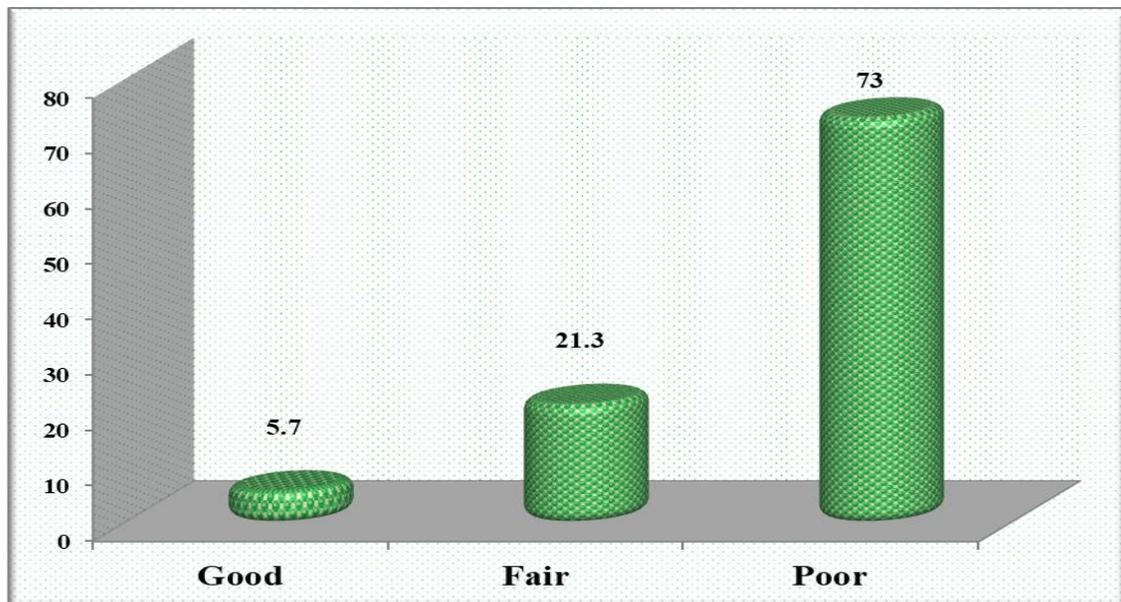


Figure (1): Distribution of the studied women levels of knowledge about maternal post natal care:

Table (4): Distribution of the studied women according to their knowledge about neonatal care:

Item	N (300)	%
How can you prevent heat loss of newborn after birth?		
Correct answer	212	70.7
Incorrect answer	86	28.6
Don't know	2	0.7
What is the appropriate time for starting bath for newborn after delivery?		
Correct answer	72	24.0
Incorrect answer	2	0.7
Don't know		
What are the methods for umbilical care?		
Correct answer	107	35.7
Incorrect answer	174	58.0
Don't know	19	6.3
What is the time for starting breastfeeding after birth?		
Correct answer	110	36.7
Incorrect answer	160	53.3
Don't know	30	10.0

Item	N (300)	%
How many breastfeeding times does a new born need per day?		
Correct answer	207	69.0
Incorrect answer	87	29.0
Don't know	6	2.0
What is the duration of exclusive breast feeding?		
Correct answer	182	60.7
Incorrect answer	114	38.0
Don't know	4	1.3
What is the Purpose of vaccination?		
Correct answer	241	80.3
Incorrect answer	49	16.3
Don't know	10	3.3

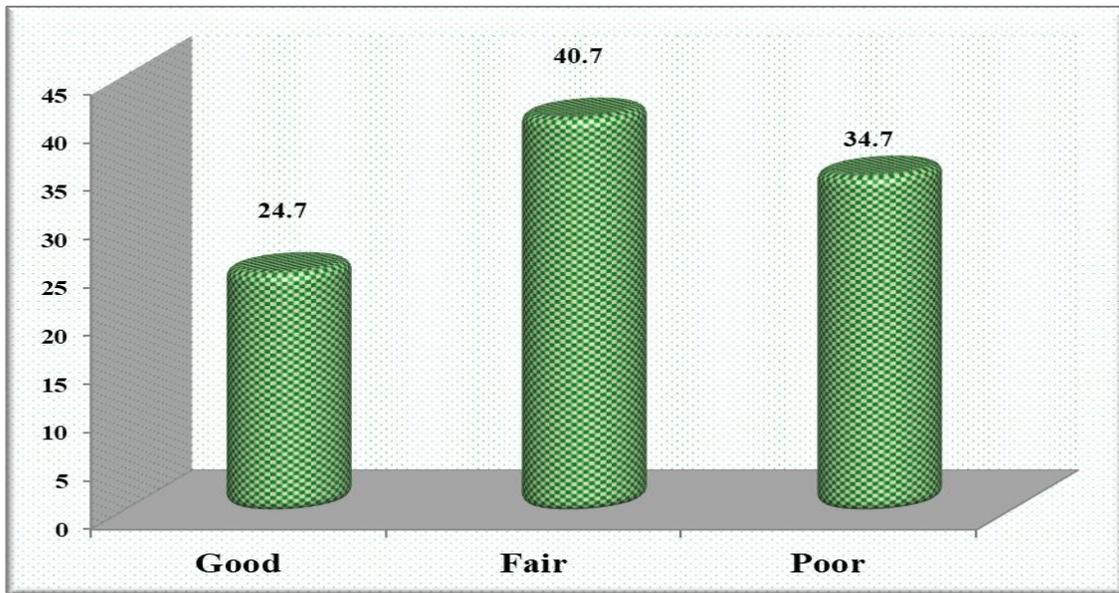


Figure (2): Distribution of the studied women levels of knowledge about neonatal care:

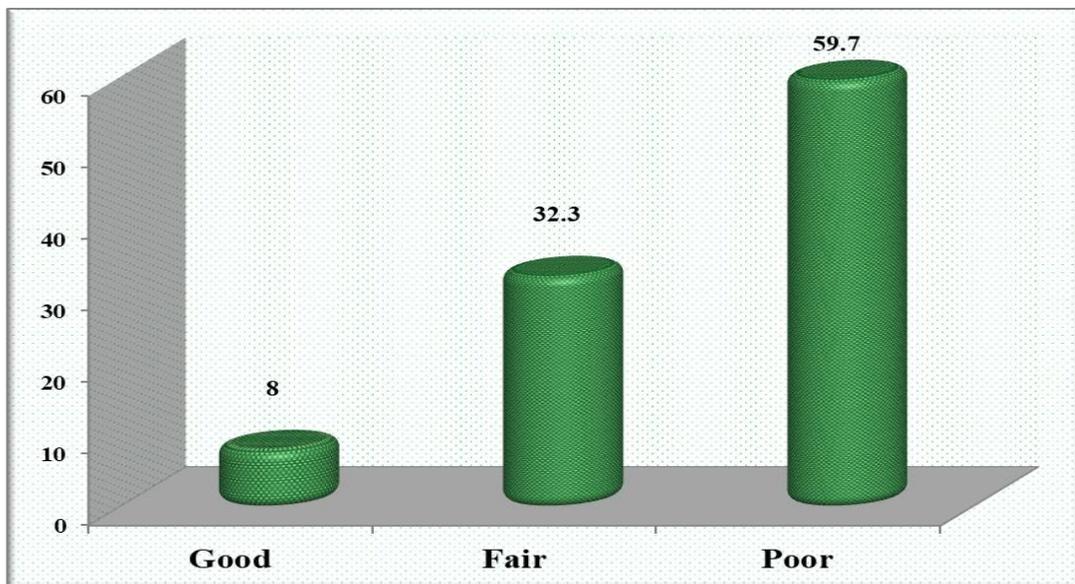


Figure (3): Distribution of the studied women levels of knowledge about postpartum care: (for mother and neonate)

Table (5): Relationship between the levels of women's knowledge regarding postpartum care & their socio-demographic characteristics (N=300):

Socio-demographic characteristics	Total knowledge score about post-partum care						p-value
	Good (24)		Fair (97)		Poor (179)		
	N	%	N	%	N	%	
Age/ years							
17 to < 25 years	3	12.5	21	21.6	82	45.8	0.001**
25-35 years	11	45.8	51	52.6	61	34.1	
More than 30 years	10	41.7	25	25.8	36	20.1	
Marital status:							
Married	24	100.0	94	96.9	178	99.4	0.181
Divorced	0	0.0	3	3.1	1	0.6	
Residence:							
Urban	10	41.7	44	45.4	25	14.0	0.001**
Rural	14	58.3	53	54.6	154	86.0	
Education:							
Illiterate	0	0.0	6	6.2	59	33.0	0.001**
Literate	2	8.3	17	17.5	37	20.7	
Primary education	4	16.7	13	13.4	46	25.6	
High school or a higher level of education.	18	75.0	61	62.9	37	20.7	
Employment status:							
Employee	15	62.5	46	47.4	24	13.4	0.001**
House wife	9	37.5	51	52.6	155	86.6	

(**) Highly statistically significant difference (p-value <0.01)

(*) Statistically significant difference (p-value <0.05)

No statistically significant difference (p-value >0.05)

Table (1): It shows Socio demographic characteristic of the studied women, it is illustrated that the mean age for the studied women was 29.5±7.25 years old. Concerning marital status 98.7% of them were married. Regarding residence 73.7% of the studied women were from rural areas. As regard employment status about 71.7% of studied women were housewives.

Table (2): Illustrates knowledge of studied women about maternal care, the studied women answered correctly as follows; regarding definition and duration of puerperium (79.7%), regarding definition of lochia and its types (48.3%) and regarding time of Return to sexual activity after labor (80.3%)

Table (3): Illustrates knowledge of studied women about proper nutrition essential for the mother during postpartum period, it shows that 93.3%, 91.7% and 82.0% of studied women identified food items rich in carbohydrates, Minerals and protein respectively, while 14.0% and 6.0% identified food items rich in fluids and fats respectively.

Figure (1): It demonstrates the studied women knowledge about maternal post-natal care, it reveals that 73%, 21.3%, and 5.7% of studied women had poor, fair, and good knowledge about maternal care respectively.

Table (4): It illustrates women's knowledge about neonatal care, it shows that 80.3%, 75.3%, 70.7% and 69.9% of studied women had correct answer about

Purpose of vaccination, time for starting bath for the newborn after birth, method of prevention heat loss of newborn after delivery and the number of breastfeeding times per day respectively, while 58.0% ,53.3% and 38% of studied women had incorrect answer regarding care needed for umbilical care, appropriate time for starting breastfeeding after giving birth and the duration of exclusive breastfeeding respectively.

Figure (2): It demonstrates the studied women levels of knowledge of about neonatal care; it reveals that 40.7 %, 34.7% and 24.7% of studied women had fair, poor and good knowledge regarding neonatal care.

Figure (3): It demonstrates the studied women levels of knowledge about postpartum care, it shows that 59.6%, 32.3%, 8% of studied women had poor, fair and good knowledge respectively.

Table (5): This table reveals that there was highly statistically significant difference between the studied women levels of knowledge regarding post-partum care and their age, residence, educational level and employment status with p-value were 0.001.

Discussion

The weeks following childbirth are crucial for both the mother and her baby, setting the tone for future health and wellness. To ensure optimal postpartum outcomes for women and babies, the postpartum care should become a continuum, not a one-time event,

with care and support customized to the individual needs of each woman. (Lopez et al., 2022).

This study aims to assess the knowledge about postpartum care among women at Women's Health Hospital, Assiut University.

As regard to the socio-demographic characteristics, present study found that over two-fifths of the women in the study were between the ages of 26 and 30 years, with a Mean \pm SD of (29.5 \pm 7.25). This was in line This finding was in accordance with Ellpody et al., 2023 Who assessed perception of women regarding self-care measures during post-partum period at Tanta university hospital, they implied that the age of women in their study ranged from 25 to 35 years with mean \pm SD (26.06 \pm 3.95) years. On the other hand, the finding was dissimilar with Amin et al., 2021, who assessed Effect of young rural women's general characteristics on their knowledge and compliance with healthy practices during postpartum period at Obstetrics &Gynecological outpatient clinic at Benha University hospital, Egypt, they reported that two fifths of the studied women aged between 23-25 years old.

Concerning women residence, the present study cleared that about three quarters of the studied women were from rural areas. This result was in agreement with Ganiga & Shetty, 2020 who assessed awareness of postnatal mothers regarding self and newborn care in a tertiary care center in Mangalore, Karnataka, they found that more than three fifths of their sample were from rural areas. This result did not match with Hussein et al., 2019, who assessed women's knowledge regarding Postpartum warning signs at postpartum inpatient units at Ain shams university Maternity Hospital, they found a slightly less than three quarters of the studied women were from urban areas. These differences may be due to differences in the aims and samples of the studies.

Regarding to the women's employment status, the findings of the present study showed that more than two thirds of the studied women were housewives. This result matched with Omran et al., 2020, who assessed Self-Care of Women during Postpartum period in Rural Area, at shesht El- Enaam health unit at El-Behara Governorate, they found about three quarters of the studied women were housewives.

This study revealed that over three-quarters of the studied women had a correct understanding of the definition and duration of post-partum periods. This finding was in accordance with the findings of Sayed et al., 2022, who evaluated self-care guidelines for minor discomfort in postpartum at Women's Health Hospital, Emergency Unit at Assiuth University Hospital. Three-quarters of the sample had correct answers to the questions regarding the definition and duration of postpartum period.

Regarding knowledge of the studied women about time of starting sexual activity after childbirth the study findings revealed that four fifths of the studied women had correct answer. The study findings were in accordance with Naigino et al., 2022 who assessed resumption of Sexual intercourse among postnatal women in Masaka, Mityana, and Luw- ero districts of Central Uganda, they found that more than three quarters of their sample had correct answer about time of starting sexual activity after delivery.

These findings disagreed with Fan et al., 2022 who assessed Factors associated with postpartum resumption of sexual intercourse among women in China, they found that more than half of the studied women had incorrect answer regarding time of starting sexual activity after childbirth; the explanation of this difference may be due to difference in communities and culture.

Regarding distribution of the studied women according to the knowledge about proper nutrition essential for the women during postpartum period, the study findings revealed that the majority of the studied women identified food items rich in carbohydrates, minerals and proteins respectively. These findings were compatible with Teferi et al., 2023 who assessed inadequate dietary diversity practices and associated factors among postpartum mothers in Gambella town, Southwest Ethiopia, they found most of respondents 98.8% consumed food staples rich in carbohydrates. From the researcher's point of view, these similarities may be due to the postpartum is a critical period which need proper nutrition rich in protein and carbohydrates save maternal and neonatal health.

Regarding distribution the score of knowledge of the studied women about maternal care, the current findings demonstrated that that less than one quarter of the studied women had fair knowledge about maternal care. This finding matched with Ellpody et al., 2023, they found that slightly less than one third of the studied women had fair level of knowledge concerning self-care measures during postpartum period.

Also, these findings were consistent with Omran et al., 2020, they found less than one quarter of the studied women had moderate level of knowledge regarding self-care during postpartum period.

Theses finding did not align with the finding of Memchoubi et al., 2017 who assessed knowledge of the post-natal mothers regarding self-care after child birth in Bharati hospital and research center, Pune. They found more than two thirds of their sample had good knowledge. The possible reason for difference between the present study & other studies may be due to the difference of the educational level.

Regarding score of knowledge of the studied women about neonatal care. The results clarified that about one quarter of the studied women had good knowledge regarding neonatal care, this finding was similar to **Mohini & Shetty, 2017** who assessed the knowledge of mothers on home based neonatal care at selected area of rural Bangalore, they found that one quarter of their sample had good knowledge on neonatal care.

Also, **Mohamed et al., 2023** who assessed knowledge and practice of postpartum women regarding neonatal care in El-Beheira Governate, who found that only one quarter of the studied women had good knowledge about neonatal care.

These findings were dissimilar with **Ayete & Udofia, 2020** who assessed knowledge and quality of essential newborn care practices in La Dade Kotopon Municipality, Ghana, they found more than half of studied women had good knowledge. The explanation of these difference between the present study & other studies may be due to the difference in aims and samples of the studies.

Concerning knowledge of the studied women about methods of prevention heat loss for newborn after delivery, the current finding demonstrated that more than two thirds of the studied women had correct answer regarding methods of prevention heat loss for newborn, this finding is compatible with **Memon et al., 2019** who assessed knowledge, attitude and practice among mothers about newborn care in Sindh, Pakistan, they found more than half of women had correct answer about methods of prevention heat loss for neonate after birth. (Skin to skin contact).

Regarding knowledge about appropriate time for starting bath for newborn after birth, the current finding showed that three quarters of the studied women affirmed correctly that first bath took place after 24 hours of birth, the study findings supported by **Fenta et al., 2022** who assessed early newborn bath Practice and its associated factors in Jimma, South West Ethiopia, they found that more than two thirds of the respondents assured first bath took place after 24 hour after birth. These study findings were incompatible with **Ayete & Udofia, 2020**, they found that about less than half of their sample had correct knowledge regarding first bath for the newborn.

For distribution of the studied women according to knowledge about number of breast-feeding times per day, current study showed that about more than two thirds of studied women had correctly answered (eight per day), this finding is compatible with **Dukuzumuremyi et al., 2020** who assessed knowledge, attitude, and practice of exclusive breastfeeding among postpartum mothers in East Africa, they found that more than half of their sample

had correct answer about number of breast-feeding times per day.

The current study revealed that a majority of the women surveyed were aware of the purpose of the vaccine for a newborn, which was to prevent disease. This finding was corroborated by the findings of **Beraki et al., 2020**, which evaluated the post-natal knowledge of post-Partum Mothers in the municipality of Asmara and found that a majority of respondents were aware of the vaccine's purpose of preventing the disease.

According to total score of women's knowledge about postpartum care, the finding of the present study showed that more than half of the postpartum women had poor knowledge about postpartum care. This finding agreed with **Beraki et al., 2020** they found that about two thirds of post-partum women had low score of knowledge about postpartum care.

On the same line **Adams et al., 2023** who assessed study on women's understanding of post-partum care, practices, barriers and educational needs at Sagnarigu District in Tamale, Ghana, they found more than half of women had low level of knowledge regarding postpartum care.

Also, this finding was similar to **Amin et al., 2021** they found about more than four fifths of the studied women had poor knowledge regarding postpartum care.

This result was not in line with the findings of **Al Kalash & Zayed, 2022**, which evaluated the Knowledge, Attitudes and Practices of Post-Partum Care among mothers enrolled in an Egyptian Family Health Unit in the District of Damanhur in EL-Beyera Governate. This study found that over half of the sample had a high level of knowledge. These discrepancies may be attributed to the disparities in the respective communities, cultures and educational levels.

This study showed that the total score of women's knowledges was significantly different with their age, residence, educational level, and employment status. This was in line with **Beraki et al., 2020**, which showed that there was a big difference between women's knowledge based on age, residence, and education. **Ellpody et al., 2023**, also showed a significant difference between total score and education. From the researcher point of view, the result of the present study may be because women with educational background had better knowledge than mothers with limited education. In addition to **Hussein et al., 2019**, they revealed that there was a significant association between total knowledge level of the studied women and their residence.

Also, **Amin et al. 2021** found that there was a strong correlation between women's job status and their understanding of postpartum care. From the

researcher's perspective, the outcome of this study could be because more than three-fifths of the women were housewives, who don't have the chance to share their experiences with others like working women do.

Conclusion:

Results of the present study concluded that about more than half of postpartum women had poor knowledge regarding postpartum care. A high significant relation between total score of women's knowledge and their residence, employment status and educational level was observed therefor special attention is needed for mothers with low educational level and low socioeconomic status.

Recommendations:

In the light of the current study findings, the following recommendations are suggested:

- Providing health education through prints and drawings for women in late pregnancy, particularly nulliparae during their antenatal visits.
- Increasing public awareness through home visits and postpartum self-care campaigns, especially in rural areas.
- Encouraging usage of social media platforms such as: WhatsApp and telegram for follow up women after delivery and giving instructions regarding postpartum care.

References

- Adams, Y., Miller, M., Agbenyo, J., Ehla, E., & Clinton, G. (2023): Postpartum care needs assessment: women's understanding of postpartum care, practices, barriers, and educational needs. *BMC Pregnancy and Childbirth*, 23(1), 502.
- Al kalash, S., & Zayed, H. (2022): Knowledge, attitude, and practice regarding postpartum care among mothers attending an Egyptian family health unit. *Menoufia Medical Journal*, 35(2), 528.
- Al Rehaili, B., Al-Raddadi, R., ALenezi, N., & ALYami, A. (2023): Postpartum quality of life and associated factors: a cross-sectional study. *Quality of life research. An international journal of quality-of-life aspects of treatment, care and rehabilitation*, 32(7), 2099–2106.
- Amin Ali Gaafar, H., Elahmady Mohamed Sarhan, A., & Abdalla Moursi, H. (2021): Effect of young rural women's general characteristics on their knowledge and compliance with healthy practices during postpartum period. *Egyptian Journal of Health Care*, 12(2), 165-175.
- Ayete-Nyampong, J., & Udofia, E. (2020): Assessment of knowledge and quality of essential newborn care practices in La Dade Kotopon Municipality, Ghana. *PLoS One*, 15(8), e0237820.
- Beraki, G., Tesfamariam, E., Gebremichael, A., Yohannes, B., Haile, K., Tewelde, S., & Goitom, S. (2020): Knowledge on postnatal care among postpartum mothers during discharge in maternity hospitals in Asmara: a cross-sectional study. *BMC pregnancy and childbirth*, 20(1), 17, <https://doi.org/10.1186/s12884-019-2694-8>
- Dukuzumuremyi, J., Acheampong, K., Abesig, J., & Luo, J. (2020): Knowledge, attitude, and practice of exclusive breastfeeding among mothers in East Africa: a systematic review. *International breastfeeding journal*, 15(1), 70, <https://doi.org/10.1186/s13006-020-00313-9>
- Ellpody, E., Elagamy, M., Gaheen, M., & Ahmed, M. (2023): Perception of Pregnant Women Regarding Self Care Measures during Postpartum Period. *Tanta Scientific Nursing Journal*, 29(2), 134-153.
- Fan, X., Zhou, F., Li, Y., Xia, W., Che, Y., & PPC Study Group (2022): Factors associated with postpartum resumption of sexual intercourse among women in China: A retrospective multicenter study. *The journal of obstetrics and gynaecology research*, 48(1), 230–238, <https://doi.org/10.1111/jog.15088>
- Fenta Kebede, B., Dagnaw Genie, Y., Yetwale Hiwot, A., Biyazin Tesafa, T., & Abebe, B. (2022): Early newborn bath practice and its associated factors in Jimma, South West Ethiopia. *Pediatric Health, Medicine and Therapeutics*, 43-52.
- Florio, K., DeZorzi, C., Williams, E., Swearingen, K., & Magalski, A. (2021): Cardiovascular medications in pregnancy: a primer. *Cardiology clinics*, 39(1), 33-54.
- Ganiga, P., & Shetty, S. (2020): A prospective study on awareness of postnatal mothers regarding self and newborn care in a tertiary care centre in Mangalore, Karnataka. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 10(1), 240.
- Hussein Bakr, A., Mahmoud Ibrahim, R., & Fathy Mohamed, W. (2019): Women's knowledge regarding postpartum warning signs. *Egyptian Journal of Health Care*, 10(2), 201-215.
- Lopez-Gonzalez, D., & Kopparapu, A. (2022): Postpartum Care of the New Mother.
- Memchoubi, K., Kudale, A., Lilileima, L., Koshy, L., & Londhe, S. (2017): A study to assess the knowledge of postnatal mothers regarding self-care after childbirth in Bharati hospital and research centre, Pune. *IJAR*, 3(6), 1115-7.
- Memon, J., Holakouie-Naieni, K., Majdzadeh, R., Yekaninejad, M. S., Garmaroudi, G., Raza, O., & Nematollahi, S. (2019): Knowledge, attitude, and practice among mothers about newborn care in Sindh, Pakistan. *BMC pregnancy and childbirth*, 19, 1-9.

- **Mohammed El-Naggar, D., Abd Elaziz Madian, A., & Salah Yonis Mahrous, E. (2023):** knowledge and practice of postpartum women regarding neonatal care in El-Beheira Governate. *International Egyptian journal of Nursing science and Research*, 3(2), 455–468.
- **Mohini, H., & Shetty, B. (2017):** A study to assess the knowledge of mothers on home based neonatal care at selected area of rural Bangalore. *Int. J. Community Med. Public Health*, 4(5), 1695-1700.
- **Mwilike, B., Nalwadda, G., Kagawa, M., Malima, K., Mselle, L., & Horiuchi, S. (2018):** Knowledge of danger signs during pregnancy and subsequent healthcare seeking actions among women in Urban Tanzania: a cross-sectional study. *BMC pregnancy and childbirth*, 18(1), 4
- **Naigino, R., Makumbi, F., Mukose, A., Buregyeya, E., Arinaitwe, J., Musinguzi, J., & Wanyenze, R. (2022):** Resumption of Sexual Intercourse Among Postnatal Women Enrolled on Lifelong Antiretroviral Therapy in Uganda. *AIDS and Behavior*, 1-11.
- **Omran, A., Abd El-Fatah, A., Abdel Hakim Ahmed, H., & Abd El Sattar Ahmed, M. (2020):** Self-care of women during postpartum period in rural area. *Egyptian Journal of Health Care*, 11(1), 59-72.
- **Said, S., Elbana, H., & Salama, A. (2022):** Effect of Educational Guideline on Nurses Performance Regarding Postnatal Care of Mothers and Neonates. *SAGE open nursing*, 8, 23779608211070154, <https://doi.org/10.1177/23779608211070154>
- **Sayed, S., Khamis, M., & Arief, A. (2022):** Improvement of Self-care of Postpartum Minor Discomfort. *Assiut Scientific Nursing Journal*, 10(32), 126-137.
- **Teferi, T., Endalk, G., & Ayenew, G.M. (2023):** Inadequate dietary diversity practices and associated factors among postpartum mothers in Gambella town, Southwest Ethiopia. *Sci Rep* 13, 7252 <https://doi.org/10.1038/s41598-023-29962-6>
- **World Health Organization. (2023):** Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division: executive summary.

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