

Relationship between Postpartum Primiparous Sleep Quality and Self-Care

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Abstract: Background: Sleep during the postpartum period may be hindered by a number of biological, psychological and social stressors associated with motherhood. These stressors include physical changes such as a drop in postpartum hormones and social factors including support and infant care. **The purpose of the study was to** assess the relationship between postpartum primiparous sleep quality and self-care. **Method:** A descriptive correlational research design was utilized. **Sample:** A convenience sample of 100 postpartum women was selected. **Settings:** The study was conducted at the postpartum unit at Menoufia University Hospital and Shebin El-kom Teaching Hospital at Shebin El-kom. **Instruments:** An interviewing questionnaire, the Pittsburgh Sleep quality Index (PSQI) and Orem self-care Guidelines Checklist were used. **Results:** There was positive statistically significant difference between sleep quality and self-care. **Conclusion:** There was positive statistically significant correlation between sleep quality and self-care. **Recommendations:** Training sessions to the primiparous women about how to apply Orem self-care to improve their sleep quality should be provided.

Keywords: Sleep quality, Postpartum primiparous, Self care

INTRODUCTION

Sleep during the postpartum period may be hindered by a number of biological, psychological and social stressors associated with motherhood. These stressors include: physical changes such as a drop in hormones postpartum and social factors including support and infant care (Bayer, Hiscock, Hampton & Wake, 2015). Approximately 30% of mothers experience sleep disturbances following the birth of their newborn, particularly frequent night time awakenings during the first 2 to 4 weeks postpartum and shorter total sleep time (i.e., less than six hours) (Nisihara & Horiuchi, 2014).

“Self-care is a new trend in health care that is highly important in promotion of health, prevention and control of diseases, and can be utilized as a cost-effective strategy for individualized

patient education in postpartum and includes activities performed by the individual for the maintenance and promotion of her health and well-being” (Ghiasvand, 2017). “The postpartum period is a physiologically, emotionally and socially critical period for women and families, as most maternal deaths and health problems occur in this period. These problems are not necessarily resolved in the first year after childbirth, and can lead to functional limitations. Despite the postpartum care programs in place, significant complications and even death still occur in mothers after childbirth” (Woolhouse, 2017).

Postpartum nurses assume many roles while implementing the nursing care plan. Nurses provide direct physical care, teach mother care, and provide anticipatory guidance and counseling

(Abd El-Razek, 2013). Many nurses find to use the necessary components of the postpartum assessment and teaching topics these include, Breasts, Uterus, Bowel function, Bladder, Lochia, Episiotomy/perineum, Humans' sign, and Emotions (Yousef,2019).

Significance of the study

In the last decades; the incidence of sleep disorders has been reported to be around 75% in the postpartum period (Okun et al., 2013). As reported by many studies; poor sleep quality could directly lead to blood pressure disorders, glucose tolerance disorders, and postpartum depression (Jahanpak et al., 2013).

Although numerous other factors influence the quality of sleep obtained by new mothers during the postpartum period. So importance of sleep quality is to improve women's postpartum health. Healthcare practitioners have little to offer in terms of effective interventions to reduce sleep deprivation or fatigue. While maternal sleep is affected by the neonate's sleep-wake activity, the neonate's activity also is shaped by interaction with his or her mother. Indeed, many parents report difficulty with managing neonate night waking and settling to sleep and there is evidence that neonate sleep problems can persist into later childhood if not treated (BMJ, 2013). Based on reviewing literature; there is limited studies that evaluate the relationship between postpartum primiparous sleep quality, self-care and dependent care for their neonates. So the researcher tried to fill in such gap of knowledge by conducting this study.

Purpose of the study

The purpose of the study is to assess the relationship between postpartum

primiparous sleep quality, self-care and dependent care for their neonates.

Research questions:

- 1- What is the relationship between postpartum primiparous sleep quality and self-care?

Method

Research Design:

Descriptive correlational research design was used in this study.

Settings:

The study was conducted at the postpartum unit at two different settings at Menoufia University Hospital and Shebin El-kom Teaching Hospital.

Sampling:

Type of the sample:

A convenience sample of 100 postpartum women participated in the present study.

Inclusion criteria of the sample:

- Women who were primiparous.
- Women who had normal labor.
- Women who breastfed their newborns.
- Women who were free from any other psychological disease.

Exclusion criteria of the sample:

- Women who had chronic disease.
- Women who's their newborns have congenital anomalies.

Sample Size:

Based on the previous studies that examined the same outcomes and found significant differences, the average sample size was 100 to achieve 80% power to detect this difference with significant level of 5%. So, a convenience sample of 100 women will be recruited in the study.

The formula to calculate the sample size is:

$$n = \frac{Nz^2 p(1 - p)}{Ne2 + z^2 p(1 - p)}$$

Data collection instruments:

1. A structured Interviewing questionnaire

That was developed by the researcher for obtaining complete data concerning sleep quality and self-care of postpartum women. It included there parts:

Part I: Sociodemographic data: It included age, educational level, occupation, telephone number and marital status.

Part II: Past medical & surgical history: It referred to any chronic disease and surgery to the women

Part III: Data about current pregnancy: It included the course of present pregnancy and gestational age per weeks.

2. The Pittsburgh Sleep Quality Index (PSQI):

It was adopted from (Nash, 2014). PSQI was used in this study to assess postpartum women sleep quality in postpartum period. It contains seven domains they are subjective sleep quality (SSQ) (question 12), woman respond was ranked as follows good SSQ (0), fair (1) and poor (2). Sleep onset latency (question 2 and question 7 num. (a)) where woman respond was ranked as follows >15 minute (2), 10-15 minute (1) and 85-95 % (1) and higher SE >95 % (zero) .Sleep disturbance (questions 7 from b-k) The response of participant to each items was vary between none (zero) .once or twice (1) and three or more times a week (2). Sum of Q7 (b-k) 0=0; 1-10 =1 ;11-20 =2 ,sleeping medication usage (question 8)) The response of participant to each items was vary between none (zero) .once or twice (1) and three or more times a week(2). Daytime impairments (question 9 ,10 and 11) where women response was ranked as no (0), sometimes (1) and much (2) .Sum of Q9,10,11{ 0=0 }; {1-3 =1 }; { 4-6 =2}. - The component scores are summed to produce score

range (0-14). Higher scores than 5 indicate worse sleep quality.

3. Orem`s Self-Care Guidelines Checklist:

It was developed by the researcher based on Orem`s Self Care Model in line with the literature (Orem, 2001).

It contains questions about:

Part I: self-care practices to meet postpartum woman's universal requisites such as: nutrition, elimination, rest and sleep ...etc

Part II: Self-care practices to meet postpartum woman's developmental requisites model such as self-esteem, disturbed body image, risk for infection,etc.

Part III: Self-care practices to meet postpartum woman's health deviation requisites. This include all minor discomforts of postpartum period such as stress incontinence, changes in comfort-pain (perineum), changes in comfort-pain (breast) ,.... etc.

Each question is rated on a three points Likert scale as follows:

Scoring system

Scoring questions	Score
Supportive educative	3
Partial compensatory	2
Complete self-dependent	1

*Higher scores donate good self-care

Validity of the instruments:-

The validity of the instrument was ascertained by three experts (one expert from the Faculty of Nursing Maternal & Newborn health nursing and two experts from the Faculty of Medicine, Obstetrics &Gynecology department) who judged the instruments for content and internal validity. They were also asked to judge the items for completeness and clarity.

Suggestions were given and modifications were made.

Reliability of the instruments:-

Test – retest reliability was used by the researcher for testing the internal consistency of the instrument. It was done through the administration of the same instrument to the same participants under similar conditions. Scores from repeated testing were compared to test consistency of the results over time.

Ethical Considerations

Approaches to ensure the ethical issues were considered in the study. Confidentiality was achieved by the use of locked sheets with the names of participants replaced by numbers. All participants were informed that the information they provided during the study would be kept confidential and used only for statistical purposes. After finishing the study, the findings would be presented as a group data with no personal participant's information remained.

Pilot study

A pilot study was conducted to ensure the applicability of the instruments, the feasibility of the study and estimate the time needed for collecting the data. It was conducted on 10% of the total sample (10). Based on pilot study results, the researcher rephrased some questions and sentences then set the final fieldwork schedule. Sample of pilot study was excluded from the main sample size. The results of pilot study helped in refining the interviewing questionnaire and setting the final schedule. On the basis of pilot study results, the necessary modifications were made accordingly, so that the pilot was not included in the study sample.

Procedures:

- 1) Data collection for this study was carried out in the period from January, 2020 to the end of June, 2020
- 2) At the beginning, the researcher screened women to identify the eligible participants according to inclusion criteria.
- 3) The researcher visit the setting two days per week in Menoufia University Hospital (Monday and Wednesday) from 10 Am to 2 Pm (1) women per day and two days per week in Shebin El-Kom Teaching Hospital (Sunday and Tuesday) from 10 Am to 2 pm (1) women per day for 6 month to the availability of the postpartum women who met the inclusion criteria.
- 4) The first meeting with the woman was in postpartum department after delivery.
- 5) The researcher introduced herself to the participants and provided verbal explanation of the study. Verbal agreement was obtained from all participants. Each participant was informed that participation in the study was voluntary and she can withdraw at any time.
- 6) The researcher provided verbal explanation about the study in simple terms. The researcher collect data about Sociodemographic data
- 7) The researcher collected the data related to the sleep quality and orem self-care questionnaire at home after one month of delivery. The interview took around 15-20 minutes to be completed for each participant

Statistical Analysis:

Upon completion of the data collection, each answer sheet was coded and scored. The researcher coded the data into coding sheet so that data could be prepared for computer use. Data were statistically analyzed

using SPSS statistical package version 22 on IBM compatible computer. Test of significance was used and level of significance is $p < 0.05$. Statistical presentation and analysis of the present study were carried out.

Data was tabulated using the

following:

- Quantitative data were expressed as mean and standard deviation ($x \pm SD$) and analyzed by applying student t-test for comparison of two groups of normally distributed variables.
- Qualitative data were expressed as number and percentage (No. and %) and analyzed by applying chi-square test.
- ❖ **Arithmetic mean** was used as an average describing central tendency of observation.
- ❖ **Standard deviation (SD)** was used as a measure of dispersion of the results around the mean.
- ❖ **The chi-square test** is the most commonly used methods for comparing frequencies or proportions, (Fisher and Yates, 2008).

Significance of the results:

For all the statistical tests done, the threshold of significance is fixed at the 5% level (p value), as follows:-

- Non-significant difference if $p > 0.05$
- Significant difference if $p < 0.05$
- Highly significant difference if $p < 0.001$

Results

Table (1): shows distribution of the study participants according to their socio-demographic characteristics. According to age, 11% of the study participants their age less than 18 years, 60% their age from 18 to 30 years, and 29% their age more than 30 years. Regarding level of education, 30% of the study participants read and

write, 44% of them had secondary level of education /diplome and 26% had university. In relation to occupation, 29% of the study participants were working and 71% of them were housewives. Lastly, more than half of the study participants lived in rural (61%) and 39% of them lived in urban.

Table (2) shows distribution of the study participants according to their medical & surgical history. Regarding their medical history, 100.0% of the study participants didn't have medical history and didn't take any medications regularly. In relation to their surgical history, 61% of the study participants had past surgical history while 31.1% of them had appendectomy and 68.9% had tonsillectomy.

Table (3): shows distribution of the study participants according to their obstetric history. The majority of the study participants (94%) followed up during their pregnancy, (19%) went to the hospital, (40%) at private clinic, and (35%) at MCH. Regarding course of pregnancy, 93% of the study participants had pregnancy without complications while 7% of them had pregnancy with complications, the pregnancy with complications was hypertension (100%). In relation to complaining from abortion, 29% of the study participants complained from abortion, 58.6% for one time, and 41.4% for 2 times. There were 63% of the study participants their gestational age was 37-40 weeks, and 37% was more than 40 weeks. 69% of the study participants had good health status of the newborn, and 31% of them had excellent health status of the newborn.

Table (4): shows sleep quality pattern among the study participants who are applying Pittsburgh sleep quality questionnaire (sufficiency domain). There were highly statistical significant differences regarding sleep quality pattern among the study

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participants who are applying Pittsburgh sleep quality questionnaire (sufficiency domain) (P<0.001)

Table (5): shows sleep quality pattern among the study participants who are applying Pittsburgh sleep quality questionnaire (time dysfunction domain). There were highly statistical significant differences regarding sleep quality pattern among the study participants who are applying Pittsburgh sleep quality questionnaire (time dysfunction domain) (P<0.001)

Table (6): shows sleep quality pattern among the study participants who are applying Pittsburgh sleep quality questionnaire (disturbance domain). There were highly statistical significant differences regarding sleep quality pattern among the study participants who are applying Pittsburgh sleep quality questionnaire (disturbance domains) (P<0.001)

Table (7): shows distribution of the study participants according to Orem's self-care guidelines. There were highly statistical significant differences regarding Orem's self-care guidelines checklist among the study participants (P<0.001). On the other hand, there were no significant differences among the study participants regarding Orem's self-care guidelines checklist

as regards to breathing problems, nutritional difficulties and elimination (P>0.05).

Table (8): shows distribution of the study participants according to the universal self-care requisites. There were significant differences regarding the universal self-care requisites (P<0.01).

Table (9): shows distribution of the study participants according to the developmental self-care requests. There were highly statistically significant differences regarding the developmental self-care requests (P<0.01).

Table (10): shows distribution of the study participants according to the health deviation self-care. There were highly significant differences regarding the health deviation self-care (P<0.01).

Table (11): shows distribution of the study participants according to Orem's self-care guidelines. (P<0.01).

Table (12): shows correlation between sleep quality and Orem's self-care guidelines among the study participants. there were highly significant positive correlation during (P<0.01).

Table (1): Distribution of the Study Participants According to their Socio-demographic Characteristics (N=100).

Items	The Study Participants	
	No	%
Age		
• <18	11	11.0%
• 18-30	60	60.0%
• >30	29	29.0%
Level of education		
• Read and write	30	30.0%
• Secondary level of education /diplome	44	44.0%
• University	26	26.0%
Occupation		
• Working	29	29.0%
• House wife	71	71.0%
Residence		
• Rural	61	61.0%
• Urban	39	39.0%

Table (2): Medical and Surgical History of the Studied Group (N=100).

Items	The Study Participants	
	No	%
Medical history		
- No	100	100.0%
Do you take any medications regularly		
- No	100	100.0%
Past surgical history		
- Yes	61	61.0%
- No	39	39.0%
If yes, what is it ? (61.0%)		
- Appendectomy	19	31.1%
- Tonsillectomy	42	68.9%

Table (3): Obstetrics History regarding Studied Group (N=100).

Items	The Study Participants	
	No	%
Do you have follow up during this pregnancy?		
- Yes	94	94.0%
- No	6	6.0%
If yes, where is it ? (94)		
- Hospital	19	20.2 %
- Private clinic	40	42.6 %
- MCH	35	37.2 %
Course of pregnancy		
- Pregnancy without complications	93	93.0%
- Pregnancy with complications	7	7.0%
If pregnancy with complications, what they are?		
- Hypertension	7	7.0%
Did you complain from abortion?		
- Yes	29	29.0%
- No	71	71.0%
If yes, number of abortion?		
- 1.	17	58.6%
- 2.	12	41.4%
Gestational age		
- 37-40 weeks	63	63.0%
- >40weeks	37	37.0%
Health status of the newborn		
- Good (Apgar score 8)	69	69.0%
- Excellent (Apgar score > 8)	31	31.0%

Table (4): Sleep Quality Pattern among the Study Participants who are Applying Pittsburgh Sleep Quality questionnaire (Sufficiency Domain) (N=100).

Items			X ²	P.value
	No	%		
The Pittsburgh Sleep Quality Index				
- 9 Pm	4	4.0%	222.168	0.001
- 11 Pm	63	63.0%		
- Others	33	33.0%		
How long have you usually taken to fall asleep each night (minutes)?				
- <15 minutes	4	4.0%	282.353	0.001
- 15-30 minutes	30	30.0%		
- > 30 minutes	66	66.0%		
What time have you usually waken up in the morning?				
- 6 Am	58	58.0%	113.047	0.001
- 9 Am	0	0.0%		
- Others	42	42.0%		
Did you sleep during the day time?				
- Yes	67	67.0%	70.124	0.001
- No	33	33.0%		
If yes, how many hours did you sleep during the day time?				
- One hour	67	67.0%	69.671	0.001
- Two hours	33	33.0%		

Table (5): Sleep Quality Pattern among the Study Participants who are Applying Pittsburgh Sleep Quality questionnaire (Time dysfunction Domain) (N=100).

Items			X ²	P.value
	No	%		
Does poor sleep effect on your enthusiasm to get things done?				
- No at all	33	33.0%	172.532	0.001
- Only very slight	63	63.0%		
- A very big	4	4.0%		
Does poor sleep effect on your concentration to get things done?				
- No at all	33	33.0%	172.532	0.001
- Only very slight	63	63.0%		
- A very big	4	4.0%		
Does poor sleep effect on your mood during the day time?				
- No at all	33	33.0%	172.532	0.001
- Only very slight	63	63.0%		
- A very big	4	4.0%		

Table (6): Sleep Quality Pattern regarding the Study Participants who are Applying Pittsburgh Sleep Quality questionnaire (Disturbance Domain) (N=100).

Items	No	%	X ²	P.value
	Trouble regarding sleeping because you			
Cannot get to sleep within 30 minutes			81.433	0.001
- No	41	41.0%		
- Once or twice	30	30.0%		
- Three times or more	29	29.0%		
Wake up in the middle of the night or early morning			129.949	0.001
- No	0	0.0%		
- Once or twice	16	16.0%		
- Three times or more	84	84.0%		
You get up to use the bathroom			60.606	0.001
- No	8	8.0%		
- Once or twice	23	23.0%		
- Three times or more	69	69.0%		
Cannot breathe comfortably			74.157	0.001
- No	67	67.0%		
- Once or twice	33	33.0%		
Cough or snore loudly			172.532	0.001
- No	33	33.0%		
- Once or twice	67	67.0%		
Feel too cold			54.545	0.001
- No	75	75.0%		
- Once or twice	25	25.0%		
Feel too hot			100.389	0.001
- No	57	57.0%		
- Once or twice	43	43.0%		
Have bad dreams			104.648	0.001
-No	41	41.0%		
- Once or twice	22	22.0%		
- Three times or more	37	37.0%		
Have pain			67.908	0.001
- No	47	47.0%		
- Once or twice	23	23.0%		
- Three times or more	30	30.0%		
Infant crying			21.429	0.001
- Once or twice	6	6.0%		
- Three times or more	94	94.0%		
Breast feeding			7.008	0.030
- Once or twice	19	19.0%		
- Three times or more	81	81.0%		
Have you taken medicine to help you sleep?			14.334	0.001
- No	93	93.0%		
- Once or twice	7	7.0%		

Table (7): Distribution of the Study Participants who according to Orem’s Self-Care Guidelines (N=100).

Items	Pre		X ²	P.value
	No	%		
Breathing problems				
- Yes	59	59.0%	5.234	0.073
- No	41	41.0%		
Fluids intake and output problems				
- Yes	100	100.0%	39.921	0.001
- No	0	0.0%		
Nutritional difficulties				
- Yes	71	71.0%	5.518	0.063
- No	29	29.0%		
Have you noticed problems with your skin?				
- Yes	92	92.0%	56.182	0.001
- No	8	8.0%		
Elimination				
- Yes	71	71.0%	5.874	0.053
- No	29	29.0%		
Do you have any problems with bowel elimination?				
- Yes	100	100.0%	-	-
Activity & rest problems				
- Yes	96	96.0%	24.127	0.001
- No	4	4.0%		
Do you experience any of the following complaints during the exercise?				
- Yes	92	92.0%	30.353	0.001
- No	8	8.0%		
Social problems				
- Yes	71	71.0%	5.518	0.003
- No	29	29.0%		
Dangerous suffering				
- Yes	71	100.0%	58.889	0.001
- No	29	29.0%		
Normalcy				
- Yes	100	100.0%	51.158	0.001
- No	0	0.0%		
Adjustment for the motherhood				
- Yes	0	0.0%	40.385	0.001
- No	100	100.0%		
Health deviation self-care requisites				
- Yes	71	71.0%	5.518	0.003
- No	29	29.0%		
Do you have any discomforts with the perineal area?				
- Yes	100	100.0%	51.130	0.001
- No	0	0.0%		
Do you aware how to do perineal care?				
- Yes	0	0.0%	18.999	0.001
- No	100	100.0%		
Do you aware how to do breast care?				
- Yes	0	00.0%	18.999	0.001
- No	100	100.0%		

Table (8): Distribution of the Study Participants according to the Universal Self-Care Requisites (N=100).s

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Items			X ²	P.value
	No	%		
Breathing problems:-			189.000	0.001
- Complete self-dependent	19	19.0%		
- partial dependent	40	40.0%		
- fully dependent	0	0.0%		
Fluids overload:-			99.195	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	49	49.0%		
- fully dependent	47	47.0%		
Fluids deficit:-			99.195	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	49	49.0%		
- fully dependent	47	47.0%		
Difficult of chewing or swallowing:-			184.014	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	63	63.0%		
Difficult of digestion			201.000	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	67	67.0%		
- fully dependent	0	0.0%		
Malnutrition:-			201.000	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	67	67.0%		
- fully dependent	0	0.0%		
Skin problems:-			62.811	0.001
- partial dependent	45	45.0%		
- fully dependent	47	47.0%		
Urinary retention:-			218.000	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	67	67.0%		
- fully dependent	0	0.0%		
Diarrhea:-			200.000	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	71	71.0%		
- fully dependent	25	25.0%		
Constipation:-			300.000	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	96	96.0%		
- fully dependent	0	0.0%		
Insomnia:-			42.858	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	19	19.0%		
- fully dependent	73	73.0%		
Deep sleep:-			129.729	0.001
- partial dependent	59	59.0%		
- fully dependent	37	37.0%		
Postpartum fatigue:-			226.309	0.001
- partial dependent	88	88.0%		
- fully dependent	8	8.0%		
Chest pain or palpitation:-			152.198	0.001
- Complete self-dependent	34	34.0%		
- partial dependent	29	29.0%		
- fully dependent	29	29.0%		
Leg or muscles pain:-			255.012	0.001

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- Complete self-dependent	33	33.0%		
- partial dependent	59	59.0%		
- fully dependent	0	0.0%		
Daily activities:-				
- Complete self-dependent	53	53.0%	255.012	0.001
- partial dependent	39	39.0%		
- fully dependent	0	0.0%		
To overcome social problems:-				
- Complete self-dependent	4	4.0%	263.012	0.001
- partial dependent	96	96.0%		
- fully dependent	0	0.0%		
To overcome dangerous:-				
- Complete self-dependent	51	51.0%	148.440	0.001
- partial dependent	19	19.0%		
- fully dependent	30	30.0%		
Normalcy:-				
- Complete self-dependent	4	4.0%	163.118	0.001
- partial dependent	67	67.0%		
- fully dependent	29	29.0%		

Table (9): Distribution of the Study Participants according to the Developmental self –care requests (N=100).

Items	No	%	X ²	P.value
Coping to the mother				
- No	0	0.0%	115.678	0.001
- Complete self-dependent	4	4.0%		
- partial dependent	67	67.0%		
- fully dependent	29	29.0%		

Table (10): Distribution of the Study Participants according to the Health deviation self-care (N=100).

Items	No	%	X ²	P.value
Personal hygiene				
• Complete self-dependent	12	12.0%	118.684	0.001
• Partial	29	29.0%		
• Supportive-educative	30	30.0%		
Perineal discomforts				
• Complete self-dependent	4	4.0%	133.516	0.001
• Partial	67	67.0%		
• Supportive-educative	29	29.0%		
Perineal care				
• Complete self-dependent	4	4.0%	161.521	0.001
• Partial	67	67.0%		
• Supportive-educative	29	29.0%		
Breast care				
• Complete self-dependent	4	4.0%	92.810	0.001
• Partial	42	42.0%		
• Supportive-educative	54	54.0%		

Table (11): Distribution of the Study Participants according to Orem’s self-care guidelines (N=100).

Items		F.test	P.value
Self-Care Requisites	33.96±10.92	3.5	0.03
Developmental self-care requests	3.14±0.56	18.5	0.001
Health deviation self-care Requisites	7.86±2.3	3.79	0.024

Table (12): Correlation between Sleep Quality and Orem’s self-care guidelines among the Study Participants(N=100).

Total Score of Sleep Quality	Total Score Orem's Self Care Guidelines	
	R	P.value
	0.883	0.001

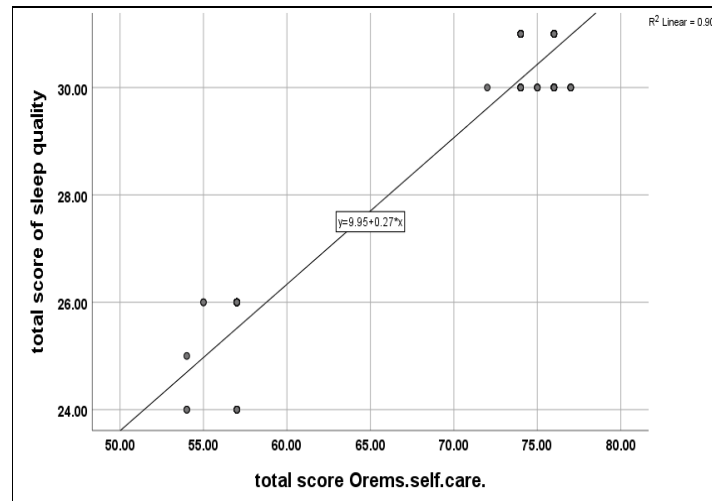


Figure (1): Correlation between Sleep Quality and Orem’s self-care.

Discussion

The findings of the current study are discussed in the following sequence: Sociodemographic characteristics of the studied groups, pittsburgh sleep quality index, orem’s self-care guidelines checklist and correlation between sleep quality and orem’s self-care

Sociodemographic

characteristics of the studied groups

The present study showed that the majority of the study women their age ranged between 18-30 years. This may reflect that women in the study were

childbearing age. This may be rationalized as the majority of women were married at this age which is considered as middle reproductive.

These findings are agreed with Okyay, (2018) who investigated the effect of physical activity level at the postpartum period on the quality of life and depression level in Malatya, Turkey. Also, this finding was in line with Çapik, et al., (2015) who investigated the Effect of the Care Given Using Orem’s Self-Care Model on the Postpartum Self- Evaluation.

Regarding education, half of the study women had secondary level of education while the minority of them

had university level. This may be rationalized as most women are from rural areas where according to culture rules, the girls looked forward to getting married more than learning and completing the school. This was supported by Khatun, et al., (2018) who investigated the relationships among postpartum fatigue, depressive mood, self-care agency, and self-care action of first-time mothers in Bangladesh.

In contrast, Creti et al., (2018) in Canada who conducted a study about 'Sleep during the postpartum period, characteristics of first-time and healthy mothers' and their findings revealed that the majority of women had completed postsecondary education.

In contrast, El-naser, (2019) in Egypt who investigated "The Relationship between Sleep Quality, Physical Activity and Postpartum Mood". Their findings revealed that the majority of women were read and write.

Regarding occupation, the most of the study women were housewives because they were not find the job. The findings were supported by the study of Iranpour, (2016) in Iran, who conducted a study about the association between sleep quality and postpartum mood. The findings revealed that women were housewives as they did not know about Orem self-care in the postpartum period and relationship between Orem self-care, sleep quality and dependent care in the postpartum period. Also, they were supported by a study conducted by Kheirabadi, et al., (2016) who revealed that the working mothers had not enough knowledge to deal with the postpartum period.

Regarding the medical and surgical history, all of them in the present study had not medical history and most of them had not surgical history. These findings are supported by Lisa, et al., (2019) who investigated that sleep

quality across pregnancy and postpartum: effects of parity and race. Regarding the pregnancy follow up, the most women in the current study followed up during pregnancy for antenatal care due to increase the health needs that arise during pregnancy. All literature emphasized the importance of antenatal education and care to avoid any complications during pregnancy, labor and postpartum period. This result was rationalized as there is more concern and interest from Ministry of Health about the importance of antenatal care as a strategic plan to improve the women health. This current finding was confirmed by Nash, (2014) in America and Hildingsson, et al., (2016) in Sweden whose findings revealed that women had access to the healthcare professional using medical assistance having private health insurance and antenatal follow up.

Describing the findings

according to sleep quality:

The current study also revealed that most of women slept less than 7 hours. This is because of many factors that cause sleep disturbance such as neonate crying and breastfeeding and so they had moderate sleep sufficiency. This is supported by Libman, et al., (2017) who conducted a study in Canada, revealed that the average total sleep night time was 6.29 hours. Also, it illustrated that women had difficulty initiating or maintaining sleep. Nash, (2014) also demonstrated that the study participants had sleep disturbances that included poor sleep quality as well as significant symptoms of insomnia. The present study revealed that most women suffered from daytime dysfunction which means poor sleep quality affect their concentration, ability to perform any activity during day and also affect their mood. This may be rationalized as there are many

factors that cause sleep disturbance as infant care, breastfeeding and also newborn cry decreases the sleep sufficiency. Therefore they all cause day time dysfunction. The result of the current study was similar to study conducted in America by Dorheim, et al., (2014) who revealed that women reported sleep disturbance and daytime dysfunctions. In addition, these findings were supported by a similar study conducted in USA by Gjerdingen, et al., (2018). Their findings revealed that women faced sleep disturbance and discussed the potential prevention strategies that could include feeding the newborn more often during the day, keeping the newborn close in the evening to encourage cluster feeding before bed, and going to bed immediately after feeding the newborn at night. Additionally, good sleep hygiene and habits should be taught. These include naps that are short in duration, limiting light exposure during the night, avoiding caffeine after a certain time, relaxation exercises, and cognitive restructuring to address worrying. The present study revealed that most the study women had poor sleep quality due to sleep disturbance. They did not sleep enough duration and had daytime dysfunction. It was supported by a similar study conducted in Iran by Kheirabad, (2016) to investigate the association between sleep quality and postpartum mood. The findings revealed that the study participants had sleep disturbances and poor subjective sleep quality.

Describing the findings

according to Orem self-care

This finding indicates that the “The home care provided to the confined women with Self Care Model was supported. The present study revealed that the total mean scores of universal self-care requisites (Breathing pattern

problems, fluids intake and output problems, nutritional difficulties, elimination problems, sleeping pattern problems, social problems, hazards exposure and normalcy) of the studied women. This finding came in agreement with Khatun, et al., (2018) who investigated that the relationships among postpartum fatigue, depressive mood, self-care Agency, and self-care Action of First-time Mothers in Bangladesh.

This finding came in line with Khatun, et al., (2018) who investigated that the relationships among postpartum fatigue, depressive mood, self-care Agency, and self-care Action of First-time Mothers in Bangladesh.

Regarding fluids intake and output problems, the current study showed that postpartum women’s fluids intake and output problems. This finding was supported Apay, (2020) who conducted a study about evaluation of the care given to mothers giving birth by caesarean section according to Roy's model.

Regarding Sleep Pattern the current study showed that postpartum women’s disturbed sleep pattern. This finding was supported Nazik’s (2020) who conducted on 63 women giving vaginal birth, the diagnosis “Disturbed Sleep Pattern ” was included into the unrecovered diagnoses. Also certain studies concluded that women in postpartum period had sleep disorders (Doganer, 2015; Guner, 2017).

Regarding fatigue the current study showed that postpartum women’s fatigue. This finding was supported Song, et al., and (2015) who conducted a study about empirical test of an explanatory theory of postpartum fatigue in Korea.

Regarding constipation the current study showed that postpartum women’s constipation. This finding was supported Doganer, (2015) founded that confined women had

constipation complaint in the postpartum period.

Regarding urinary retention the current study showed that postpartum women's urinary retention. This finding was supported Nazik and Eryilmaz (2020) who conduct the study about the prevention and reduction of postpartum complications: Orem's model.

The total mean scores of developmental self-care requirements (coping of mother). This study showed that there were defect in coping of mother. This finding came in agreement with Kim et al., (2019) who conducted a study about feelings, self-care, and infant care reported by Korean women at risk for postpartum depression.

This finding came in agreement also with Barkin and Wisner, (2019) who conducted a study about the role of maternal self-care in new motherhood.

The total mean scores of health deviation self-care (personal hygiene, perineal discomfort, perineal care and breast care) this study showed that there were defect in health deviation self-care. This finding came in agreement with Khatun, et al., (2018) who investigated that the relationships among postpartum fatigue, depressive mood, self-care Agency, and self-care Action of First-time Mothers in Bangladesh.

This finding was supported Chamangasht, et al., (2021) who investigated that efficacy of an early self-care based education program on the self-evaluation of primiparous postpartum mothers.

Describing the findings

according to relationship

between sleep quality and Orem

self-care:

The finding of the present study revealed that there is a statistically

significant positive correlation between sleep quality and Orem self-care. This is rationalized as poor sleep quality may be due to infant care and breast feeding and physical activity. These findings were similar to a study conducted by Khatun, (2018) who investigated that the relationships among postpartum fatigue, depressive mood, self-care agency, and self-care action of first-time mothers in Bangladesh. The other study was told that the relationship between fatigue and sleep quality in postpartum women Farag and Hassan (2019). A study by Khatun, (2018) and Farag and Hassan (2019) proved that there is positive correlation between sleep quality and Orem self-care.

Conclusion:

There was positive statistically significant relationship between sleep quality and Orem self-care. This was answer to question.

Recommendations:

Training sessions to the primiparous women about how to apply Orem self-care to improve their sleep quality and dependent care for their neonates

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