

Effect of Exclusive Breastfeeding on the Quality of Life among Primiparous Women

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Abstract

Background: Evidence of the importance of exclusive breastfeeding as the cornerstone of child and maternal health continues to increase, recent researches assured that exclusive Breastfeeding effect on the different aspects of women quality of life. **Aim; the study aim was to** evaluate the effect of exclusive Breastfeeding on the Quality of life among Primiparous Women, **Subject and Methods;** descriptive design was used. A purposive sample of 250 women recruited in this study, which was conducted at outpatient clinics at Elhamoul General Hospital and Kafr Elshiekh General Hospital. **Two tools of data collection** were used; **Tool 1.** Structured interviewing questionnaire, **Tool 2.** Quality of life assessment tool. **Results;** the current study revealed that the majority of primiparous women had satisfactory knowledge regarding exclusive breastfeeding, had positive attitude regarding exclusive breastfeeding and more than two thirds of primiparous women have good quality of life regarding exclusive breastfeeding **Conclusion;** The current study concluded that exclusive breastfeeding affected different aspects of primiparous women quality of life. **Recommendations;** Designing and implementing strategies for maternal care during the antenatal and postnatal periods regarding exclusive breastfeeding. Further research is still needed to identify the effect of exclusive breastfeeding during postpartum period on other maternal-child health issues.

Key words; exclusive breastfeeding, primiparous, Quality of life.

Introduction

Exclusive breastfeeding means that the infant receives only breast milk, no other liquids or solids are given – not even water – with the exception of oral rehydration solution, or drops/syrup of vitamins, minerals or medicines. Evidence of the importance of breastfeeding as the cornerstone of child survival, nutrition and development and maternal health continues to increase. Breast milk is cheap, convenient, hygienic, and has high concentration of growth and immunity factor. A series of systematic reviews have shown that mothers who breastfeed are at decreased risk of breast cancer (**Bhandari et al., 2015**).

Improving breastfeeding rates globally can prevent over 20, 000 deaths from breast cancer annually. Breastfeeding gives babies the best start for a healthy life and has benefits for the health and wellbeing of mothers and babies. Breastfeeding also has economic benefits for the whole family and society. Researches show that

breastfeeding has significant health benefits for mothers. Breastfeeding assists uterus to return to its pre-pregnant state faster. It can help women lose weight after baby's birth, may reduce the risk of mothers with gestational diabetes developing type 2 diabetes, and may reduce the risk of osteoporosis (**Gregory et al., 2013**).

The World Health Organization (WHO) recommends exclusive breastfeeding for the first 6 months of life, followed by continued breastfeeding with appropriate complementary foods up to 2 years or beyond. Women need support in order to optimize their chances of breastfeeding regarding WHO's recommendations (**Barros et al., 2016**).

Quality of life is a multidimensional and complex concept, and also a comprehensive and flexible process that encompasses all aspects of people's life. It meets not only essential needs, but also includes factors that cause self-actualization. In other words, quality of life originates from people's

satisfaction or dissatisfaction with different aspects of life, which are important to them. It includes health, occupational, economic, psychological and family areas. It is also an important criterion for measuring health care quality (Alijanpoor et al., 2015).

Breastfeeding leads to improved infant and maternal health outcomes in both industrialized and developing countries and is recommended as the conventional and unequalled method for feeding infants. Exclusive breastfeeding decreases the chance of developing chronic illnesses related to obesity and the development of ovarian and breast cancer among women. Breastfeeding reduces the incidences of postpartum bleeding, maternal obesity by an earlier return to pre-pregnancy weight, and developing breast and ovarian cancer. Exclusive breastfeeding provides additional emotional benefits to the mother. In addition, evidence shows that exclusive breastfeeding mothers are less likely to develop depressive symptoms (Spiro, 2017).

Breastfeeding has been reported to impact mood and stress reactivity in mothers. Specifically, breastfeeding mothers report reductions in anxiety, negative mood, and stress while compared to formula-feeding mother. Breastfeeding seems to be related to good physical and emotional health for the mother during the puerperium, the lactation period and all her future life. Epidemiological studies have demonstrated that, compared to women who did not breastfeed, lactating women reported seeking for medical care less often, a lower frequency of respiratory, cardio circulatory and gastrointestinal diseases, as well as fewer symptoms related to emotional problems (Chowdhury et al., 2015).

The nurse's role to encourage breast feeding varies with the time and place where patient care is provided. In each setting, however, the nurse plays a significant role in helping the mother to begin breast feeding and to enjoy it, at the same time providing her infant with optimum nutrition for his/her early growth and development. The nurse can provide information about, and support of, breastfeeding (Laanterä et al., 2015).

The prenatal nurse can inform women about the advantages of breastfeeding to herself

and her baby. The labor and delivery nurse can aid the mother in her first contact with the baby and reassure the mother who has a caesarean birth, or a premature or sick infant, that she too can nurse. The postpartum nurse can help breast feeding to continue by providing frequent maternal-infant contact during the women's hospital stay (Giugliani et al., 2016).

Significance of the Study:

There are health benefits for women that breastfeed, including the reduction of risks for both breast and ovarian cancers. Each year a mother breastfeeds, her risk of developing invasive breast cancer is reduced by 6 percent; longer breastfeeding is also associated with a reduction in ovarian cancer. Current rates of breastfeeding prevent almost 20,000 deaths from breast cancer each year, and another 20,000 deaths could be prevented by improving breastfeeding practices (Barros et al., 2016).

Exclusive breastfeeding is not universal in Egypt. Only 29% of children aged 4-5 months are exclusively breastfed United Nations Children's Fund (UNICEF). Children who receive only breast milk are considered exclusively breastfed and 56% early initiation of breastfeeding (within one hour of birth) and 66% Timely complementary feeding rate (6-9 months) United Nations Children's Fund (UNICEF 2015). Nowadays there is a growing body of research regarding the importance Exclusive breastfeeding. So, this study will be done to evaluate the effect of exclusive breastfeeding on the quality of life among primiparous women.

Aim of the Study

This study aimed to evaluate the effect of the exclusive breastfeeding on quality of life among primiparous women.

Research Question:

What are effects of the exclusive Breastfeeding on quality of life among primiparous women?

Subjects and Methods

The methodology followed for achieving the aim was elaborated under the following items:

- I- Technical design.
- II- Operational design.

III- Statistical design.

(I) Technical design:

The technical design used for the study discussed the following four categories, research design, setting of the study, the subjects, and the tools used for data collection, and the ethical considerations.

Research design:

Descriptive study was used in this study.

Research Setting:

This study was conducted in the Maternity outpatient clinics at Elhamoul General Hospital and Kafr Elshiekh General Hospital.

Research Subjects:

Type of sample: Purposive sample.

Inclusion criteria

- Primiparous women.
- Free from any medical or surgical illness

- Housewife

Women have telephone number

Sample Size:

All primiparous women fulfill previous inclusion criteria with exclusive Breastfeeding are admitted to outpatient clinics at Elhamoul General Hospital and Kafr Elshiekh General Hospital in 250 women.

$$\text{Sample size} = \frac{Z_{1-\alpha/2}^2 P(1-p)}{d^2}$$

$Z_{1-\alpha/2}$ is standard normal variate at 5% type I error ($P < 0,05$) and at 1% type I error. ($P < 0,01$) As in majority of studies p values are considered significant Below 0.05 hence.

P = Expected proportion in population based previous studies or pilot studies.

d = Absolute error or precision - has to be decided by researcher.

Sample technique:

All primiparous women fulfill previous inclusion criteria with exclusive Breastfeeding are admitted to outpatient clinics at Elhamoul General Hospital and Kafr Elshiekh General Hospital at morning shift from 8 am to 2 pm.

Tools of the study:

Two tools were used for data collection related to this study:

Tool (1): Structured interviewing

questionnaire:

The researcher constructed a questionnaire after reviewing the related literature (Singh et al., 2018). It was divided in 4 parts and Consisted of (41) questions of open and closed-ended types.

The first Part I:

Included assessment of women personal data (questions: 1- 6), it took 5 minutes to be fill by women.

The second Part II:

Included women assessment of Obstetric history: questions (7-10). The time allowed to fill this part of questionnaire was 5 minutes

The third Part III: Included assessment of women knowledge about exclusive Breastfeeding.

- It consisted of 17 multiple choice questions regarding women knowledge about exclusive Breastfeeding.

- Each knowledge question was given a score and the total score of knowledge was obtained for each women ranging from 17 to 34.

- The time allowed to fill this part of questionnaire was 10 minutes.

Scoring system

The correct answers were predetermined according to literature. Each knowledge question was given a score and the total score of knowledge was obtained for each women ranging from 2 as correct answer, 1 as unknown, and 0 as incorrect. The range of score was from 17 to 34, women total score was classified as follows;

- Satisfactory (score of 2) represents 60 % or more are correct answers

- Unsatisfactory (score 0) it represents less than 60 % are correct answers.

The fourth Part IV: included assessment of women attitude toward exclusive Breastfeeding.

It was developed by the researcher related to the literature (Al Ketbi et al., 2018) the researcher to evaluate affective domains regarding women attitude toward exclusive Breastfeeding.

- A14 statements of questionnaire used to evaluate women attitude toward exclusive Breastfeeding., All items was rated used a Likert-type scale it ranged from correct answer (2), unknown (1) and, incorrect answer (0).

- Total scores could range from 14 to 28.
- It took 10 minutes to be filled by women.

Scoring system

- ❖ Positive attitude (score of 2) represents more than 65 % are correct answers.
- ❖ Uncertain (score of 1) it represents 50 % to less than 65 % are correct answers
- ❖ Negative attitude (score 0) it represents less than 50 % are correct answers.

Tool (2): Quality of life assessment tool (Javier Bueno et al., 2017)

Included assessment of quality of life of primiparous women with exclusive Breastfeeding

It was modified by the researcher related to the literature (Javier Bueno et al., 2017): to assess physical, social, emotional well being and environmental area.

Scoring system

- A 23 statements of questionnaire used to evaluate quality of life of primiparous women with exclusive Breastfeeding, (physical, Q1-Q5, social, Q6-Q10, emotional, Q11-Q15, environmental, Q16-Q20, sexuality, Q21-Q23). All items was rated used a Likert-type scale it ranged from correct answer (2), undecided (1) and, incorrect answer (0).

- Total scores could range from 23 to 46
 - It took 10 minutes to be filled by women.
- Total score of QOL;

Total score%	Quality of life
More than 60%	Good QOL
50%-60%	average QOL
Less than 50%	Poor QOL

Operational design:

The operational design included; the preparatory phase, Pilot study and field work.

A. Preparatory phase:

Review current and past, local and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection. The developed tools was examined by experts to test their reliability and validity to the study.

Administrative design:

An official approval to conduct this study was obtained from Dean of faculty of nursing Ain Shams University, a letter containig the Title and aim was directed to administrator of the previous mentioned study setting.

Pilot Study:

A pilot study was conducted on 10% of the total sample in order to ensure the applicability of the tools and the time needed to complete it. it was included or excluded from study sample and why??

Field Work:

After approval from Elhamoul General Hospital and Kafr Elshiekh General Hospital, the researcher visited the previous mentioned study setting 3 days a week at morning shift from 8 am to 2 pm to collect data. The researcher first explained the aim of the study to the participants and reassured the women that information collected treated confidentiality and used only for the purpose of the research. This aim of the study achieved through fulfillment of the tools of data collection first, structured interviewing questionnaire which used to assessed Primiparous women's general characteristics, obstetric history and her knowledge, attitude about exclusive Breastfeeding in time range (10-25) minutes, in addition follow up of health related quality of life for primiparous women will be done by telephone

using quality of life assessment tool filling in time range (5-10) minutes.

All women were firstly assessed for personal data and, obstetric history and her knowledge, attitude about exclusive Breastfeeding at hospital by self-administered questionnaire (part 1 of questionnaire). The time allowed to fill this part of questionnaire was 10-25 minutes.

Follow up of health regarding quality of life among primiparous women was done by telephone using for level of women knowledge, attitude about exclusive Breastfeeding by self administered questionnaire (part 2 of questionnaire). The time allowed to fill this part of questionnaire was 5-10 minutes.

Statistical design:

Data entry in the study was done by using quality control through two stages which were coding and data entry. Obtained data were statistically analyzed, organized & presented in numbers, percentage, tables, figures, & diagrams as required & suitable statistical tests were used to test the significance of results obtain.

Ethical Consideration:

The ethical research considerations in this study include the following:

- The research approval was obtained from Scientific Research Ethical Committee in Faculty of Nursing at Ain Shams University before starting the study.
- The researcher clarified the objective and aim of the study to the participants included in the study.
- The researcher assured maintaining anonymity and confidentiality of the subject data.
- Women were informed consent and they are allowed to choose to participate or not in the study and that they have the right to withdraw from the study at any time without penalties.

Limitations of the study:

- Data collection was somewhat difficult and exhausted due to the necessity of researcher to assess and evaluate each women alone using various methods of data collection

- The lack of suitable places to collect data from the women.

Results:

Table 1 reveals that women age ranged between 15-45 years; with mean age 24.6; 5.5 yr. Women completed their secondary education represented 45.6 % followed by those completed university education (44.8%) and primary education (4%). Meanwhile 68.8 % of the studied sample lived in rural areas, housewife women represented (99.2%), (70.4 %) of them have enough income.

Table 2 reveals that 95.6 of primiparous women feel exhausted with Housework while (94.8%) of them have not a good sleep and (85.6%) have headache.

Table 3 shows that (85.6%),(46.4%) of primiparous women get emotional support from their family and friends. (84.4%) of them accept role as a mother.

Table 4 shows that (79.6%) of primiparous women have not a general feeling of well-being while (63.6%) of them disagreed that feel sad and (34.4%), undecided that feeling depressed.

Table 5 reveals that 50.8% of primiparous women able to adjust with the life right now (financial, resources, transport) but not enjoy the things usually do for fun. While (50.4%) of them not capable to participation in community and (46%) of primiparous women have not opportunities for acquiring new information and skills.

Table 6 shows that (58%) of primiparous women agreed that exclusive breastfeeding affects the sexual state. While (47.6%) of them undecided that exclusive breastfeeding leads to a deficiency in the sexual state and (42%) of

them disagreed that exclusive breastfeeding increases sexual desire.

Table 7 reveals that there was statistical significance difference between primiparous' general characteristics and their total quality of life in Occupation ($P = 0.109$) and household income ($P = 0.109$).

Figure 1 shows that the studied sample experienced different levels of QOL in different

domains, 80% experience good level in emotional domain, while (12%, 5% and 5%) experienced poor level in social, environmental and sexual domains respectively.

Figure 2 shows that 66.8% of primiparous women have good quality of life regarding exclusive breastfeeding while 8.2% of them have poor quality of life regarding exclusive breastfeeding.

Table (1): Distribution of primiparous women according to their general characteristics.

Women' characteristics	Total number = 250	
	NO	%
Age/ years		
15 < 25	142	56.8
25 < 35	101	40.4
35 ≤ 45	7	2.8
Mean ± SD		32 ± 6.4
Marital status		
Married	243	97.2
Divorced / Separated	4	1.6
Widow	3	1.2
Level of education		
Illiterate.	8	3.2
Read and write.	6	2.4
Primary.	10	4
Secondary.	114	45.6
University.	112	44.8
Residence		
Urban.	78	31.2
Rural.	172	68.8
Occupation		
Housewife	248	99.2
Working	2	0.8
Average household income		
Enough.	176	70.4
Hardly enough.	67	26.8
Not enough	7	2.8

Table (2): Distribution of primiparous women according to their quality of life related to physical well-being.

Items	Total number = 250					
	Agree		Undecided		Disagree	
	NO	%	NO	%	NO	%
I have pain during breastfeeding	169	67.6	13	5.2	68	27.2
I am feel exhausted with Housework	139	95.6	6	2.4	5	2
I have not a good sleep	237	94.8	7	2.8	6	2.4
I have headache	214	85.6	16	6.4	20	8.0
I have menstrual pain	195	78	30	12	25	10

Table (3): Distribution of primiparous women according to their quality of life related to social family well-being.

Items	Total number = 250					
	Agree		Undecided		Disagree	
	NO	%	NO	%	NO	%
I am feel close to my friends	79	31.6	32	12.8	139	55.6
I am get emotional support from my family	214	85.6	24	9.6	12	4.8
I am get support from my friends	116	46.4	71	28.4	63	25.2
I am feel close to my partner (or the Person who is my main support)	126	50.4	76	30.4	48	19.2
accept role as a mother	211	84.4	29	11.6	10	4

Table(4):Distribution of primiparous women according to their quality of life related to emotional well-being.

Items	Total number = 250					
	Agree		Undecided		Disagree	
	NO	%	NO	%	NO	%
I am feel sad	60	24	31	12.4	159	63.6
Feeling anxious and stressed	126	50.4	44	16.4	80	32
feeling depressed	85	34	86	34.4	79	31.6
feeling alone	135	54	47	18.2	68	27.2
I have not a general feeling of well-being	199	79.6	26	10.4	25	10

Table (5): Distribution of primiparous women according to their quality of life related to environment.

Items	Total number = 250					
	Agree		Undecided		Disagree	
	NO	%	NO	%	NO	%
I have accepted my physical environment (pollution, noise, traffic, climate)	85	34	47	18.8	118	47.2
I am enjoy the things I usually do for fun	67	26.8	56	22.4	127	50.8
I am able to adjusts with the quality of my Life right now (financial, resources, transport)	127	50.8	38	15.2	85	34
I have opportunities for acquiring New information and skills	90	36	45	18	115	46
I am Capable to participation in community.	81	32.4	43	17.2	126	50.4

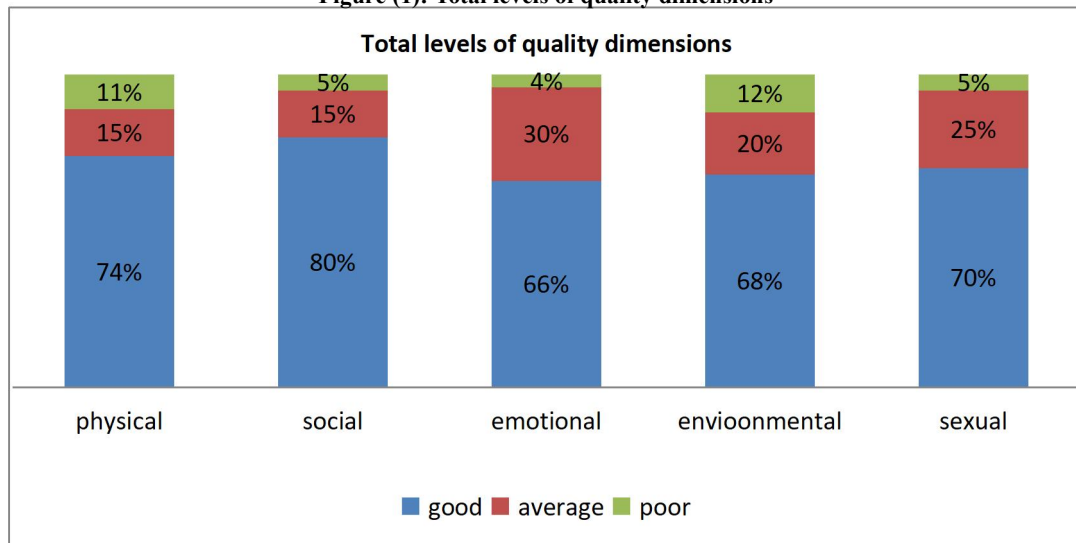
Table 6 Distribution of primiparous women according to their quality of life related to sexual.

Items	Total number = 250					
	Agree		Undecided		Disagree	
	NO	%	NO	%	NO	%
Exclusive breastfeeding affects the sexual state	145	58	46	18.4	59	23.6
Exclusive breastfeeding leads to a deficiency in the sexual state	41	16.4	119	47.6	90	36
Exclusive breastfeeding increases sexual desire	41	16.4	104	41.6	105	42

Table(7):Relation between primiparous' general characteristics and their total quality of life regarding exclusive breastfeeding.

Women' characteristics	Average		Good		X ² & P value
	NO	%	NO	%	
Age/ years					
15 < 25	52	36.6	90	63.4	X ² = 2.409
25 < 35	28	27.7	73	72.3	P = 0.300
35 ≤ 45	3	42.9	4	57.1	
Marital status					
Married	81	33.3	162	66.7	X ² = 2.002
Divorced / Separated	2	50	2	50	P = 0.368
Widow	0	0	3	100	
Level of education					
Illiterate.	1	12.5	7	97.5	X ² = 2.661
Read and write.	2	33.5	4	66.5	P = 0.616
Primary.	4	40	6	60	
Secondary.	35	30.7	79	69.3	
University.	41	36.6	71	63.4	
Residence					
Urban.	24	30.8	54	69.2	Fisher exact test
Rural.	59	34.3	113	65.7	P = 0.345
Occupation					
Housewife	81	32.7	167	67.3	Fisher exact test
Working	2	100	0	0	P = 0.109
Average household income					
Enough.	62	35.2	114	64.8	X ² = 3.909
Hardly enough.	21	31.3	46	68.7	P = 0.142
Not enough	0	0	7	100	

Figure (1): Total levels of quality dimensions



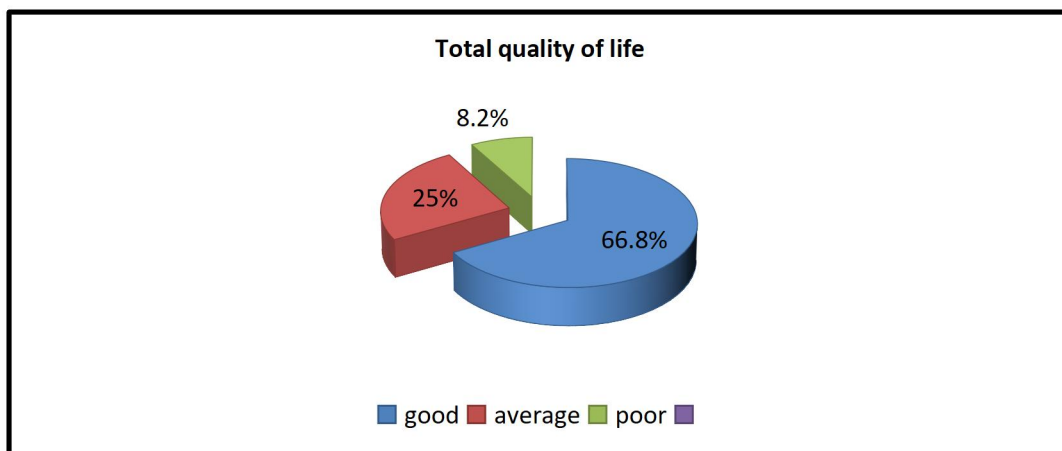


Figure (2): Distribution of women according to their total quality of life regarding exclusive breastfeeding.

Discussion

Evidence of the importance of exclusive breastfeeding is as the cornerstone of child survival, nutrition and development and maternal health continue to increase. So that exclusive breastfeeding affect all aspects of women's life. It includes health, occupational, economic, psychological-mental, and family areas, and is an important criterion for measuring health care quality, a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to silent features of their environment (Alijanpoor and Bahadoran, 2015).

Regarding general characteristic of primiparous women the current study revealed that age ranged between 15-45 yrs. with mean age 24.6; 5.5 0. More than two quadrant of them completed their secondary education. while more than three quadrants of the primiparous women lived in rural areas, housewives and have enough income. In the same line and in a study done by Al Ketbi (2018) et al. who found most of the participants had formal education, majorly secondary education for the rural groups, and tertiary education for the urban groups with monthly income. This accordance may be due to middle age, income and education are more likely to seek medical care, be better informed about their children's nutritional requirements, and adopt improved healthy practices. On the opposite of the current study, a

study had done by Ihudiebube-Splendor et al. (2019) found that the age range and mean age of the study group (16-42 years and 25.49-27.34 years, For employment status, the majorities of participants had formal education, lived in urban areas, and were working, either employed in a paid job or self-employed. This contrary may be due to differences in social and environmental life between two studies.

Many researches confirmed that women who were breastfeeding exclusively for 6 months since birth have good quality in all aspects of life physically, emotionally, social and sexual., Regarding primiparous women physical quality of life the current study showed that the majority of primiparous women feel exhausted with Housework and has not a good sleep so most of primiparous women have headache. Similarity with F, Mortazavi, S, A Mousavi, R, Chaman, et al (2019) who found that common difficulties experienced by women were baby's frequent demand for breastfeeding lead to pain during breastfeeding, had not good sleep and headache, feeling exhausted, difficulty combining work and breastfeeding. This similarity between two studies may be due to the studied women were primiparous and not able to adjust with new responsibilities.

Concerning primiparous women social quality of life the current study illustrated that most of studied women get emotional support from their family and friends and accept role as a mother. In the same line El Beth, St John, et

al (2016), who studied Relationship between Social Support and Quality of Life in postpartum Women, finding that the majority of breastfeeding women feel close to family and partner. Similar findings also have been reported in **Ahn & Youngblut, 2007; Schytt & Waldenstrom (2007)**. This similarities between studies confirmed that Social support had found to be a significant predictor of maternal HRQoL. so support was only a significant predictor of HRQoL in the social and physical domain.

Investigating environmental aspect of quality of life **Carlos Zubara, Katia Foresti, M, Schumacher, et al. (2018)**, conduct a study on maternal quality of life in the postpartum period found that the Environment domain was the lowest scoring area. These results were accordance with present study finding displayed that about half of primiparous women were able to adjust with the quality of Life right (financial, resources, transport) but not enjoy the things usually do for fun, not capable participation in of community activities so two quadrants of primiparous women have not opportunities for acquiring new information and skills.

As regard to sexual quality of life for breastfeeding women and in a study carried by **Al Yilmaz, S, Polat, et al 2019**, finding that, The rate of the women who enjoyed sexual satisfaction more was higher in the **non-breastfeeding** women than in the breastfeeding women. These results were in agreement with the current study that showed that more than two quadrant of primiparous women agreed that exclusive breastfeeding affects the sexual state, more than one third of primiparous women disagreed that exclusive breastfeeding increases sexual desire.

On evaluating total scores of quality of life among study sample, the present study illustrated that more than two thirds of the primiparous women have good quality of life during exclusive breastfeeding practices, These result were in agreement with the study done by **Kamalifard, et al (2018)** who found that the mean score of QoL in breastfeeding mothers in this study was higher than average. **Mortazavi, F, et al (2014)** also assured the finding of the

results that mothers who continued EBF a t2 and 4 months postpartum had better QOL than mothers who discontinued EBF.

On assessing relationship between primiparous' general characteristics and their total quality of life The present study revealed that there was statistically significance difference between primiparous' general characteristics and their total quality of life in Occupation ($P = 0.109$) and household income ($P = 0.109$). This finding agreed **N, Rezaei, A, Azadi, R, Zargousi, et al(2016)** who found that aged younger than 30 years and secondary education had better QoL. This agreement may be due to younger women are mostly primiparous and receiving more attention by both family members and health professionals, Women with secondary education had higher scores in mental health and physical function subscales

Conclusion

Based on the finding of the present study, it is concluded that:

- The majority of primiparous women had satisfactory knowledge regarding exclusive breastfeeding.
- Almost all primiparous women have positive attitude regarding exclusive breastfeeding.
- The present study showed that more than two third of primiparous women have good quality of life regarding exclusive breastfeeding while less than one tenth of them have poor quality of life regarding exclusive breastfeeding.
- There was significance difference between primiparous' general characteristics and their total knowledge regarding exclusive breastfeeding in form of residence.
- There was significance difference between primiparous' general characteristics and their total attitude in form of residence and household income.

- There was statistical significance difference between primiparous' general characteristics and their total quality of life in Occupation and household income.

Recommendations

In the light of the study findings, the following were recommended;

- Designing and implementing strategies for maternal care during the antenatal and postnatal periods regarding exclusive breastfeeding.

- Intervention programs on the awareness and benefits of exclusive breastfeeding among mothers should be disseminated at the community level and should involve important key players such as community leaders, husbands, and mothers in law, mass media, friends and grandmothers, as they often influence the decision of a mother to exclusively breastfeed.

- Support the need for health care system interventions, family interventions, and public health education campaigns to promote optimal BF practices, especially in less educated women.

- Further research is still needed to identify the effect of exclusive breastfeeding during postpartum period on other aspects of maternal-child health.

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