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Effect of Breastfeeding Education on Knowledge and Intention-To-Practice Exclusive Breastfeeding among Pregnant Women Attending Antenatal Clinic in Ile-Ife, Nigeria

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Abstract Mothers have been encouraged to practice exclusive breastfeed for the first six months of child's life. Breastfeeding education improves knowledge and intention to practice exclusive breastfeeding among pregnant women. The study assessed the effect of breastfeeding education on the knowledge and intention to practice exclusive breastfeeding among pregnant women attending antenatal clinic in Ile-Ife, Nigeria. The study was conducted among 200 pregnant women attending antenatal clinics in the two Local Government Areas (LGAs) in Ile-Ife. It was a quasi-experimental study conducted in three phases: pre-intervention/baseline, intervention and post-intervention phases. Baseline data were collected from both intervention and control groups using pre-tested interviewer-administered questionnaire. The intervention group received breastfeeding education while the control group did not. After 12 weeks from the start of the intervention, post-intervention data were collected from both the intervention and control groups using the same questionnaire at baseline. Data collected were analyzed with the use of IBM Statistical Package for Service Solutions (SPSS) version 25 software. Descriptive analysis was done for all variables. The outcome variables were compared at pre and post-intervention using chi-square and McNemar's chi-square (binomial distribution) as test of association. The level of significance was set at p value less than 0.05. In the intervention group, knowledge of EBF increased from 29.8% to 95.2% at post-intervention respectively, and this was statistically significant at $p < 0.001$. Similarly, the intention to practice EBF improved from 75.0% to 94.0% at post-intervention. This difference was statistically significant at $p = 0.045$. In the control group, knowledge of EBF increased from 30.4% to 57.6% at post-intervention, however, this difference was not statistically significant i.e. $p > 0.05$. There was no increase in the intention to practice EBF. The study concluded that breastfeeding education significantly improved knowledge of exclusive breastfeeding but not the intention to practice exclusive breastfeeding.

Keywords: *Exclusive, Breastfeeding, Pregnant, Knowledge, Intention to practice*

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1. Introduction

Adequate nutrition is of great importance in the early days after a child's birth. The early days of a child starts counting right from inception to 2years of life. These first 1000 days is also called "window of opportunity". [1,2] The formation of cells, development of skeletal muscles, development of cognitive abilities amidst other growth processes starts in this phase of life. Feeding practices adopted by a mother determines the outcome of the child's development. Therefore, adequate nutrition is required for the attainment of optimal growth and healthy nutritional status in this early stage. [3]

Mothers have been encouraged to practice exclusive breastfeed for six months. [4,5] Exclusive breastfeeding has been defined as a feeding method in which an infant is given only breast milk (whether directly from the breast of the mother, bottle-fed or from a wet nurse), this means no water nor herbs but only prescribed drops or syrups (vitamins, minerals, medicines) can be given to the infant.

[5] Studies have shown that breast milk is a secure food for an infant since the temperature is optimum, does not need processing and it contains all nutrient needed by the child at 6 months. [5]

Breastfeeding education improves knowledge of breastfeeding practices among pregnant women and have been proven to increase breastfeeding initiation rates. [5] A study revealed that ensuring adequate visits for recommended Antenatal Care (ANC) could be useful in improving breastfeeding practices among pregnant women. [6]

The major goal of exclusive breastfeeding is to reduce death rates among infants. Appropriate breastfeeding (which include early initiation of breastfeeding, exclusive breastfeeding and complementary feeding) of infants until 2 years of age, among all other preventive interventions, is a great determinant of child survival and it has the potential to prevent up to 1.4 million deaths among infants in developing countries.[8] Majority of the nutrition education for pregnant women in Nigeria has focused on the nutrition of the pregnant mother, which is important for the outcome of pregnancy. However, attention also needs to be drawn to educating women on the recommended feeding practices for the optimal growth of their children. Hence, this study aims to determine the effect of breastfeeding education on the knowledge and intention to practice exclusive breastfeeding among pregnant women attending antenatal clinics in Ile-Ife, Osun State, Nigeria.

This study will give information on the effect of nutrition education on knowledge and intention to practice exclusive breastfeeding among pregnant women. This might help in designing programmes to improve the exclusive breastfeeding practice.

2. Materials and Methods

The study was conducted in the two Local Government Areas (LGAs) in Ile-Ife, Osun State. It was a quasi-experimental study that employed quantitative method of data collection. The study was conducted in three phases: pre-intervention/baseline, intervention and post-intervention phases. The sample size was 100 pregnant women each for intervention and control group, calculated using Le Fischer's formula for calculating sample size for the comparison of two independent proportions. Pregnant women in first and second trimester attending antenatal care in primary health facilities in Ile-Ife were included in the study while pregnant women who were sick at the point of data collection were excluded from the study.

The respondents were selected using multi-stage sampling techniques;

Stage 1: One primary health center (PHC) and one comprehensive health center (CHC) were selected from the list of government-owned health facilities in each of the two LGAs, using simple random sampling technique (balloting), making a total of two PHCs and two CHCs. One of the LGAs was randomly selected as the intervention group (Ife East) and the other as control group (Ife Central).

Stage 2: The number of pregnant women to be selected in each health center was determined using proportional allocation. The respondents were selected from the antenatal clinics in PHCs and CHCs using systematic sampling technique. In Ife East, 57 respondents were selected from the CHC while 43 respondents were selected in PHC. In Ife Central, 93 respondents were selected in the CHC while 7 respondents were selected in the PHC. The sampling interval (k) was determined by dividing the estimated population of pregnant women attending antenatal clinic in the month, by the estimated sample size for that health facility. The first respondent was selected using simple randomization technique and subsequent respondents were every k^{th} number until the sample size was met.

Baseline data were collected from both intervention and control groups using pre-tested interviewer administered questionnaire from January 9, 2023 to January 30, 2023. The intervention group received educational intervention while the control group did not. The intervention was done from February 6, 2023 to February 27, 2023. The pregnant women in the intervention group received breastfeeding education which included trainings on early initiation of breast milk, latching of baby to breast, duration of exclusive breastfeeding after the collection of the baseline data. There were practical demonstrations using a dummy baby, there were also power point presentation and teachings. The training started early in the morning from 9a.m to 2p.m., and their palpation and ante-natal care was included within the schedule of the training. Arrangement was made with nurses for return visits for the pregnant women after a month post-intervention to interact with the pregnant women and to provide answers to their questions.

At 12 weeks from the start of the intervention, post-intervention data were collected from both the intervention and control groups using the same questionnaire used at baseline from April 3, 2023 to April 28, 2023. Data collected were analyzed with the use of IBM Statistical Package for Service Solutions (SPSS) version 25 software. Descriptive analysis was done for all variables. The outcome variables; knowledge of exclusive breastfeeding and intention to practice exclusive breastfeeding were compared between intervention and control group at pre and post-intervention using chi-square while intra-group comparison was done using McNemar's chi-square (binomial distribution) as test of association. The level of significance was set at p value less than 0.05.

3. Results

Sociodemographic characteristics

The result indicates majority of the respondents were in the age group 20 – 29 years and accounted for 63 (75.0%) and 61 (66.3%) of the intervention and control group respectively. Also, more than half of the respondents was primigravida (Intervention: 43, 51.2% control: 50, 54.3%). There were no statistically significant differences in the relationship of these socio-demographic characteristics between the intervention and the control groups. (Table 1)

Pre-intervention Knowledge of respondents about exclusive breastfeeding

Majority of the respondents (Intervention: 65, 77.4%; Control: 66, 71.7%) agreed that Exclusive breastfeeding is the best option for babies up to 6 months. (Table 2)

Overall, 25 (29.8%) of the intervention group had good knowledge while 59 (70.2%) had poor knowledge while for the control group, only 30 (30.4%) had good knowledge while 62 (69.6%) had poor knowledge. There was no statistically significant difference in the knowledge of exclusive breastfeeding between intervention and control groups.

Pre-intervention intention to practice exclusive breastfeeding

All respondents disagreed to only formula feed baby and agreed to give breastfeeding a try. (Table 3) Overall, in the intervention group, 21 (25.0%) had poor intention to practice exclusive breastfeeding while 63 (75.0%) had good intention to practice. For the control group, 23 (25.0%) had poor intention to practice while 69 (75.0%) had good intention to practice. There was no statistically significant difference in the intention to practice exclusive breastfeeding between intervention and control groups.

Post-intervention knowledge of exclusive breastfeeding

Majority of the respondents in the intervention 69 (82.1%) and control 60 (65.2%) groups agreed that water or pap should not be given to a child under 6 months and this has a significant difference between the intervention and control group (p = 0.011). (Table 4) Overall, 80 (95.2%) of the intervention group had good knowledge while only 4 (4.8%) had poor knowledge while for the control group, 53 (57.6%) had good knowledge while 39 (42.4%) had poor knowledge. This difference was statistically significant at p = 0.002. (Figure 1)

Table 1. Sociodemographic characteristics of respondents

Socio-demographic characteristics	Groups (%)		Statistics
	Study (n = 84)	Control (n = 92)	
Age groups (in years)			
17 - 19	6 (7.1)	6 (6.5)	χ^2 = 2.173
20 - 29	63 (75.0)	61 (66.3)	df = 2
30 and above	15 (17.9)	25 (27.2)	p = 0.337
Occupation			
Semi-skilled	69 (82.1)	67 (72.8)	
Student	7 (8.3)	4 (4.3)	χ^2 = 7.671
Skilled worker	4 (4.8)	11 (12.0)	df = 5
Apprentice	2 (2.4)	2 (2.2)	p = 0.175
Unskilled	1 (1.2)	2 (2.2)	
Unemployed	1 (1.2)	6 (6.5)	
Education			
Primary	11 (13.1)	9 (9.8)	χ^2 = 0.766
Secondary	53 (63.1)	57 (62.0)	df = 2
Tertiary	20 (23.8)	26 (28.3)	p = 0.682
Income			
No income	10 (11.9)	16 (17.4)	χ^2 = 8.975
< 10000	10 (11.9)	4 (4.3)	df = 3
10000 - 20000	54 (64.3)	49 (53.3)	p = 0.052
> 20000	10 (11.9)	23 (25.0)	
Number of live births			
0	44 (52.4)	50 (54.3)	χ^2 = 1.242
1 - 2	21 (25.0)	27 (29.3)	df =2
3 - 5	19 (22.6)	15 (16.3)	p = 0.537
Number of previous pregnancies			χ^2 = 2.227
0	43 (51.2)	50 (54.3)	df = 2
1	21 (25.0)	28 (30.4)	p = 0.328
2 and above	20 (23.8)	14 (15.2)	
Gestational age (in weeks)			χ^2 = 1.131
1 - 13	13 (15.5)	20 (21.7)	df = 1
14 - 27	71 (84.5)	72 (78.3)	p = 0.288

χ^2 = Chi-square; df = degree of freedom, p = p-value

Table 2. Pre-intervention Knowledge of Exclusive breastfeeding of Pregnant Women attending Antenatal Clinics in Ile-Ife, across study and control groups

Knowledge of Exclusive Breastfeeding	Groups (%)		Statistics
	Study (n = 84)	Control (n = 92)	
EBF is the best option for babies up to 6 months			χ^2 = 1.891
[a]Yes	65 (77.4)	66 (71.7)	df = 2
No	17 (20.2)	20 (21.7)	p = 0.388
Don't know	2 (2.4)	6 (6.5)	
Water, pap should be given to a child under 6 months			χ^2 = 5.209
Yes	34 (40.5)	35 (38.0)	df = 2
[a]No	49 (58.3)	52 (56.5)	p = 0.074
Don't know	1 (1.2)	5 (5.4)	
Breastmilk helps baby attain healthy weight			χ^2 = 1.314
[a]Yes	13 (15.5)	9 (9.8)	df = 2
No	1 (1.2)	1 (1.1)	p = 0.518
Don't know	70 (83.3)	82 (89.1)	
Exclusive breastfeeding aids in child spacing			χ^2 = 1.122

[a]Yes	1 (1.2)	0 (0.0)	df = 2
No	46 (54.8)	50 (54.3)	p = 0.571
Don't know	37 (44.0)	42 (45.7)	
Breast milk is more easily digested than formula			
[a]Yes	54 (64.3)	55(59.8)	χ^2 = 0.424
No	2 (2.4)	2 (2.2)	df = 2
Don't know	28 (33.3)	35 (38.0)	p = 0.809
Formula feeding is better for working mothers			
Yes	19 (22.6)	15 (16.3)	χ^2 = 2.111
[a]No	30 (35.7)	42 (45.7)	df = 2
Don't know	35 (41.7)	35 (38.0)	p = 0.348
Breastmilk has nutrient, water, needed for 6 months			
[a]Yes	66 (78.6)	65 (70.7)	χ^2 = 1.447
No	12 (14.3)	18 (19.6)	df = 2
Don't know	6 (7.1)	9 (9.8)	p = 0.485
EBF protects the mother against cancers			
[a]Yes	50 (59.5)	45 (48.9)	χ^2 = 2.052
No	5 (6.0)	6 (6.5)	df = 2
Don't know	29 (34.5)	41 (44.6)	p = 0.358
EBF prevents childhood malnutrition			χ^2 = 1.131
[a]Yes	71 (84.5)	72 (78.3)	df = 1
Don't know	13 (15.5)	20 (21.7)	p = 0.288
EBF helps in the development of good teeth			
[a]Yes	70 (83.3)	72 (78.3)	χ^2 = 1.425
No	0 (0.0)	1 (1.1)	df = 2
Don't know	14 (16.7)	19 (20.7)	p = 0.490
EBF prevents diarrhea infection in a child			
[a]Yes	53 (63.1)	54 (58.7)	χ^2 = 0.370
No	3 (3.6)	4 (4.3)	df = 2
Don't know	28 (33.3)	34 (37.0)	p = 0.831

[a] Correct option, χ^2 = Chi-square; df = degree of freedom, p = p-value, **EBF= Exclusive breastfeeding**

Table 3. Pre-Intervention Intention to practice Exclusive breastfeeding of Pregnant Women attending Antenatal Clinics in Ile-Ife, across study and control groups

Intention towards Exclusive breastfeeding	Groups (%)		Statistics
	Study (n = 84)	Control (n = 92)	
I am planning to only formula feed my baby			
Disagree	84 (100.0)	92 (100.0)	
I am planning to give breastfeeding a try			
Agree	84 (100.0)	92 (100.0)	
I will practice EBF till 1 month			
[a]Agree	71 (84.5)	74 (80.4)	χ^2 = 2.296
Neutral	10 (11.9)	11 (12.0)	df = 2
Disagree	3 (3.6)	7 (7.6)	p = 0.317
I will practice EBF till 3 months			
[a]Agree	68 (81.0)	74 (80.4)	χ^2 = 0.391
Neutral	3 (3.6)	5 (5.4)	df = 2
Disagree	13 (15.5)	13 (14.1)	p = 0.823
I will practice EBF till my baby is 6months			
[a]Agree	55 (65.5)	48 (52.2)	χ^2 = 0.881
Neutral	9 (10.7)	21 (22.8)	df = 2
Disagree	20 (23.8)	17 (18.5)	p = 0.644
I will formula feed at work resumption			
Agree	20 (23.8)	32 (34.8)	χ^2 = 13.236
Neutral	52 (61.9)	41 (44.6)	df = 2
[a]Disagree	12 (14.3)	19 (20.7)	p = 0.051

[a]Correct option; χ^2 = Chi-square; df = degree of freedom; p = p-value; *Statistically significant
EBF= Exclusive breastfeeding

Table 4. Post-intervention Knowledge of Exclusive breastfeeding of Pregnant Women attending Antenatal Clinics in Ile-Ife, across study and control groups

Knowledge of Exclusive Breastfeeding	Groups (%)		Statistics
	Study (n = 84)	Control (n = 92)	
EBF is the best option for baby up to 6 months			χ^2 = 3.191
[a]Yes	69 (82.1)	65 (70.7)	df =1
No	15 (17.9)	27 (29.3)	p = 0.074

Water, pap should be given to a child under 6 months			χ^2 = 6.426
Yes	15 (17.9)	32 (34.8)	df =1
[a]No	69 (82.1)	60 (65.2)	p = 0.011*
Breastmilk helps baby attain healthy weight			χ^2 = 0.918
[a]Yes	84 (100.0)	91 (98.9)	df =1
No	0 (0.0)	1 (1.1)	p =0.338
Exclusive breastfeeding aids in child spacing			χ^2 = 16.247
[a]Yes	50 (59.5)	27 (29.3)	df =1
No	34 (40.5)	65 (70.7)	p < 0.001*
Breast milk digests easily than formula			χ^2 = 2.402
[a]Yes	83 (98.8)	87 (94.6)	df =1
No	1 (1.2)	5 (5.4)	p = 0.121
Formula feeding is better for working mothers			χ^2 = 1.837
Yes	14 (16.7)	23 (25.0)	df =1
[a]No	70 (83.3)	69 (75.0)	p =0.175
Breastmilk has nutrient, water, needed for 6 months			χ^2 = 1.323
[a]Yes	69 (82.1)	69 (75.0)	df =1
No	15 (17.9)	23 (25.0)	p = 0.250
EBF protects the mother against cancers			χ^2 = 1.586
[a]Yes	83 (98.8)	88 (95.7)	df =1
No	1 (1.2)	4 (4.3)	p = 0.208
EBF prevents childhood malnutrition			
[a]Yes	84 (100.0)	92 (100.0)	
EBF helps in the development of good teeth			
[a]Yes	84 (100.0)	92 (100.0)	
EBF prevents diarrhea infection in a child			χ^2 = 0.123
[a]Yes	82 (97.6)	89 (96.7)	df = 1
No	2 (2.4)	3 (3.3)	p = 0.726

[a]Correct option; χ^2 = Chi-square; df = degree of freedom; p = p-value; EBF = Exclusive Breastfeeding

Table 5. Post-intervention Intention to practice Exclusive breastfeeding among Pregnant Women attending Antenatal Clinics in Ile-Ife, across study and control groups

Intention towards Exclusive breastfeeding	Groups (%)		Statistics
	Study (n = 84)	Control (n = 92)	
I am planning to only formula feed my baby			χ^2 = 0.918
Agree	0 (0.0)	1 (1.1)	df = 1
[a]Disagree	84 (100.0)	91 (98.9)	p = 0.338
I am planning to at least give breastfeeding a try			χ^2 = 0.918
[a]Agree	84 (100.0)	91 (98.9)	df = 1
Disagree	0 (0.0)	1 (1.1)	p = 0.338
When my baby is 1 month old, I will practice EBF			
[a]Agree	79 (94.0)	87 (94.6)	χ^2 = 0.499
Neutral	1 (1.2)	2 (2.2)	df = 2
Disagree	4 (4.8)	3 (3.3)	p = 0.779
When my baby is 3 months old, I will practice EBF			
[a]Agree	72 (85.7)	71 (77.2)	χ^2 = 3.078
Neutral	3 (3.3)	9 (9.8)	df = 2
Disagree	9 (10.7)	12 (13.0)	p = 0.215
I will practice EBF till my baby is 6months			
[a]Agree	68 (81.0)	50 (54.4)	χ^2 = 3.573
Neutral	5 (6.0)	12 (13.0)	df = 2
Disagree	11 (13.1)	30 (32.6)	p = 0.016*

I will feed my baby with formula when I resume work			
[a]Agree	11 (13.1)	37 (40.2)	χ^2= 22.893
Neutral	14 (16.7)	22 (23.9)	df = 2
Disagree	59 (70.2)	33 (35.9)	p < 0.001*

[a]Correct option; χ^2 = Chi-square; df = degree of freedom; p = p-value; *Statistically significant
EBF= Exclusive breastfeeding

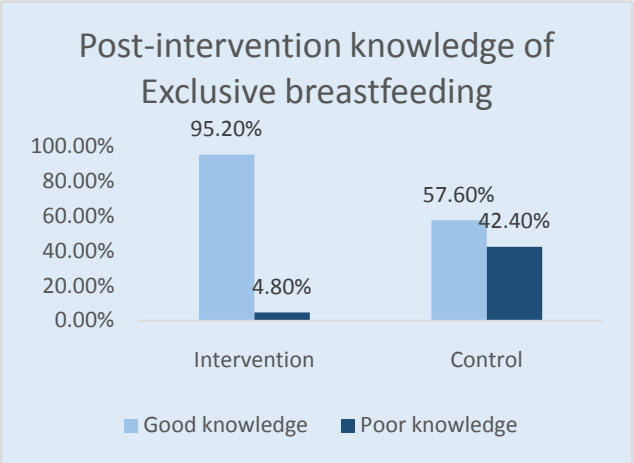

Figure 1. Post-intervention knowledge of Exclusive breastfeeding among intervention and control groups

Post-intervention intention to practice exclusive breastfeeding

Majority of the respondents in the intervention 68, (81.0%) and more than half of the control group 50 (54.4%) reported that they will breastfeed exclusively up to 6 months. This was statistically significant at p = 0.016. (Table 5) Overall, in the intervention group, 5 (6.0%) had poor intention to practice exclusive breastfeeding while 79 (94.0%) had good intention to practice. For the control group, 23 (25.0%) had poor intention to practice while 69 (75.0%) had good intention to practice. This difference was statistically significant at p = 0.048.

Intra-group comparison of variables for pre-intervention and post intervention of variables

In the intervention group, at pre-intervention, only 25 (29.8%) of the respondents had good knowledge while at post intervention 80 (95.2%) had good knowledge. This difference was statistically significant at p < 0.001. Good intention towards breastfeeding was 63 (75.0%) at pre-intervention while at post-intervention, 79 (94.0%) had good intention to practice exclusive breastfeeding. This was statistically significant at p = 0.045.

In the control group, only 30 (30.4%) of the respondents had good knowledge while at post-intervention, 53 (57.6%) had good knowledge. However, this difference was not statistically significant i.e. p > 0.05. Also, at pre-intervention, 69 (75.0%) had good intention to practice exclusive breastfeeding, this remained the same at post-intervention.

4. Discussion

The intervention and control groups were comparable in the distribution of the socio-demographic characteristics. Three-quarters and three-fifths of the intervention and control groups were within age group 20-29 years respectively. Three-fifths of the respondents in both intervention and control groups had secondary education. Half of the respondents in both intervention and control groups were primiparous and primigravida. These differences were not statistically significant. This corroborates the findings from the study of Rasoli *et al.* [9] among pregnant women in Darmian which found out there was no statiscally significant differences between the intervention group in the age of mothers, the number of pregnancies they have had, parity and literacy levels.

Knowledge of exclusive breastfeeding for both intervention and control group was low at pre-intervention. More than three-fifth of the control group while seven out of ten of the intervention group had poor knowledge. The poor knowledge is surprising considering that majority of the respondents were literate and information about exclusive breastfeeding is expected to be an integral part of the routine education at antenatal clinics. This could be partly due to the fact that over 50% of the respondents were primiparous and primigravida. This finding is also corroborated by the finding of Ogunba et al. [10] in her research among undergraduates in Obafemi Awolowo University, Ile-Ife who found out that less than a tenth of the respondents had good knowledge of Exclusive breastfeeding. Ihudiebube-Splendor *et al.* [6] also discovered poor knowledge among primiparous pregnant women in Enugu and reported that their lack of adequate knowledge may be partly due to the fact that some women do not show up at the antenatal clinics punctually and must have missed the routine breastfeeding education delivered by the health personnel. However, this is in contrast to the study of Omuemu et al. [4] among working mothers in Federal Capital Territory, whose finding revealed that seven out of ten mothers had good knowledge about breastfeeding. This contrast could be attributed to the exposure of these working mothers to adequate information from hospital and internet since majority of them have tertiary education.

At post-intervention, there was a statistically significant improvement in the knowledge of exclusive breastfeeding in the intervention group. Though there was increase in knowledge in the control group, it was not statistically significant. The significant improvement in knowledge in the intervention group could be explained by the breastfeeding education introduced in the intervention group. The increase in knowledge at post-intervention is supported by the findings of Rasoli *et al.* [9] among pregnant women in Darmian who found out that the mean scores of knowledge in the intervention group improved significantly than the control group. Similarly, Jehonni et al. [11] reported a significant improvement in the knowledge of pregnant women in Iran which was attributed to educational intervention.

Intention to practice exclusive breastfeeding improved

significantly in the intervention group at post-intervention while it remained unchanged in the control group. This increase can be attributed to the breastfeeding education introduced in the intervention group as found in the study of Rasoli et al. [9] who reported that training intervention based on theories, especially those based on the extended theory of planned behavior, increase intention to practice and actual practice of exclusive breastfeeding which is a significant behavior in pregnant women. Mostafa et al. [12] also agreed that an educational intervention about breastfeeding which uses interactive methods resulted in improved knowledge of interns in Cairo, Egypt.

5. Conclusion

The breastfeeding education introduced in the intervention group was effective in significantly improving the knowledge of exclusive breastfeeding and intention to practice exclusive breastfeeding among the pregnant women.

Public awareness about exclusive breastfeeding should increase, in order to improve the knowledge of those who are important to breastfeeding mothers and increase support from them towards exclusive breastfeeding. The present study identified some gaps in the knowledge of pregnant women attending antenatal clinics about the content and duration of exclusive breastfeeding at pre-intervention, therefore, the educational curriculum for antenatal clinics should target these identified gaps.

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Competing Interests

The authors declare that there are no competing interests for the study.

List of abbreviations

ANC- Antenatal Care
CHC - Comprehensive Health Center
LGA - Local Government Areas
PHC - Primary Health Center
SPSS- Statistical Package for Service Solutions
UNICEF - United Nations Children's Fund
WHO – World Health Organization

References

[1] United Nations Children's Fund (UNICEF) (2017) "*First 1000 days: the critical window to ensure that children survive and thrive*". Available at: www.unicef.org/ southafrica/ media/ 551/file/ZAF-First-1000-days-brief-2017-pdf (Accessed: 22 November 2021).

[2] Kelechi-Ebisike, V. O. *et al.* (2020) 'Prevalence of Early Initiation of Breastfeeding (EIBF) and Exclusive Breastfeeding (EBF) and Some Associated Factors among Mothers in Gombe Metropolis , Gombe State , Nigeria', *ACTA Scientific Nutritinal Health*, 4(1), pp. 130–135.

[3] Sulaiman, S. *et al.* (2020) 'Assessment of Nutritional Status, Knowledge, Attitude and Practices of Infant and Young Child Feeding in Kumbotso Local Government Area, Kano State, Nigeria', *Pakistan Journal of Nutrition*, 19(9), pp. 444–450.

[4] Omuemu, V. O. and Adamu, S. A. (2019) 'Assessment of breastfeeding knowledge and practices among working mothers in the federal capital territory Nigeria', 6(1), pp. 20–29.

[5] World Health Organisation. (2023) Exclusive breastfeeding for optimal growth and development and health of infants. https:// www.who.int/ tools/elena/interventions/exclusive-breastfeeding. Assessed at 6th March, 2023.

[6] Ihudiebube-Splendor, C. N. *et al.* (2019) 'Exclusive Breastfeeding Knowledge, Intention to Practice and Predictors among Primiparous Women in Enugu South-East, Nigeria', *Journal of Pregnancy*, 2019.

[7] Mekonnen, M. *et al.* (2021) 'Infant and young child feeding practice among mothers of children age 6 to 23 months in Debrelibanos district, North Showa zone, Oromia region, Ethiopia', *Plos One*, 16(9), p. e0257758.

[8] Thakur, S. and Shukla, P. (2018) 'Effectiveness of Nutrition Education on the Knowledge of Primigravida and Multigravida Women about Exclusive Breastfeeding in Urban Slum of New Delhi', 8(November), pp. 56–63.

[9] Rasoli, H. *et al.* (2020) 'Effect of Education Based on Extended Theory of Planned Behavior on Exclusive Breastfeeding in Pregnant Women in Darmian in 2017', *Health Scope*, 9(3).

[10] Ogunba, B.O. and Agwo, E.O. (2020) 'Knowledge, attitude and intending practice of female undergraduates about breastfeeding', *African Journal of Food, Agriculture, Nutrition and Development.*

[11] Jeihooni, A. K., Kashfi, S. M. and Harsini, P. A. (2019) 'Impact of an educational intervention on breastfeeding behaviour among pregnant women', *British Journal of Midwifery*, 27(1), pp. 33–42.

[12] Mostafa, O. A., Salem, M. R. and Badr, A. M. (2019) 'Effect of an educational intervention on breastfeeding knowledge and attitude among interns at Cairo University Hospital', *Journal of the Egyptian Public Health Association*, 94(1).