Knowledge and Practice of Postpartum Exercise by Childbearing Mothers in Ohaozara Local Government Area, Ebonyi State

Oliver Igwebuike Abbah^{1*}, Godfrey Chinweike Nji², Adaustin Ifeoma Okeke³

^{1,2,3}Department of Human Kinetics and Health Education, University of Nigeria, Nsukka.

*Corresponding author: Oliver Igwebuike Abbah. Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. E-mail: oliver.abbah@unn.edu.ng

Abstract

The study investigated the level of knowledge and practice of postpartum exercise by childbearing mothers (CBM) in Ohaozara Local Government Area of Ebonyi State. The researchers adopted the descriptive survey research design. Four specific objectives with its corresponding research question and two hypotheses guided the study. The population for the study was 5, 432 childbearing mothers assessing post natal services at health facilities. The sample size of 375 childbearing mothers obtained through Taro Yamane formula for a finite population was used. Instrument for data collection was the questionnaire. Research questions were answered using frequencies and percentage while chi square statistics was used to test the hypothesis at 0.05 level of significance. Results indicate that CBMs in Ohaozara possess high level of knowledge of postpartum exercise (77.1%). Also, the higher the level of education of CBMs, the higher their knowledge of postpartum exercise (PPE). Hence, CBMs with tertiary level of education have the highest level of knowledge of PPE (81%), whereas CBMs with no formal education have the lowest level of knowledge of PPE (60%). Results further revealed that 69.9% of the CBMs engaged in PPE after childbirth with CBMs in rural areas engaging in PPE more than those in urban areas. Knowledge of PPE by CBMs is not significantly dependent on age, occupation and location, while Knowledge of PPE by CBMs is significantly dependent on level of education. The researchers recommended that more awareness on the meaning, types and benefits of postpartum exercise should be created through the mass media, using the appropriate languages comprehensive to childbearing mothers in Ohaozara.

Keywords: Knowledge, Practice, Postpartum exercise, Childbearing mothers

Introduction

Globally, knowledge of the benefits of postpartum exercise in the postpartum period differ among women and postpartum exercise is being practiced at different rates by women, although exercise is likely to be beneficial in the postpartum period as it is in other times of a woman's life (Larson-Meyer, 2002). According to Saligheh, Beverley, and Rosanna (2016), about 60% of Australian women partake in postpartum exercise while 30% of British women are involved in postpartum exercise. They further stated that walking, pram walking and bike riding are the commonly and regularly practised postpartum exercises. However, in Africa, the prevalence of postpartum exercise among the childbearing mothers (CBM) was 79% and aerobic and stretching being the most common type of exercise practised (Adenike et al., 2015). Hence, an essential strategy for the prevention of such psychological problems during postpartum period is through engaging in postpartum exercise.

Postpartum exercise is the exercise engaged in by child bearing mothers after childbirth. According to Adeniyi et al. (2003), postpartum exercise is the exercise performed by mothers few weeks to 24 weeks after the delivery of their babies. Also, Macarthur (2012) defined postpartum exercise as a regular exercise which prevents potential postnatal complications and increases maternal strength and capability to undertake physical and

mental tasks after childbirth. In the views of Jaikumar (2019) it is a series of physical exercises that are performed by the postnatal mother to bring about optimal functioning of all systems and prevent complications. This includes the exercise performed by mothers within the six weeks interval of the birth of a new born which hastens the return of the reproductive organs to their normal pre-pregnant condition (Mbada, Adebayo, Adeyemi, & Kikelomo, 2016). These exercises engaged in by the CBMs after childbirth helps to correct the changes in the reproductive system and enable the reproductive organs such as the uterus, vagina, perineum and breasts return to their non-pregnant state (Larson-Meyer, 2002). In the context of this study, postpartum exercise is the physical activity performed by childbearing mothers (CBM) after childbirth in order to improve their physical, psychological and social well-being.

The American College of Obstetrics and Gynaecologists (ACOG) (2009) suggests that aerobic exercises such as brisk walking, running, swimming, cycling and muscle strengthening workouts like sit-ups, push-ups, yoga, weight lifting and kegel exercise are types of postpartum exercises which can be beneficial to the childbearing mothers after childbirth. The possible benefits of postpartum exercise include decreased incidence of postpartum fatigue and depression, prevention of anxiety and sleep disorders, prevention of obesity and diastasis recti abdominus, promotion of aerobic fitness and strength leading to improved ability to perform activities of mothering, improvement in posture, coordination and balance, increase in endurance and stamina, optimizing bone health by increasing bone mineral density (BMD), improvement of high-density lipoprotein cholesterol level and insulin sensitivity, improved psychological adjustment to changes in pregnancy and rapid postnatal recovery. Hence, there is the need for health practitioners, health counselors and physical therapists to improve the knowledge of childbearing mothers (CBM) towards the benefits of postpartum exercise through the creation of adequate awareness.

Knowledge is seen as awareness of a particular fact or situation. That is, having information about a subject, a place or situation (Turnbull, 2010). According to Patrick (2002), knowledge is an expertise and skill acquired by a person through experience or education. It is the theoretical or practical understanding of a subject that is known in a particular field or in total, facts or information or awareness of familiarity gained by experience of a situation (Kerneman, 2006). In the context of this study, the knowledge of childbearing mothers towards postpartum exercise simply means the level of understanding of childbearing mothers concerning the types and benefits of postpartum exercise. According to Adeniyi et al. (2003), most mothers are not aware that they could undertake physical exercise to enhance postpartum health. Women who engage in postpartum exercise usually do that by self-prescription and the commonest information sources are nurses and midwives other than physical therapists. The knowledge of childbearing mothers towards postpartum exercise is dependent on their level of education and location. Hence, there is little knowledge of benefits of postpartum exercise by Nigerian women, especially among the uneducated mothers and mothers living in the rural areas (Funmilola, 2015). This is to say that the educated mothers have better knowledge of postpartum exercise than the uneducated mothers just as mothers in urban areas are better informed about postpartum exercise than mothers in rural areas. From the foregoing one can deduce that childbearing mothers who maintain exercise from pre-pregnancy through to postpartum period experience better wellbeing compared to those who do not. Hence, having adequate knowledge of postpartum exercise by the childbearing mothers (CBM) will definitely boost their self-efficacy towards the practice of postpartum exercise.

Practice is a repeated performance or action. It is a habitual application or use of ideas, beliefs or methods as opposed to the theories relating to it. Christopher and Roy (2007) defined practice as a customary, habitual or expected procedure of doing things, whereas

Jacobsen (2010) defined practice as the performance of activity so to acquire or maintain proficiency in it. In the context of this study, practice is the regular performance of an activity in order to be able to do it better. Hence, practice of postpartum exercise is the regular engagement in physical exercise by the childbearing mothers (CBM) in order to improve and maintain maternal well-being. According to Mbada et al. (2015), the practice of postpartum exercise by childbearing mothers is mainly by self-prescription with aerobic and stretching being the predominant exercise practised. It is therefore very needful for Ministry of Health, health care personnel, health educators, health counselors, health agencies and physical therapists to play a better role in enlightening and persuading childbearing mothers towards the practice of postpartum exercise by posing a clearer picture on the types, benefits and procedures for postpartum exercise to the best benefit of every childbearing mother in order to improve their health after childbirth.

The practice of postpartum exercise among Nigerian women is not encouraging. In Nigeria, few women (64%) engage in postpartum exercise and usually by self-prescription (Anne, Abiola & Chidozie, 2015). According to Mbada and Faremi (2015), most of the Nigerian women were not aware that they could engage in postpartum exercise while others did not appreciate postpartum exercise as a result of some conservative views and myths that exercise is too delicate and unsafe during the pregnancy and postpartum periods. This is also applicable in Ohaozara Local Government Area of Ebonyi State. Apart from superstitions on postpartum exercise, other determinants of postpartum exercise among Nigerian women are age, educational level, occupation, location and parity. According to Bermete and Brown (2001), the health needs of childbearing mothers (CBM) could be physical needs, emotional needs and socio-economic needs. This shows that despite the promotion of postpartum health by health professionals, more effort needs to be channelled towards the knowledge of postpartum exercise by childbearing mothers in order to curb the barriers to postpartum exercise and create better awareness on the benefits of postpartum exercise to mothers. It is therefore, necessary to assess the knowledge and practice of postpartum exercise by child bearing mothers (CBM) in Ohaozara Local Government Area of Ebonyi State.

Some demographic factors are capable of influencing the knowledge and practice of postpartum exercise by childbearing mothers. These include: age, level of education, occupation, income, location and parity. This study however, focuses on the demographic factors such as age, level of education, occupation and location.

Age of childbearing mothers (CBM) can influence their knowledge and practice of postpartum exercise. Mbada et al. (2015) reported that younger women engage in postpartum exercise than older women. World Health Organization (2004) declared that women of childbearing age (WCBA) should fall between 15-49 years and studies have shown that women below the age of 30 years engage more in exercise after childbirth than women who are 30 years old and above. This may also be applicable to the childbearing mothers in Ohaozara Local Government Area of Ebonyi State because generally, younger women are more agile and fit for exercise than older women after delivery.

The level of education of CBM is another demographic factor capable of influencing knowledge and practice of postpartum exercise because in most settings, education is the sure way to acquiring knowledge and skill. According to Olubukayom, Oluwola and Monisola (2015), there is significant association between exercise practice and educational level. Hence, mothers with higher educational level (secondary and tertiary) have better knowledge and practice of postpartum exercise than those with lower educational level (primary). This is because they are able to read articles and understand the importance and benefits of postpartum exercise. The educated CBM are also in better position to differentiate between superstitions and reality whereas the uneducated childbearing mothers (CBM) are easily

influenced by some superstitions and beliefs that postpartum exercise is unsafe and unhealthy. Hence, they may not engage in postpartum exercise.

Occupation of childbearing mothers (CBMs) determines their participation in postpartum exercise. Mothers, who are self-employed such as trading, tailoring, hair dressing, etc., engage more in postpartum exercise than mothers who are civil servants (Abiola et al., 2015). Also, the nature of job performed by childbearing mothers affect the rate at which they partake in postpartum exercise. That is to say that mothers whose jobs are more demanding do not engage in postpartum exercise as those whose jobs are less demanding. Based on income, Adeniyi, Bamifeka, and Ogwumike (2013) asserted that mothers of high financial status easily acquire home exercise equipment like ergometer, bicycle, treadmill, etc., which enable them engage in postpartum exercise even at home whereas mothers of low financial status cannot afford such equipment to enable them exercise at home, thereby limiting their physical activity. Furthermore, the locations of childbearing mothers equally influence their knowledge and attitude towards postpartum exercise. Childbearing mothers in the urban area are better informed about postpartum exercise than those in the rural area. Hence, those in urban areas engage more in postpartum exercise than those in rural areas. This is because there are better channels of communication in the urban areas than in the rural areas. With regard to this, more effort is needed to create awareness on importance, types and benefits of postpartum exercise in the rural areas.

Purpose of the Study

The purpose of the study was to determine the level of knowledge and practice of postpartum exercise by childbearing mothers (CBM) in Ohaozara Local Government Area of Ebonyi State. Specifically, this study determined the:

- 1. level of knowledge of postpartum exercise possessed by CBM in Ohaozara Local Government Area of Ebonyi State;
- 2. level of knowledge of postpartum exercise possessed by CBM in Ohaozara Local Government Area of Ebonyi State based on some selected demographic variables (age, level of education, occupation and location);
- 3. practice of postpartum exercise by CBM in Ohaozara Local Government Area of Ebonyi State; and
- 4. practice of postpartum exercise by CBM in Ohaozara Local Government Area of Ebonyi State based on selected demographic variables (age, level of education, occupation and location).

Research Questions

The following research questions were posed to guide the study:

- 1. What is the level of knowledge of postpartum exercise as possessed by CBM in Ohaozara Local Government Area of Ebonyi State?
- 2. What is the level of knowledge of postpartum exercise as possessed by CBM in Ohaozara Local Government Area of Ebonyi State based on some selected demographic variables (age, level of education, occupation and location)?
- 3. What is the practice of postpartum exercise by CBM in Ohaozara Local Government Area of Ebonyi State?
- 4. What is the practice of postpartum exercise by CBM in Ohaozara Local Government Area of Ebonyi State based on selected demographic variables (age, level of education, occupation and location)?

Hypotheses

The following hypotheses were postulated and tested at .05 level of significance:

Ho₁: There is no significant difference in the knowledge of childbearing mothers (CBM) in Ohaozara Local Government Area towards postpartum exercise based selected demographic variables (age, level of education, occupation and location).

Ho₂: There is no significant difference in the practice of postpartum exercise by CBM in Ohaozara Local Government Area based on selected demographic variables (age, level of education, occupation and location).

Methods

The descriptive survey research design was adopted for the study. The population for the study consisted of 4, 225 CBMs that visit hospitals and health centres in Ohaozara Local Government Area for immunization after delivery. The sample size for the study consisted of three hundred and sixty-two (362) childbearing mothers. This was arrived at using Taro Yamane formula for a finite population.

The instrument for data collection was a researcher-designed questionnaire titled "Knowledge and Practice of Postpartum Exercise Questionnaire (KPPEQ). The questionnaire was designed based on review of related literature and the specific objectives of the study. It was structured in close-ended form requesting the respondents to place a tick ($\sqrt{}$) against the options that best applied to them. It consisted of twenty-five (19) items classified into sections A and B. Section A consisted of four (4) questionnaire items that sought information on the bio data of respondents (i.e. age, educational level, occupation and location). Section B consisted of two clusters: clusters A and B. Cluster A consisted of 12 items on knowledge of postpartum exercise, while cluster B consisted of 3 items on practice of postpartum exercise. The validity of the instrument was established by three experts in the Department of Human Kinetics and Health Education, University of Nigeria, Nsukka.

The reliability of the instrument was established through a test retest by administering thirty (30) copies of the questionnaire to thirty (30) childbearing mothers among two health care centres in Onicha Local Government Area of Ebonyi State, who had the same characteristics with the study population. The reliability was calculated using the spearman's rank order correlation formula and the reliability coefficient of .85 was considered reliable for the study.

Frequencies and percentages were used to answer the research questions, while Chisquare statistics was used to test the null hypotheses at .05 level of significance.

Results

Table 1: Frequency and Percentage of knowledge of postpartum exercise possessed by CBMs in Ohaozara Local Government Area of Ebonyi State (n = 353)

S/N		True		False	
	Knowledge of postpartum exercise	F	%	F	%
I.	I hear about postpartum exercise always	244	69.1	109	30.9
2.	Postpartum exercise is one performed by mothers after childbirth in order to keep fit and improve their well being	287	81.3	66	18.7
3.	I should engage in postpartum exercise few weeks after the birth of my baby	267	74.8	89	25.2
4.	Abdominal exercise is an example of postpartum exercise	313	88.7	40	11.3
5.	Pelvic floor exercise is an example of postpartum exercise	278	78.8	75	21.2
6.	Muscle stretching exercise is an example of postpartum exercise	245	69.4	108	30.6
7.	Swimming is an example of postpartum exercise	156	44.2	197	55.8
8	Postpartum exercise prevents depression, obesity and fatigue	308	87.3	45	12.7
9	Postpartum exercise reduces aches and pains	306	86.7	47	13.3
10	Postpartum exercise improves cardiovascular fitness	270	76.5	83	23.5
11	Postpartum exercise restores muscle strength	321	90.9	32	9.1
	Total	272	77.1	81	22.9

Data in Table 1 show that CBMs in Ohaozara Local Government Area of Ebonyi State possess high level of knowledge of postpartum exercise (77.1%). The study revealed that CBMs possessed very high level of knowledge of the fact that postpartum exercise restores muscle strength (90.9%), Abdominal exercise is an example of postpartum exercise (88.7%), Postpartum exercise prevents depression, obesity and fatigue (87.3%), Postpartum exercise reduces aches and pains (86.7%) and Postpartum exercise is one performed by mothers after childbirth in order to keep fit and improve their well being (81.3%).

Table 2: Frequency and Percentage of knowledge of postpartum exercise possessed by CBMs in Ohaozara Local Government Area of Ebonyi State, based on selected demographic variables (age, level of education, occupation and location) (n = 353)

	Location Age						Level of education								Occupation									
	Urban		Ru	ral	18-	-25	26-	-33	34	+	Prin	ary	Secon	ıdary	Tert	iary	No	one	Stud	ent	Civil S	S	Trade	r
	(n =1	31)	$(\mathbf{n} = 1)$	222)	(n =	111)	(n =	113)	(n = 1	129)	(n =	31)	(n =	169)	(n =1	144)	(n :	=9)	(n =	110)	(n=1	24)	(n=1	119)
Item	F	%	f	%	f	%	f	%	F	%	f	%	F	%	f	%	f	%	f	%	f	%	f	%
Item 1	101	77	143	64	76	71	72	64	93	72	14	45	106	63	118	82	6	67	74	67	99	80	71	60
Item 2	110	84	177	80	92	83	82	73	113	88	24	77	141	83	116	81	6	67	89	81	101	82	97	82
Item 3	94	72	170	77	85	77	80	71	99	77	18	58	119	70	120	83	7	78	74	67	102	82	88	74
Item 4	117	89	196	88	99	89	103	99	111	86	28	90	144	85	135	94	6	67	94	86	108	87	111	93
Item5	99	76	179	81	83	75	90	77	105	81	22	71	130	77	123	85	3	33	83	76	96	77	99	83
Item 6	92	70	153	69	81	73	82	73	82	64	22	71	134	79	83	58	6	67	91	83	76	61	78	66
Item 7	57	44	99	45	53	48	50	44	53	41	17	55	85	50	50	35	4	44	57	52	49	40	50	42
Item 8	109	83	199	87	100	90	93	82	115	89	25	81	141	83	135	94	7	78	99	90	105	85	104	87
Item 9	118	90	188	85	96	86	99	88	111	86	27	87	143	85	133	92	3	33	92	84	109	88	105	88
Item10	100	76	170	77	86	77	85	75	99	77	22	71	121	72	124	86	3	33	87	79	93	75	90	76
Item11	119	91	202	91	99	89	103	91	119	92	27	87	147	87	139	97	8	89	99	90	116	94	106	89
Total	101	77	171	77	86	78	85	76	100	77	22	72	128	76	116	81	5	60	86	78	96	77	91	76

Data in table 2 below show that there is no difference in the level of knowledge of postpartum exercise (PPE) possessed by childbearing mothers (CBMs) in urban areas and CBMs in rural areas in Ebonyi State. The table revealed that there is a slight difference in level of knowledge of PPE among CBMs of different age brackets; CBMs between the age of 18 and 25 possess the highest level of knowledge of PPE (78%), followed by those between the age of 40 and above (77%) and those between the age of 26 and 33 (76%). The table also revealed that the higher the educational level of CBMs, the higher their level of knowledge of PPE.

Hence, CBMs with tertiary level of education have the highest level of knowledge of PPE (81%), followed by those with secondary level of education (76%) and those with primary level of education (72%). It also indicated that CBMs with no formal education have the lowest level of knowledge of PPE (60%). The data also showed that CBMs who are students possess the highest level of knowledge of PPE (78%), followed by CBMs who are civil servants (77%) and traders (76%) respectively.

Table 3: Frequency and Percentage of the practices of postpartum exercise by CBMs in Ohaozara Local Government Area of Ebonyi State (n = 353)

S/N		Practis	sed
	The practices of postpartum exercise	F	%
I.	I engage in physical exercise after childbirth	246	69.7
2.	I do not engage in postpartum exercise because it is time wasting and	170	48.2
	very stressful		
3.	I engage in postpartum exercise 1-2 times per week	126	35.7
4.	I engage in postpartum exercise 3-4 times per week	129	36.5
5.	I engage in postpartum exercise more than 4 times per week	98	27.8

Data in table 3 show that 69.9 percent of the CBMs in Ohaozara engage in PPE after childbirth but not on regular basis as some of the CBMs feel it is time wasting and stressful.

Table 4: Frequency and Percentage of the practices of postpartum exercise by CBMs in Ohaozara Local Government Area of Ebonyi State, based on selected demographic variables (location, age, level of education, and occupation)

	Location			Location Age						Level of education								Occupation						
	Urb	an	Ru	ral	18-	25	26-	-33	34	+	Prin	nary	Secor	ıdary	Tert	iary	No	one	Stude	ent	Civil S	S	Trade	r
	(n =1	31)	(n = 2	222)	(n =	111)	(n =	113)	(n =	129)	(n =	31)	(n =	169)	(n =1	144)	(n	=9)	(n =1	110)	(n =1	124)	(n =1	119)
Item	f	%	F	%	F	%	F	%	F	%	f	%	F	%	f	%	f	%	f	%	f	%	f	%
Item 1	88	67	158	71	83	75	72	64	91	71	13	42	99	59	127	88	7	78	73	66	96	77	77	65
Item 2	60	46	110	50	42	38	58	51	70	54	18	58	75	44	76	53	1	11	44	40	67	54	59	50
Item 3	44	34	82	37	46	41	37	33	43	33	14	45	64	38	44	31	4	44	39	36	36	29	51	43
Item 4	56	43	73	33	39	35	48	43	42	33	7	23	62	37	56	39	4	44	44	40	45	36	40	34
Item5	31	24	67	30	26	23	28	25	44	34	10	32	43	25	44	31	1	11	27	25	43	35	28	24

Data in table 4 showed that based on location, CBMs in rural areas engage in PPE more than CBMs in urban areas. Based on age, younger mothers have higher percentage participation in PPE than others. By level of education, the higher the level of education of CBMs, the more their participation in PPE. Also, based on occupation, CBMs who are civil servants participate more in PEE than those who are students or traders.

Table 5: Summary of Chi-Squure testing the knowledge of postpartum exercise among the CBMs in Ohaozara Local Government Area based on the selected variables (age, level of education, occupation and location) (n = 353)

Variable	N	^{χ2} value	p-value	df	Decision
Age	353	3.711	.156	2	H ₀ not rejected
Level of	353	22.70*	.000	3	H ₀ Rejected
education					
Occupation	353	2.249	.325	2	H ₀ not rejected
Location	353	1.260	.262	1	H ₀ not rejected

The data in table 5 show chi-square analysis verifying the responses on knowledge of postpartum exercise among childbearing mothers in Ohaozara Local Government Area based on selected demographic variables (age, level of education, occupation and location). Based on age, occupation and location, their calculated x^2 values are 3.711, 2.249 and 1.260 respectively, with their p-values (.156, .325 and .262 respectively) which are greater than the alpha value of .05 and at a 2, 2 and 1 degrees of freedom respectively. The null hypotheses of no significant relationship were therefore retained, implying that age, occupation, and location of childbearing mothers had no significant relationship in their knowledge of postpartum exercise. Based on level of education, the calculated x^2 value is 22.70 with the p-value of .000 which is less than the alpha value of .05 and at a 3 degree of freedom. The null hypothesis of no significant relationship was therefore rejected. This implied that level of education of childbearing mothers had significant relationship in their knowledge of postpartum exercise.

Table 6: Summary of Chi -Square analysis of practice of postpartum exercise by CBMs in Ohaozara Local Government Area (n = 353)

Variable	N	^{χ2} value	p-value	df	Decision
Age	353	3.312	.191	2	H ₀ not rejected
Level of education	353	8.364	.039	3	H ₀ Rejected
Occupation	353	7.209	.125	4	H ₀ not rejected
Location	353	3.713	.156	1	H ₀ not rejected

Data in table 6 show chi-square analysis verifying the responses on practice of postpartum exercise among childbearing mothers in Ohaozara Local Government Area based on selected demographic variables (age, level of education, occupation and location). Based on age, occupation and location, their calculated chi-square (x^2) values are 3.312, 7.209 and 3. 713 respectively, with their p-values (.191, .125 and .156 respectively) which are greater than the alpha value of .05 and at a 2, 4 and 1 degrees of freedom respectively. The null hypotheses of no significant relationship were therefore retained, implying that age, occupation and location of childbearing mothers had no significant relationship in their practice of postpartum exercise. Based on level of education, the calculated chi-square (x^2) value is 8.364 with the p-value of

.039 which is less than the alpha value of .05 and at a 3 degree of freedom. The null hypothesis of no significant relationship was therefore rejected. This implied that level of education of childbearing mothers had significant relationship in their practice of postpartum exercise.

Discussion

Results in table 1 showed that 77.1 percent of childbearing mothers (CBMs) in Ohaozara have knowledge of postpartum exercise (PPE). The finding was expected because the researcher hoped that not less than two fifth of the CBMs should have knowledge of PPE. The data in table 1 also revealed that majority of CBMs have high level of knowledge of types and importance of PPE. This is similar to the reports of Mbombi, Thopola, and Kgole (2017) who found out that 50 percent of their respondents had knowledge of PEE.

Results in table 2 revealed that the higher the educational level of CBMs, the higher their level of PPE; CBMs with tertiary, secondary and primary levels of education having 81 percent, 76 percent and 72 percent respectively. This is similar to the reports of Hawazin, Mohammed, and Alharqi (2017) who found out that women with tertiary levels of education participated more in postpartum exercise than women with secondary and primary levels of education. Results in table 5 indicated that no significant relationship existed between age, occupation, location of childbearing mothers as regard to their knowledge of PPE. Based on age the findings disagrees with the discoveries of Mbombi, Thopola, and Kgole (2017) that puerperas between 23 and 25 years had more knowledge of PPE (14%) compared to those between 17 and 19 years (4%). Table 7 also indicated a significant relationship between level of education of CBMs and their knowledge of PPE. This is in consonance with the study of Hawazin, Mohammed, and Alharqi (2017) who found out that women with tertiary level of education participated more in PPE than those with secondary and primary levels of education.

Results in table 4 showed 69.9 percent of the CBMs engage in PPE, although on irregular basis. The finding was expected because the researcher hoped that not less than 50 percent of CBMs should engage in PPE. This is similar to the reports of Adeniyi, Ogwumike, and Bamikefa (2013) who found out that 52% of the respondents were engaged in PPE. Results in table 6 showed that CBMs in rural areas engage in PPE more than CBMs in urban areas, younger mothers and mothers with higher educational levels participate more in PPE than older mother and mothers with lower levels of education. This is similar to the reports of Adebayo, Awotidebe, Emechete, Faremi, Mbada, Oginni, and Ogundele (2015) who found out that women who are less than 30 years of age participate more in physical exercise than women who are 30 years and above, and that respondents with tertiary education level reported the highest exercise practice.

Results in table 6 showed that age, occupation and location of childbearing mothers (CBMs) had no significant relationship in their practice of postpartum exercise (PPE). This is surprising as the researcher envisaged that these variables should have significant relationship in their practice of PPE. The study also revealed that level of education of CBMs had significant relationship in their practice of PPE. This is similar to the reports of Hawazin, Mohammed, and Alharqi (2017) who found out that women who had tertiary level of education participated more in PPE than women with secondary and primary levels of education.

Conclusions

From the findings of the study it was concluded that childbearing mothers (CBMs) in Ohaozara had high knowledge of postpartum exercise (PPE). Also, CBMs aged 18 to 25 years possess

higher knowledge of PPE than CBMs aged 26 years and above; and that CBMs with formal education had higher knowledge of PPE than CBMs with no formal education. It was also concluded that more than half of childbearing mothers in Ohaozara engage in PPE; with higher percentage participant among educated CBMs, mothers in rural areas and younger mothers. However, more awareness on the meaning, types and benefits of postpartum exercise should be created through the mass media, using the appropriate languages comprehensive to childbearing mothers in Ohaozara.

References

- Adeniyi, A. F., Ogwumike, O. O., and Bamikefa, T. R. (2013). *Postpartum Exercise aong Nigerian Women: Issues Relating to Exercise Performance and Self-Efficacy*.
- Albright, c., Maddock, J.E., and Nigg, C. R. (2005). *Physical Activity before Pregnancy and following Childbirth in a Multiethnic Sample Health Women in Hawaii: Women Health.*
- American College of Obstetricians and Gynaecologists (ACOG) (2018). Exercise after Pregnancy
- American College of Obstetricians and Gynaecologists (ACOG) (2002). Exercise during Pregnancy and Postpartum Period.
- American College of Obstetricians and Gynaecologists (ACOG) Committee Opinion: *Exercise during Pregnancy and Postpartum Period* (2009). http://www.acog.org/
- Carey, G. B., and Quinn, T. J. (2003). Changes in Postpartum Period. International SportMed Journal, 4
 (6)
- Daley, A. J., Marcarthur, C., & Winter, H. (2007). The Role of Exercise in Treating Postpartum Depression. Midwife and Women Health Journal, 52(1)
- Davies, G. A., Wolfe, A. L., Motttola, F. M., and Catherine, M. (2018). *Exercise in Postpartum Period*.
- Ezea, P. C. (2004). Foundations of Social Research Methods . (John Jacobs Classic Publishers ltd.)
- Glanz, K., Rimer, B. K., and Lewis, F. M. (2002). *Healh Behaviour and Health Education. Theory Reseach and Practice.*
- Hawazin, M. A. (2017). Assessment of Knowledge and Attitude of Women towards Postpartum Exercise.
- Herring, A.H., Ferrani, R. M., Siega-Riz, A. M., Everson, K. R., Moose, M. K., and Melvin, C. L. (2010). *Provider Advice About Weight Loss and Physical Activity in Postpartum period. Journal of Women's Health*, 19(3), 397-406.
- Jacqueline, B. (2018). Gentle postpartum Yoga posses for New Moms.

- Jaikumar, M. (2019). Post natal exercise Assessed online on 04/08/2023 from; https://www.slideshare.net/maheswarijaikumar/post-natal-exercise-192249924
- Katja, B., Kelly,R., Everson and Herring. (2009). *Physical Activity Pattern during Pregnancy through Postpartum*.
- Mbombi, M. O., Thopola, M. K., and Kgole, J. C. (2017). *Pueperas Knowledge regarding Postpartum Exercise*.
- Miriam, Akhtar. (2008). What is Self-Efficacy? Bandura's 4 Sources of Efficacy Beliefs.
- Morrkved, Si and Bo, K. (2012). Effect of Pelvic Floor Muscle Training during Pregnancy and after Childbirth on Prevention and Treatment of Urinary Incontinence
- Larson-Meryer, D. E.(2002). Effects of Postpartum Exercise on Mothersandtheir Offsprings
- Larson-Meryer, D. E.(2003). Effects of Regular Postpartum Exercise on Mother and Child. International SportMed Journal, 4(6), 1-15.
- Marcarthur, C., Daley, A. J., Jolly, K., Sharp, D. J., Turner, K. M., Blamey, R. V., Coleman, S.(2012).

 The Effectiveness of Exercise as Treatment for Postnatal Depression
- Mbada, C. E., Adebayo, O. E., Adeyemi, A. B., and Kikelomo, E.(2016). *Knowledge and Attitude of Nigerian Nursing Mothers towards Postnatal Exercise*.
- Mbada, C. E., Adebayo, O. E., Oluwele, T. A., Faremi, A. F., Monisola, O. O., Abiola, O. O., and Emechete, A. A. (2015). *Practice and Pattern of Antenatal and Postnatal Exercise among Nigerian Women*.
- Rajabi, H., Ashrafinia, F., Mirmohammadali, M., Kazemnejad, A., Haghighi, K. S., and amelvaliadeh, M. (20015). *Effects of Pilates Exercise on Postpartum Maternal Fatigue*. hptt://doi.org.
- Saligheh, M., Bervely, M. N., and Rosanna, R. (2016). *Perceived Barriers and Enablers of Physical Activity in Postpartum Women.*
- Scott, S.(2006). Exercise in Postpartum Period. ACSM's Health and Fitness Journal, 10(4), 40-41
- Trinette Reed and Stock (2018). Kegel Execise How, When and Why to Do Your Kegels During and After Pregnancy.