

FACTORS AFFECTING MALE-PARTNER PARTICIPATION IN POST-PARTUM CARE AND BREASTFEEDING PRACTICES OF OB WARD PATIENTS OF A PHILIPPINE PUBLIC HOSPITAL

JENIFER H. ALCORANO, RN, MSN-MS, MHA, CHA, DIPCHA, DIPHM

Palawan State University-Main Campus, Tiniguiban Heights, Sta. Monica, Puerto Princesa City.
Email: jalcarano@psu.palawan.edu.ph

Abstract

Male-partner involvement in postpartum care and breastfeeding practices has a vital but frequently overlooked role in supporting women's care-related initiatives throughout the postnatal period. This paper determined factors affecting male-partner participation in post-partum care and breastfeeding practices. Data were collected using a survey involving 150 male partners of postpartum patients of the Ospital ng Palawan, Philippines. Data analysis was performed using descriptive and inferential statistics. Results showed that there are personal and interpersonal factors that are significantly and insignificantly associated with male partners' involvement in postpartum care and breastfeeding practices. Specifically, while male partners' educational backgrounds showed a significant association, age and the number of children posited no significant associations to their involvement in postpartum care and breastfeeding practices. A prospective study design may be further used by other researchers to systematically investigate the impact of educational background factors to provide more detailed and comprehensive information.

Keywords: Male-Partner Involvement, Postpartum Care, Breastfeeding

INTRODUCTION

During the first 28 days of life, a newborn is at the highest risk of dying. This medical-related fact premises the Sustainable Development Goals 2030 (SDG) #3 of the United Nations (UN) which includes the reduction of child mortality rate and improvement of maternal health as pillars. Specifically, the UN aims to reduce deaths of newborns and children under the age of 5 years old, with a target to decrease neonatal mortality to at least 12 per 1000 live births (World Health Organization, and.). In the first four weeks of life, it is crucial to provide newborns with appropriate feeding and care to improve their chances of survival and further lay the foundations for a healthy life.

Breastfeeding has a significant role in nurturing a newborn. It is a nutritional source for infants, providing immune components such as antibodies, growth factors, cytokines, antimicrobial compounds, and specific immune cells (Paramasivam K. et al., 2006). It serves as the first passive immunization. It further assists the immature immune system of the newborn and offers protection from infectious risks during the postnatal period while the infant's immune system matures. Breastfeeding is also advantageous to mothers of newborns because it offers the best protection against postpartum hemorrhage (WHO). Breastfeeding also causes the release of the hormone, oxytocin, which causes uterine contraction and assists the uterus in clotting the placental attachment point postpartum. Nonetheless, the success of breastfeeding and postpartum care cannot be done by the mother alone and may require the involvement of their

male partners. In fact, paternal's emotional, practical, and physical supports are identified as important factors in promoting successful breastfeeding which enriches the experiences for both mothers and fathers. However, the restriction and policies of the OB ward hinder the male partner to engage in taking care of his partner and the newborn baby. Often male partners can only accompany the ward nurse for visits in public hospitals and families that do not have any female relatives who can assist their postpartum patient impedes the care for the patient and the baby. Aside from these inopportune events, there are still other personal and interpersonal factors in extant literature that have been suggested to affect the success of male participation in postpartum care and breastfeeding practices of mothers which can be further explored. By identifying these 'factors', in the context of OB ward patients in a public hospital in the Philippines, policies and interventions may be developed or enhanced which can increase the likelihood of male-partner participation in successful postpartum care and breastfeeding practices. Hence, this study attempts to determine personal and interpersonal factors that contribute to having male partners of OB ward patients participate in the postpartum care and breastfeeding practices of their partners.

METHODOLOGY

This study utilizes the descriptive research method. The respondents of this study are 150 male - partners of mothers who gave birth under normal delivery in the OB ward of Ospital ng Palawan, Philippines from September 01, 2021, to October 30, 2021. The researcher administered a questionnaire that consisted of two parts. The first part of the questionnaire contained queries about the respondents' profile and the second part contained questions on respondents' behaviors, i.e., whether their female partners underwent regular prenatal visits, reasons for undergoing prenatal visits, and their level of understanding of prenatal visits in a health facility. The data were processed using descriptive and inferential statistics. Specifically, frequency, percentage, weighted mean, SD, and analysis of variance (ANOVA). The mean was used to express the general evaluation of the validators on the learning material and on the test items, while a mean percentage was used in describing the factors affecting the success of male participation in postpartum care and breastfeeding practices of a mother's main concern in this study. One-way ANOVA was utilized to determine whether there are any statistically significant differences between the means of three or more independent groups. To determine which specific groups differed from each other, post hoc tests specifically Tukey's Honest Significance Difference (HSD) were used. The data are presented in tabular presentation and are supplemented with categorical variables, numerical and statistical terms, and symbols. For descriptive and inferential analysis and interpretation of the data set, the researcher used IBM-SPSS Version 26 software.

RESULTS AND DISCUSSIONS

The purpose of this study is to look at the factors affecting male partners' involvement in postpartum care and breastfeeding practices. The following discussions will center on the features of the respondent's demographic profile, which include (1) age, (2) educational

background, and (3) number of children, and how they differ in terms of personal and interpersonal factors of postpartum care and breastfeeding behaviors.

A. Demographic Profile

Table A.1: Demographic Profile of Male-Partner Participation Assessment

Age	F	%
56- years & above	4	3
46-55 years old	19	13
36-45 years old	31	21
26-35 years old	65	43
15-25 years old	31	21
Educational background		
Vocational	4	3
College Graduate	17	11
College level	20	13
Secondary graduate	30	20
Secondary level	29	19
Elementary graduate	35	23
Elementary level	15	10
Number of children		
2- more	92	61
0-1	58	39

Table A.1. Depicts the demographic profile of 150 male companions. With a total of 150 male partners questioned, 31 (21%) belong to the 15 to 25 and 36 to 45 age groupings, while 65 (43%) belong to the 26 to 35 age brackets, which has the biggest number of responses. Only 19 (13%) are between the ages of 46 and 55, while 4 (3%) are between the ages of 56 and up.

In terms of educational background, 15 (10%) are elementary school levels, whereas 35 (23%) are elementary school graduates. There were 29 (19%) at the secondary level and 30 (20%) at the secondary graduate level. The college level had 20 (13%) of the respondents, college grads had 17 (11%) of the respondents, and vocational courses had just 4 (3%) of the respondents. When it comes to the number of children, 92 (61%) of male partners have more than two, while 58 (39%) have only one.

B. Male-Partner Personal and Interpersonal Participation Assessment

Table B.1: Personal Factors Weighted Mean and Interpretation

Components	\bar{x}	Interpretation
I believe my support is an important factor in establishing successful breastfeeding	2.57	Strongly agree
I believe my participation in post-partum care and breastfeeding fulfill my role as a father.	2.56	Strongly agree
I believe that my support is an important factor in establishing successful breastfeeding.	2.53	Strongly agree
Continues breastfeeding is more sustainable.	2.52	Strongly agree
Exclusively breastfed babies are proven to be healthier; thus, lowering the risk of hospital admission.	2.48	Strongly agree
I highly support my partner because there are pieces of evidence that breastfeeding reduces to zero the chances of some health disorders.	2.47	Strongly agree
My approval to participate means so much to my partner because I'm her primary source of support.	2.47	Strongly agree
Breastfeeding is cheaper than milk formula.	2.41	Strongly agree
Exclusive breastfeeding is essential for newborn babies.	2.4	Strongly agree
Acceptance of the family of my partner affects my role.	2.36	Strongly agree
according to my beliefs, it is acceptable that males to participate in post-partum care and breastfeeding	2.35	Strongly agree
My civil status affects my participation.	2.3	Agree
I am knowledgeable about the numerous health benefits of breastfeeding for both the mother and my newborn baby.	2.3	Agree
I rely on books, leaflets, and other written materials as the only source of information on breastfeeding, post-partum, and childbirth practices.	2.13	Agree
I believe that commercially prepared formula has been enhanced in recent years, infant formula is equivalent to breast milk in terms of its health benefits.	1.81	Agree
It's my first time handling a baby.	1.71	Agree
I cannot participate because of my family's involvement.	1.69	Agree
I believe that I don't have the confidence to participate in post-partum care and breastfeeding.	1.69	Agree
I don't know how to handle a baby.	1.61	Disagree
My unpredictable schedule at work affects my participation in addressing the needs of my partner and our baby.	1.43	Disagree
I cannot participate because of my present illness.	1.4	Disagree
Assisting the needs of my post-partum partner in breastfeeding our newborn baby makes me late for work.	1.4	Disagree
I cannot assist with my partner's post-partum and breastfeeding needs because I'm busy at work.	1.39	Disagree
I strongly believe that formula milk is more nutritional than breastfeeding.	1.38	Disagree
My family traditions prohibit me to assist with the post-partum needs of my partner and breastfeeding our newborn baby successfully.	1.37	Disagree
I view bottle feeding as the "normal" way to feed infants.	1.33	Disagree
I cannot participate because I'm not physically and mentally stable.	1.29	Disagree
I find my participation boring.	1.28	Disagree
Taking care of my partner and newborn baby will consume a lot of my time and effort thus making me exhausted.	1.26	Disagree
I believe my participation is not important at all.	1.24	Disagree

The results of study indicates that eleven (11) components under personal factors were regarded as "strongly agree," with the matching mean scores as follows: (1.) "I believe my support is an important factor in establishing successful breastfeeding" ($\bar{x}=2.57$); (2) "I believe my participation in post-partum care and breastfeeding fulfill my role as a father" ($\bar{x}=2.56$); (3) "I believe that my support is an important factor in establishing successful breastfeeding" ($\bar{x}=2.53$); (4) "Continues breastfeeding is more sustainable" ($\bar{x}=2.52$); (5) "Exclusively breastfed babies are proven to be healthier; thus, lowering the risk for the hospital admission" ($\bar{x}=2.48$); (6) "I highly support my partner because there are pieces of evidence that breastfeeding reduces to zero the chances of some health disorders" ($\bar{x}=2.47$); (7) "My approval to participate means so much to my partner because I'm her primary source of support" ($\bar{x}=2.47$); (8) "Breastfeeding is cheaper than milk formula" ($\bar{x}=2.41$); (9) "Exclusive breastfeeding is essential to newborn babies" ($\bar{x}=2.4$); (10) "Acceptance of the family of my partner affects my role" ($\bar{x}=2.36$); and, (11) "according to my beliefs, it is acceptable that males participate in post-partum care and breastfeeding" ($\bar{x}=2.35$).

Seven components were grouped under the "agree" category. These are (1) "My civil status affects my participation" ($\bar{x}=2.3$); (2) "I am knowledgeable about the numerous health benefits of breastfeeding for both the mother and my newborn baby" ($\bar{x}=2.3$); (3) "I rely on books, leaflets, and other written materials as the only source of information on breastfeeding, post-partum, and childbirth practices" ($\bar{x}=2.13$); (4) "I believe that commercially prepared formula has been enhanced in recent years, infant formula is equivalent to breast milk in terms of its health benefits" ($\bar{x}=1.81$); (5) "It's my first time handling a baby" ($\bar{x}=1.71$); (6) "I cannot participate because of my families' involvement" ($\bar{x}=1.69$); and, (7) "I believe that I don't have the confidence to participate in post-partum care and breastfeeding" ($\bar{x}=1.69$).

Finally, the following 15 components were determined as belonging to the "disagree" category stated as follows: (1) "I don't know how to handle a baby" ($\bar{x}=1.61$); (2) "My unpredicted schedule at work affects my participation in addressing the needs of my partner and our baby" ($\bar{x}=1.43$); (3) "My unpredicted schedule at work affects my participation in addressing the needs of my partner and our baby" ($\bar{x}=1.43$); (4) "I cannot participate because of my present illness" ($\bar{x}=1.4$); (5) "Assisting the needs of my post-partum partner in breastfeeding our newborn baby makes me late at work" ($\bar{x}=1.4$); (6) "Assisting the needs of my post-partum partner in breastfeeding our newborn baby makes me late at work" ($\bar{x}=1.4$); (7) "I cannot assist my partner's post-partum and breastfeeding needs because I'm busy at work" ($\bar{x}=1.39$); (8) "I cannot assist my partner's post-partum and breastfeeding needs because I'm busy at work" ($\bar{x}=1.39$); (9) "I strongly believe that formula milk is more nutritional than breastfeeding" ($\bar{x}=1.38$); (10) "My family traditions prohibit me to assist the post-partum needs of my partner and breastfeeding our newborn baby successfully" ($\bar{x}=1.37$); (11) "I view bottle feeding as the "normal" way to feed infants" ($\bar{x}=1.33$); (12) "I cannot participate because I'm not physically and mentally stable" ($\bar{x}=1.29$); (13) "I find my participation boring" ($\bar{x}=1.28$); (14) "Taking care of my partner and newborn baby will consume a lot of my time and effort thus making me exhausted" ($\bar{x}=1.26$); (15) "I believe my participation is not important at all" ($\bar{x}=1.24$).

Table B.2: Interpersonal Factors Weighted Mean and Interpretation

Components	\bar{x}	Interpretation
There is adequate family support about decision-making on how the baby is fed and in providing support for breastfeeding our families, relatives, and friends encourage me to participate as well.	2.32	Agree
Normal spontaneous delivery is associated with delayed skin-to-skin contact between mother and baby. I have the chance to participate.	2.3	Agree
The male is only allowed in the ward during visiting hours.	2.27	Agree
I believe that it is the healthcare workers' job to assist my partner's post-partum and breastfeeding needs.	2.25	Agree
I ask my family and friends if I'm capable to participate.	2.18	Agree
I rely on support and advice from my family.	1.84	Agree
The negative outlook of our family and friends poses a barrier to my participation.	1.75	Agree
Proper education and the essentials of breastfeeding are not a priority.	1.56	Disagree
No support group is needed, I can manage.	1.47	Disagree
I highly understand that the hospital is far from me to visit.	1.41	Disagree
Somehow, I believe that my participation will affect my masculinity.	1.29	Disagree
I cannot visit my family in the hospital because of the fare rate.	1.25	Disagree
I'm afraid that my participation will affect my relationship with my friends.	1.17	Disagree

Table B.1 presents the weighted mean and interpretation of interpersonal factors. The study identified seven components in the "agree" category. These are (1) "There is adequate family support with regards to decision-making on how the baby is fed and in providing support for breastfeeding our families, relatives, and friends encourage me to participate as well" (\bar{x} =2.32); (2) "Normal spontaneous delivery is associated with delayed skin-to-skin contact between mother and baby. I have the chance to participate" (\bar{x} =2.3); (3) "Male is only allowed in the ward during visiting hours" (\bar{x} =2.27); (4) "I believe that it is the healthcare workers' job to assist my partner's post-partum and breastfeeding needs" (\bar{x} = 2.25); (5) "I ask my family and friends if I'm capable to participate" (\bar{x} =2.18); (6) "I rely on support and advice from my family" (\bar{x} =1.84); and, (7) "Negative outlook of our family and friends poses a barrier to my participation" (\bar{x} =1.75). Finally, six components were determined as "disagree." These are (1) "Proper education and the essentials of breastfeeding are not a priority" (\bar{x} =1.56); (2) "No support group is needed, I can manage" (\bar{x} =1.47); (3) "I highly understand that the hospital is far from me to visit" (\bar{x} =1.41); (4) "Somehow, I believe that my participation will affect my masculinity" (\bar{x} =1.29); (5) "I cannot visit my family in the hospital because of the fare rate." (\bar{x} =1.25); and, (6) "I'm afraid that my participation will affect my relationship with my friends" (\bar{x} =1.17).

C. Descriptive Analysis and Inferential Interpretation in relation to age, educational background, and the number of children.

Table C.1: Tabular Description of Personal Factors Related to Age

Ages	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
15-25 Years Old	30	2.03	0.48	0.09	1.85	2.21	1.39	2.87
26-35 Years Old	30	1.97	0.66	0.12	1.72	2.21	1.20	2.82
36-45 Years Old	30	2.02	0.49	0.09	1.84	2.21	1.19	2.74
46-55 Years Old	30	1.93	0.55	0.10	1.72	2.13	1.21	2.74
56 Years and Above	30	1.88	0.81	0.15	1.58	2.19	1.00	3.00
Total	150	1.97	0.61	0.05	1.87	2.06	1.00	3.00

Table C.1 shows the personal factors Mean, standard deviation (SD), standard error (SE), and 95 % confidence interval (CI) for the Mean about age. The data shows that the SD of age

ranging from 15 to 25 years old ($\sigma=0.48$); 26 to 35 years old ($\sigma=.66$); 36 to 45 years old ($\sigma=0.49$), 46 to 55 years old ($\sigma=0.55$); and, 56 years old and above ($\sigma=0.81$) connotes that individual data values are closer from the mean value. In this result, the total SD of all ages ($\sigma=0.61$) is close to zero indicating that data points are close to the mean.

The SE of the mean of 15 to 25 years old ($\sigma \bar{X} =0.09$), 26 to 35 years old ($\sigma \bar{X} =0.12$), 36 to 45 years old ($\sigma \bar{X} =0.09$), 46 to 55 years old ($\sigma \bar{X} =0.10$), and, 56 years old and above ($\sigma \bar{X} =0.15$) are closer from the sample mean to the true mean of the overall population. This result indicated that a smaller value of the SE of the mean among ages is a more precise estimate of the true population means. The researcher is 95 percent confident that the total interval for the mean of all age ranges is between 1.87 lower bound and 2 upper bounds with a minimum observation of 1.00 and a high observation of 3.00 in the data set of values.

Table C.2: Analysis of Variance (ANOVA) of Personal Factors Related to Age

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	.479	4	.120	.321	.864
Within groups	54.196	145	.374		
Total	54.675	149			

The F value obtained in this study across age groups about personal factors is.321, with a p-value of.864 at 0.05 level of probability with (4,149) degrees of freedom. The F value is much lower than the tabular value of 2.37, and the p-value is higher than the alpha value ($\alpha=0.05$). As a result, it is concluded that the mean score of personal factors in relation of male-partner participation assessment in postpartum care and breastfeeding practices does not differ significantly, predicated on the null hypothesis that no significant difference exists between the mean scores of personal factors in relation about male partner ages, thus null hypothesis is accepted. Finally, the result is not statistically significant, therefore the mean of personal factors concerning age are all the same concerning the male partner’s participation assessment in postpartum care and breastfeeding practices.

Table C.3: Tabular Description of Interpersonal Factors Related to Age

Ages	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
15-25 Years Old	14	2.00	0.60	0.16	1.65	2.35	1.23	2.87
26-35 Years Old	14	1.89	0.57	0.15	1.56	2.21	1.20	2.62
36-45 Years Old	14	1.79	0.54	0.14	1.48	2.10	1.13	2.81
46-55 Years Old	14	1.85	0.64	0.17	1.49	2.22	1.16	2.89
56 Years Old Above	14	1.66	0.75	0.20	1.23	2.09	1.00	3.00
Total	70	1.84	0.62	0.07	1.69	1.99	1.00	3.00

Table C.3 shows the personal factors Mean, SD, SE at 95% CI for mean in relation to age. The data shows that the SD of age ranging from 15 to 25 years old ($\sigma=0.60$); 26 to 35 years old ($\sigma=.57$); 36 to 45 years old ($\sigma=0.54$), 46 to 55 years old ($\sigma=0.64$); and, 56 years old and above ($\sigma=0.75$) connotes that individual data values are closer from the mean value. In this result, the total SD of all ages ($\sigma=0.62$) is close to zero indicating that data points are close to the mean.

The SE of the mean of 15 to 25 years old ($\sigma \bar{X} = 0.16$), 26 to 35 years old ($\sigma \bar{X} = 0.15$), 36 to 45 years old ($\sigma \bar{X} = 0.14$), 46 to 55 years old ($\sigma \bar{X} = 0.17$), and, 56 years old and above ($\sigma \bar{X} = 0.20$) are closer from the sample mean to the true mean of the overall population. This result indicated that a smaller value of the SD error of the mean among ages is a more precise estimate of the true population means. The researcher is 95 percent confident that the total interval for the mean of all ranges is between 1.69 lower bound and 1.99 upper bounds with a minimum observation of 1.00 and a high observation of 3.00 in the data set of value.

Table C.4: Analysis of Variance (ANOVA) of Interpersonal Factors Related to Ages

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.884	4	.221	.567	.687
Within Groups	25.329	65	.390		
Total	26.213	69			

The F value obtained in this study between age groups in relation to interpersonal factors is .567, with a p-value of .687 at 0.05 level of probability with (4,69) degrees of freedom. The F value is much lower than the tabular value of 2.51, and the p-value is higher than the alpha value ($\alpha=0.05$). As a result, it is concluded that the mean score of interpersonal factors in relation to the ages of male-partner participation assessment in postpartum care and breastfeeding practices does not differ significantly, predicated on the null hypothesis that no significant difference exists between the mean scores of personal factors in relation to male-partner ages, thus null hypothesis is accepted. Finally, the result is not statistically significant, therefore the mean of interpersonal factors in relation to age are all the same in relation to male partners' participation assessment in postpartum care and breastfeeding practices.

Table C.5: Tabular Description of Personal Factors Related to Educational Background

Educational Background	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Elementary Level	30	1.93	0.5	0.09	1.74	2.12	1.2	2.73
Elementary Graduate	30	1.93	0.52	0.1	1.74	2.13	0.91	2.66
Secondary Level	30	1.98	0.58	0.11	1.76	2.2	1.1	2.86
Secondary Graduate	30	1.96	0.64	0.12	1.73	2.2	1	2.93
College Level	30	1.93	0.62	0.11	1.7	2.17	1.05	2.85
College Graduate	30	1.89	0.55	0.1	1.68	2.09	1.18	2.76
Vocational	30	1.16	0.42	0.08	1	1.31	0.57	1.71
Total	210	1.83	0.61	0.04	1.74	1.91	0.57	2.93

The C.5 table depicted the personal factors Mean, SD, SE, and 95 % CI for Mean in relation to educational background. The data showed that the SDs of elementary level ($\sigma=0.50$), elementary graduate ($\sigma=.52$), secondary level ($\sigma=0.58$), secondary graduate ($\sigma=0.64$), college-level ($\sigma=0.62$), and college graduate ($\sigma=0.5$) are higher than the SD of vocational ($\sigma=0.42$), which is lower in comparison to their sample means. A higher SD from elementary school to college graduate indicated that individual responses to formulated questions were heterogeneous and hence deemed spread around the mean value. While a lower SD of vocational educational background suggested that individual responses to formulated questions were homogeneous and hence deemed closer to the mean value.

The SE of the mean of elementary level ($\sigma \bar{X} = 0.09$), elementary graduate ($\sigma \bar{X} = 0.10$), secondary level ($\sigma \bar{X} = 0.11$), secondary graduate ($\sigma \bar{X} = 0.12$), college-level ($\sigma \bar{X} = 0.11$), and college graduate ($\sigma \bar{X} = 0.10$) is higher than the SE of the mean of vocational ($\sigma \bar{X} = 0.04$). A higher SE from the mean of elementary school to college graduates showed that sample means are widely distributed around the population mean, and hence the sample may not precisely represent the population means. A low SE in vocational suggested that sample means were tightly dispersed around the population mean, implying that the sample was reflective of the underlying population mean. In this result, however, it is 95 % confidence that the total interval for the mean of all educational backgrounds is between 1.74 lower bound and 0.57 upper bound with a minimum observation of 1.00 and a high observation of 2.93 in the data set of value.

Table C. 6: Analysis of Variance (ANOVA) of Personal Factors Related to Educational Background

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.843	6	2.641	8.648	.000
Within Groups	61.986	203	.305		
Total	77.829	209			

The F value obtained in this study between educational background groups in relation to personal factors is 8.648, with a p-value of <0.001 at 0.05 level of probability with (6,209) degrees of freedom. The F value is much higher than the tabular value of 2.10, and the p-value is lower than the alpha value ($\alpha = 0.05$). As a result, it is concluded that the mean score of personal factors in relation to the educational background of male-partner participation assessment in postpartum care and breastfeeding practices differ significantly, predicated on the null hypothesis that there is no significant difference exists between the mean scores of personal factors in relation to male-partner educational background is rejected, thus accepted the alternative hypothesis that there is significant difference exists between the mean scores of personal factors in relation to male-partner educational background. Furthermore, the total SD ($\sigma = 0.61$) and total SE of the mean ($\bar{X} = 0.04$) were distant with respect to the sample mean and the true population means justified the results.

Finally, this result provides statistically significant evidence that means of personal factors in relation to educational background are not the same for all male-partners participation assessment in postpartum care and breastfeeding practices.

Table C.7: Multiple Comparison (Post hoc tests) of Personal Factors Related to Educational Background

(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Vocational	Elementary Level	-.77467*	0.14	0	-1.2	-0.35
	Elementary Graduate	-.77500*	0.14	0	-1.2	-0.35
	Secondary Level	-.82267*	0.14	0	-1.25	-0.4
	Secondary Graduate	-.80667*	0.14	0	-1.23	-0.38
	College Level	-.77700*	0.14	0	-1.2	-0.35
	College Graduate	-.73167*	0.14	0	-1.16	-0.31

*. The mean difference is significant at the 0.05 level.

Multiple comparisons of personal factors in the educational background shown that vocational and elementary level (MD $-.77467^*$; SE 0.14; p 0.00); elementary graduate (MD $-.77500^*$; SE 0.14; p 0.00); secondary level MD $-.82267^*$; SE 0.14; p 0.00); secondary graduate (MD $-.80667^*$; SE 0.14; p $<.05$); and, college level (MD $-.77700^*$; SE 0.14; p 0.00); college graduate (MD $-.73167^*$; SE 0.14; p 0.00) differed significantly at p $<.05$.

Table C.7.1: Tukey’s Honesty Significant Difference (HSD) of Personal Factors Weighted Mean

Educational Background	N	Subset for alpha = 0.05	
		1	2
Vocational	30	1.1563	
College Graduate	30		1.8880
Elementary Level	30		1.9310
Elementary Graduate	30		1.9313
College Level	30		1.9333
Secondary Graduate	30		1.9630
Secondary Level	30		1.9790
Sig.		1.000	.995

The post hoc tests compare the educational backgrounds two at a time. The results are shown in table C.7.1 with educational background listed in order according to their mean value for the dependent variable. Here, the vocational is shown first as this educational background has the lowest personal factors weighted mean ($\bar{X} = 1.1563$) and the secondary level is shown last as they have the highest personal factors weighted mean ($\bar{X} = 1.9790$). The columns or subsets show the mean personal factors made by each educational background listed in different columns. The arrangement of the mean values in columns or subsets shows which educational groups differ/do not differ significantly in terms of their mean personal factors.

If the educational background means are given in different columns, it suggests that the difference between their mean values is statistically significant. The weighted mean of personal factors in vocational as educational background, on the other hand, is displayed in a column by itself in this result and does not appear in any other columns. This implies that the vocational personal factors weighted mean score differs considerably from the personal factors weighted mean score of all other educational backgrounds.

Table C.8: Tabular Description of Interpersonal Factors Related to Educational Background

Educational Background	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Elementary Level	14	1.85	0.42	0.1	1.61	2.09	1.33	2.47
Elementary Graduate	14	1.87	0.43	0.1	1.62	2.11	1.2	2.34
Secondary Level	14	1.74	0.5	0.1	1.45	2.04	1.21	2.34
Secondary Graduate	14	1.83	0.45	0.1	1.57	2.09	1.2	2.43
College Level	14	1.73	0.53	0.1	1.42	2.03	1.15	2.55
College Graduate	14	1.66	0.5	0.1	1.37	1.95	1.18	2.47
Vocational	14	1.16	0.34	0.1	0.97	1.36	0.57	1.57
Total	98	1.69	0.5	0.1	1.59	1.79	0.57	2.55

Table C.8 presents the interpersonal factors Mean, SD, SE, and 95% CI for Mean in relation to educational background. The data showed that the SDs of elementary level ($\sigma=0.42$), elementary graduate ($\sigma=.43$), secondary level ($\sigma=0.50$), secondary graduate ($\sigma=0.45$), college-level ($\sigma=0.53$), and college graduate ($\sigma=0.50$) is higher than the SD of vocational ($\sigma=0.34$), which is lower in comparison to their sample means. A higher SD from elementary school to college graduate indicated that individual responses to formulated questions were heterogeneous and hence deemed spread around the mean value. While a lower SD of vocational educational background suggested that individual responses to formulated questions were homogeneous and hence deemed closer to the mean value.

The SE of the mean of elementary level ($\sigma \bar{X}=0.11$), elementary graduate ($\sigma \bar{X}=0.11$), secondary level ($\sigma \bar{X}=0.13$), secondary graduate ($\sigma \bar{X}=0.12$), college-level ($\sigma \bar{X}=0.14$), and college graduate ($\sigma \bar{X}=0.13$) is higher than the SE of the mean of vocational ($\sigma \bar{X}=0.09$). A higher SE from the mean of elementary school to college graduates showed that sample means are widely distributed around the population mean, and hence the sample may not precisely represent the population means. A low SE in vocational suggested that sample means were tightly dispersed around the population mean, implying that the sample was reflective of the underlying population mean. In this result, however, it is 95 % confidence that the total interval for the mean of all educational backgrounds is between 1.59 lower bound and 1.79 upper bound with a minimum observation of 0.57 and a high observation of 2.55 in the data set of value.

Table C.9: Analysis of Variance (ANOVA) of Interpersonal Factors Related to Educational Background

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.036	6	.839	4.017	.001
Within Groups	19.013	91	.209		
Total	24.048	97			

The F value obtained in this study between educational background groups in relation to interpersonal factors is 4.017, with a p-value of <0.001 at 0.05 level of probability with (6, 97) degrees of freedom. The F value is much higher than the tabular value of 2.19, and the p-value is lower than the alpha value ($\alpha=0.05$). As a result, it is concluded that the mean score of interpersonal factors in relation to the educational background of male-partner participation assessment in postpartum care and breastfeeding practices differ significantly, predicated on the null hypothesis that there is no significant difference exists between the mean scores of interpersonal factors in relation to male-partner educational background is rejected, thus accepted the alternative hypothesis that there is a significant difference exists between the mean scores of interpersonal factors in relation to male-partner educational background. Furthermore, the total SD ($\sigma=0.50$) and total SE of the mean ($\bar{X}=0.05$) were distant with respect to the sample mean and the true population means justified the results.

Finally, this result provides statistically significant evidence that means of interpersonal factors in relation to the educational background are not the same for all male-partners participation assessment in postpartum care and breastfeeding practices.

Table C.10: Multiple Comparison (post hoc tests) of Interpersonal Factors Related to Educational Background

(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Vocational	Elementary Level	-.69000*	0.17	0	-1.21	-0.17
	Elementary Graduate	-.70429*	0.17	0	-1.23	-0.18
	Secondary Level	-.58143*	0.17	0	-1.1	-0.06
	Secondary Graduate	-.66429*	0.17	0	-1.19	-0.14
	College Level	-.56571*	0.17	0	-1.09	-0.04
	College Graduate	-.5	0.17	0.1	-1.02	0.02

*The mean difference is significant at the 0.05 level.

Multiple comparisons of data results show that vocational and elementary level (MD $-.69000^*$; SE 0.17; p 0.00); elementary graduate (MD $-.70429^*$; SE 0.147; p 0.00); secondary level MD $-.58143^*$; SE 0.147; p 0.02); secondary graduate (MD $-.66429^*$; SE 0.17; p 0.00); and, college level (MD $-.56571^*$; SE 0.17; p 0.02); differed significantly at $p < .05$. However, college graduate (MD $-.50^*$; SE 0.17; p 0.07) bears no meaningful difference.

Table C.10.1: Tukey’s Honesty Significant Difference (HSD) of Interpersonal Factors Weighted Mean

Educational Background	N	Subset for Alpha = 0.05	
		1	2
Vocational	14	1.1629	
College Graduate	14	1.6636	1.6636
College Level	14		1.7286
Secondary Level	14		1.7443
Secondary Graduate	14		1.8271
Elementary Level	14		1.8529
Elementary Graduate	14		1.8671
Sig.		.068	.901

The post hoc tests compare the educational backgrounds two at a time. The results are shown in Table C.10.1, with educational background listed in order according to their mean value for the dependent variable. Here, the vocational is shown first as this educational background has the lowest personal factors weighted mean ($\bar{X} = 1.1629$) and the elementary graduate is shown last as they have the highest interpersonal factors weighted mean ($\bar{X} = 1.8671$). The columns or subsets show the mean personal factors made by each educational background listed in different columns. The arrangement of the mean values in columns or subsets shows which educational groups differ/do not differ significantly in terms of their mean interpersonal factors.

If the educational background means are given in separate columns, it suggests that the difference between their mean values is statistically significant. However, in this result, the weighted mean of vocational interpersonal factors is displayed in a column by itself and does not appear in any other columns, but the weighted mean of college graduates appears in both columns. This demonstrates that the vocational educational background's weighted mean score

differs considerably from the weighted mean of all other educational background groups, except for college graduates, who have no significant difference in vocational educational background.

Table C.11: Tabular Description of Personal Factors Related to the Number of Children

Number of children	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 Child	30	2.05	0.55	0.1	1.85	2.25	1.12	2.72
2 Above	14	2.03	0.58	0.16	1.69	2.36	1.21	2.71
Total	44	2.04	0.55	0.08	1.87	2.21	1.12	2.72

Table C.11. Shows the personal factors Mean, SD, SE, and 95 % CI for Mean in relation to the number of children. The data showed that the SDs of the number of children from 0 to 1 is ($\sigma=0.55$); and, 2 above ($\sigma=.58$) connotes that individual data values are closer to the mean value. In this result, the total SD of ($\sigma=0.55$) is close to zero indicating that data points are close to the mean.

The SE of the mean of 0 to 1 child is ($\sigma \bar{X} =0.10$), and, 2 children above ($\sigma \bar{X} =0.16$) are closer from the sample mean to the true mean of the overall population. This result indicated that a smaller value of the SE of the mean among ages is a more precise estimate of the true population means. The researcher is 95 percent confident that the total interval for the mean of all age ranges is between 1.87 lower bound and 2.21 upper bound with a minimum observation of 1.12 and a high observation of 2.72 in the data set of values.

Table C.12: Analysis of Variance (ANOVA) Personal Factors Related to the Number of Children

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.005	1	.005	.016	.901
Within Groups	13.075	42	.311		
Total	13.080	43			

The F value obtained in this study between a number of children groups in relation to personal factors is.016, with a p-value of.901 at 0.05 level of probability with (1,43) degrees of freedom. The F value is much lower than the tabular value of 4.07, and the p-value is higher than the alpha value ($\alpha=0.05$). As a result, it is concluded that the mean score of personal factors in relation to the number of children of male-partner participation assessment in postpartum care and breastfeeding practices does not differ significantly, predicated on the null hypothesis that no significant difference exists between the mean scores of personal factors in relation to male-partner number of children, thus null hypothesis is accepted.

Finally, the result is not statistically significant, therefore the mean of personal factors in relation to the number of children are all the same in relation to male-partners participation assessment in postpartum care and breastfeeding practices.

Table C.13: Tabular Description of Interpersonal Factors Related to the Number of Children

Number of children	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 Child	30	1.82	0.63	0.11	1.59	2.06	1.01	2.76
2 Above	14	1.84	0.6	0.16	1.5	2.18	1.07	2.52
Total	44	1.83	0.61	0.09	1.64	2.01	1.01	2.76

Table C.11. Presents the interpersonal factors Mean, SD, SE, and 95 % CI for Mean in relation to the number of children. The data showed that the SDs of the number of children from 0 to 1 is ($\sigma=0.63$); and, 2 above ($\sigma=.60$) connotes that individual data values are closer to the mean value. In this result, the total SD of ($\sigma=0.61$) is close to zero indicating that data points are close to the mean. The SE of the mean of 0 to 1 child is ($\sigma \bar{X} =0.11$), and, 2 children above ($\sigma \bar{X} =0.16$) are closer from the sample mean to the true mean of the overall population. This result indicated that a smaller value of the SE of the mean among ages is a more precise estimate of the true population means. The researcher is 95 % confident that the total interval for the mean of all age ranges is between 1.64 lower bound and 2.01 upper bound with a minimum observation of 1.01 and a high observation of 2.76 in the data set of values.

Table C.14: Analysis of Variance (ANOVA) Of Interpersonal Factors Related to the Number of Children

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.003	1	.003	.007	.935
Within Groups	16.015	42	.381		
Total	16.018	43			

The F value obtained in this study between a number of children groups in relation to personal factors is.007, with a p-value of.935 at 0.05 level of probability with (1,43) degrees of freedom. The F value is much lower than the tabular value of 4.07, and the p-value is higher than the alpha value ($\alpha=0.05$). As a result, it is concluded that the mean score of interpersonal factors in relation to the number of children of male-partner participation assessment in postpartum care and breastfeeding practices does not differ significantly, predicated on the null hypothesis that no significant difference exists between the mean scores of interpersonal factors in relation to male-partner number of children, thus the null hypothesis is accepted. Finally, the result is not statistically significant, therefore the mean of interpersonal factors in relation to the number of children are all the same in relation to male-partners participation assessment in postpartum care and breastfeeding practices.

CONCLUSION

The conclusion of the findings of eight research questions on factors affecting male-partner participation in post-partum care and breastfeeding practices of OB ward patients of a Philippine public hospital was based on the two factors identified as (1) personal factors, and (2). Interpersonal factors, to wit.

- 1) There is no significant difference exists between the mean scores of personal and interpersonal factors concerning male-partner ages and their number of children.
- 2) There is a significant difference exists between the mean scores of personal and interpersonal factors regarding male-partner educational background.
- 3) Multiple comparisons (post hoc tests) of personal factors in the educational background shown that vocational and elementary level (MD $-.77467^*$; SE 0.14; p 0.00); elementary graduate (MD $-.77500^*$; SE 0.14; p 0.00); secondary level MD $-.82267^*$; SE 0.14; p 0.00); secondary graduate (MD $-.80667^*$; SE 0.14; p $<.05$); and, college level (MD $-.77700^*$; SE 0.14; p 0.00); college graduate (MD $-.73167^*$; SE 0.14; p 0.00) differed significantly at $p < .05$.
- 4) Tukey's Honesty Significant Difference (HSD) test of personal factors weighted mean about educational background revealed that the vocational personal factors weighted mean score differs significantly from the personal factors weighted mean score of all other educational backgrounds, except college graduates, who have no significant difference in interpersonal factors about vocational educational background.

RECOMMENDATIONS

This study has contributed to understanding the factors affecting male-partner participation in post-partum care and breastfeeding practices. As the study progressed, a few areas surfaced as suggested areas for future studies., to wit:

- 1) It is recommended that while creating assessment methods for male-partner participation in postpartum care and encouraging breastfeeding practices, postpartum patients' impressions of healthcare provided by male nurses be included.
- 2) Because educational background differs significantly from other variables in this study, educational interventions are being investigated to determine the most effective teaching ways to promote men's participation in reproductive health programs.
- 3) The study was on factors affecting male-partner participation in post-partum care and breastfeeding practices. It is suggested that the same study be repeated with various factors found in this study on additional postpartum patients to see if these variables represent the same conclusions shown in this study.
- 4) Except for educational background, the data revealed that the majority of the factors in this study have no meaningful association. It is suggested that the same study be repeated, but with the addition of other relevant characteristics that might improve knowledge of male-partner participation assessment in postpartum care and breastfeeding practices. A study considering other significant variables may yield more discussions and comprehensive results.
- 5) This study was undertaken during the COVID-19 pandemic when the admission of expectant patients for a hospital birth and their partner or spouse is rigorously monitored with adherence to health protocol enforced by the health authorities. It is

suggested that the same study shall be carried out once the epidemic has returned to normalcy to determine whether there is a substantial difference when minimum health regulations are still in place.

- 6) The only notable restriction of this study was that male participants were accompanying the postpartum patients' husbands. Although some husbands were compelled to attend the hospital for their spouse's discharge, others did so of their own volition. As a result, population-based research is recommended in comparable future investigations.
- 7) Revisit the OB ward policy and OPD Bantay orientation program for prenatal visit patients to include the importance of male partners in postpartum care and breastfeeding.

References

1. Antonovsky, A. & Kats, R. (1967). *Journal of Health and Social Behavior*, "The Life Crisis History as a Tool in Epidemiologic Research", p. 15-20.
2. Barona-Vilar, C. et. al, (2007). A qualitative approach to social support and breast-feeding decisions. *Midwifery*, 25,187-194.
3. Carpenter (2004). "Centering Pregnancy and the Current State of Prenatal Care." *Journal of Midwifery and Women's Health*.
4. Flower, K. B., et. Al. (2007). Understanding Breastfeeding Initiation and Continuation in Rural Communities: A Combined Qualitative/Quantitative Approach.
5. Melnechenko, Karen, Parse's (1995). *Theory of Human Becoming: An Alternative Guide to Nursing Practice for Pediatric Oncology Nurses*. *Journal of Pediatric Oncology Nursing*, Vol. 12, No.3, 122-127.
6. Newman, M. (2010). *Health as expanding consciousness*.
7. Paramasivam K, Michie C, Opara E, Jewell AP (2006). Human breast milk immunology: a review., p. 51:208-217
8. Roehrich, (2000). *Maternal & Child Health Survey*, New York University Press.
9. <http://jfn.sagepub.com/content/4/2/1198.short>
10. <http://madyaaspen.blogspot.com/2010/08/doh-urges-fathers-assist-in.html>, 2010
11. http://www.who.int/topics/millennium_development_goals/about/en/index.
12. <http://www.who.int/topics/breastfeeding/en/>
13. <http://www.internationalbreastfeedingjournal.com/content/4/1/15#B2>
14. <http://www.healthasexpandingconsciousness.org/home/>
15. <https://www.un.org/sustainabledevelopment/health/>