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Effectiveness of information education and communication package on diagnosis of infertility among couples attending infertility clinic

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Abstract
Infertility is the inability of the couple to conceive after trying for one year. Infertility for women is the inability to deliver a baby to full term. Male infertility, also termed as male factor infertility is simply the man's attribution or cause to a couple that has no ability to conceive. A pre experimental study was done to assess the effectiveness of information education and communication package on diagnosis of infertility among couples attending infertility clinic. The study was conducted at G.G Hospital- Fertility Research Centre, Nungambakkam, Chennai. The self-administered tool was used to assess the knowledge of couples regarding diagnosis of infertility. A total of 30 couples were selected using convenient sampling. After the pre-test couples were given with information education and communication package and after a week, the post-test was conducted with the same self-administered tool and the effectiveness of information education and communication package was measured. The result of this study highlighted the information education and communication package improves the knowledge on diagnosis of infertility among the couples.

Keywords: Effectiveness, IEC package, diagnosis, infertility, couples

Introduction
Infertility has been recognized as a public issue worldwide by the World Health Organization (WHO) in 2007. Infertility exists then, when a woman was pregnant once, but could not carry the baby to full term or Infertility is defined as failure to conceive after frequent unprotected sexual intercourse for one to two years in couples in the reproductive age group. The causes for both problems can be the same. (Pfleiderer, Breckwoldt, Martius, 2000).Infertility is one of the taboos of society that can be challenging and frustrating for couples. Couples feel helpless and isolated when they learn that they have a low to nil chance of conceiving. While this is not necessarily a disease, this disorder can cause the same amount of stress and hopelessness. According to American Society for Reproductive Medicine (ASRM, 2002) [28] Infertility is a serious medical concern that affects the quality of life and is a problem for about 10% of the reproductive age population.

Traditionally it is the women who are frequently blamed when the couple cannot have a child. The investigation for infertility begins and ends with evaluation of wife alone but husbands were not examined in many infertility centers. But now in the recent decades both the couples understood the importance of investigation for the infertility. In identifying the disorders of infertility, both partners are required to undergo various clinical investigations. Education of the infertile couple is the cornerstone to the treatment of their problem. Most couples, despite being relatively well educated, have a rudimentary understanding of reproductive biology. The couple should be advised to have intercourse within the fertile zone and should be informed that conception can occur. Couples should be discouraged from using any form of artificial lubricants as all of these agents have a deleterious effect on sperm function and viability. They should be informed that conception usually occurs within 4-6 months and only 25% of the women have chance to conceive within one month of ovulatory cycle.

Couples should be encouraged to alter any unfavorable lifestyle practices that would decrease their chance of pregnancy. The woman should be started on prenatal vitamins with adequate folic acid content to reduce the risk of neural tube defects.

It should be mentioned that any couple expressing a concern over their reproductive potential deserves a basic infertility evaluation, despite a history of less than one year of attempting conception. Hence the health care providers can help couples with infertility by designing supportive services and offering psychological counseling, intervention that provide educational information and teach new skill and may produce positive changes than interventions focused on counseling and expression of feeling.

Statement of the problem

A pre experimental study to assess the effectiveness of information education and communication package on diagnosis of infertility among couples attending infertility clinic at G.G Hospital-Fertility Research Centre, Nungambakkam, Chennai.

Objectives

1. To assess the pre-test level of knowledge on diagnosis of infertility among couples attending infertility clinic.
2. To assess the post-test level of knowledge on diagnosis of infertility among couples attending infertility clinic.
3. To evaluate the effectiveness of information education and communication package on level of knowledge in diagnosis of infertility among couples attending infertility clinic.
4. To associate the pre and post-test level of knowledge with the selected demographic variables.

Hypothesis: There is no significant relationship between the information education and communication package and the level of knowledge on diagnosis of infertility among the couples.

Research methodology: The Quantitative approach was adopted for the study. The research design selected for the study was pre experimental one group pre-test post-test design. This study was conducted in G.G Hospital - Fertility Research Centre Chennai. A sample of 30 couples attending infertility clinic at G.G hospital- fertility research centre, Nungambakkam were selected by Convenient sampling. The self-administered tool was prepared to assess the knowledge of couples attending infertility clinic.

Results and Discussion

The findings of the study were discussed based on the objectives Demographic variables of husbands attended infertility clinic. In regard to age 20 (66%) husbands were from the age group of 31 - 34 years and the others 10 (34%) were fall in the age group of 26 - 30 years. In relation with, age at marriage 21 (70%) husbands were married between the age of 26 - 30 years and 5 (17%) husbands married in the age between 31 - 34 years. In accordance with educational status 19 (63%) husbands were completed their graduation, 10 (34%) were educated up to higher secondary and only 1(3%) finished secondary education.

Demographic variable of wives attended infertility clinic with regard to the age 14(47%) wives were from the age group of 25 - 29 year, 10 (33%) of them were between the age group of 30 - 34 years and 6(20%) of them from the age group of 21 - 24 years. In concerned with menstrual pattern 21 (70%) of them had regular menstrual pattern and 9(30%) with irregular menstruation. In relation to the age at marriage 15 (50%) of the wives were married in the age between 25 - 29 years, 13(43%) were married between 21 - 29 years and rest of the 2 (7%) wives were married in the age between 17 - 20 years. In accordance with educational status 21 (70%) wives were graduated and 8(27%) wives have completed their higher secondary education, only 1(3%) wife educated up to secondary schooling.

Demographic variables of couples attending infertility clinic with respect to the type of marriage, 16 (54%) couples had non consanguineous marriage, 7(23%) have got first and second degree consanguineous marriage. In concerned with the monthly family income 22(74%) of them had family income of about Rs.11001 and about, 4(13%) were earning about Rs.8001 - 11000 and Rs.5001 - 8000, none of them had family income of below Rs.5000. In accordance with years of infertility 11(37%) couples were diagnosed for infertility between 1st and 2nd year and 8 (26%) couples were diagnosed in 3rd year.

The first objective was to assess the pre-test level of knowledge on diagnosis of infertility among couples attending infertility clinic.

Table 1: Frequency and percentage distribution of pre-test level of knowledge on diagnosis of infertility among husbands attending infertility clinic N=30

Level of Knowledge	Pre-test	
	Frequency	Percentage
Inadequate	-	-
Moderate	12	40
Adequate	18	60

The table 1 showed the frequency and percentage distribution of pre-test level of knowledge on diagnosis of infertility among husbands attending infertility clinic. With respect to the level of knowledge level majority18 (60%) of them had inadequate knowledge on diagnosis of infertility and 12 (40%) of them had moderate knowledge on diagnosis of infertility. None of them had adequate knowledge on diagnosis of infertility in the pre-test.

Table 2: Frequency and percentage distribution of pre-test level of knowledge on diagnosis of infertility among wives attending infertility clinic. N=30

Level of Knowledge	Pre-test	
	Frequency	Percentage
Inadequate	-	-
Moderate	8	27
Adequate	22	73

The above table 2 represented frequency and percentage distribution of pre-test level of knowledge on diagnosis of infertility among wives attending infertility clinic. With respect to the level of knowledge majority 22 (73%) of them had inadequate knowledge on diagnosis of infertility and 8 (27%) of them had moderate knowledge on diagnosis of infertility. None of them had adequate knowledge on diagnosis of infertility in the pre-test.

Table 3: Frequency and percentage distribution of pre-test level of knowledge on diagnosis of infertility among couples attending infertility clinic. N=30

Level of Knowledge	Pre-test	
	Frequency	Percentage
Inadequate	-	-
Moderate	10	33
Adequate	20	67

The above table 3 showed the frequency and percentage distribution of pre-test level of knowledge on diagnosis of infertility among couples attending infertility clinic. In respect to the knowledge level majority 20 (67%) couples had inadequate knowledge on diagnosis of infertility and 10 (33%) couples had moderate knowledge on diagnosis of infertility. None of them had adequate knowledge on diagnosis of infertility in the pre-test.

The second objective was to assess the post-test level of knowledge on diagnosis of infertility among couples attending infertility clinic.

Table 4: Frequency and percentage distribution of post-test level of knowledge on diagnosis of infertility among husbands attending infertility clinic. N=30

Level of Knowledge	Post-test	
	Frequency	Percentage
Adequate	24	80
Moderate	6	20
Inadequate	-	-

The above table 4 represented frequency and percentage distribution of post-test level of knowledge on diagnosis of infertility among husbands attending infertility clinic. With respect to the level of knowledge majority 24 (80%) of them had adequate knowledge on diagnosis of infertility and 6 (20%) of them had moderate knowledge on diagnosis of infertility. None them had inadequate knowledge on diagnosis of infertility in the post-test.

Table 5: Frequency and percentage distribution of post-test level of knowledge on diagnosis of infertility among wives attending infertility clinic. N=30

Level of Knowledge	Post-test	
	Frequency	Percentage
Adequate	20	67
Moderate	10	33
Inadequate	-	-

The above table 5 depicted the frequency and percentage distribution of post-test level of knowledge on diagnosis of infertility among wives attending infertility clinic. With respect to the level of knowledge majority 20 (67%) of them had adequate knowledge on diagnosis of infertility and 10 (33%) of them had moderate knowledge on diagnosis of infertility. None of them had inadequate knowledge on diagnosis of infertility in the post-test.

Table 6: Frequency and percentage distribution of post-test level of knowledge on diagnosis of infertility among couples attending infertility clinic. N=30

Level of Knowledge	Post-test	
	Frequency	Percentage
Adequate	17	57
Moderate	13	43
Inadequate	-	-

The above table 6 showed the frequency and percentage distribution of post-test level of knowledge on diagnosis of infertility among couples attending infertility clinic. With respect to the level of knowledge majority 17 (57%) of them had adequate knowledge on diagnosis of infertility, and 13 (43%) couples showing that having moderate knowledge on diagnosis of infertility. None of them had inadequate knowledge in the post-test.

The third objective was to evaluate the effectiveness of information education and communication package on level of knowledge in diagnosis of infertility among couples attending infertility clinic.

Table 7: Frequency and percentage distribution of pre-test and post-test level of knowledge on diagnosis of infertility among husbands attending infertility clinic. N = 30

Level of Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Inadequate	18	60	-	-
Moderate	12	40	6	20
Adequate	-	-	24	80

The above table 7 represented frequency and percentage distribution of pre-test and post-test level of knowledge on diagnosis of infertility among husbands attending infertility clinic. With respect to the level of knowledge majority18 (60%) of them had inadequate knowledge, 12 (40%) of them had moderate knowledge on diagnosis of infertility whereas in post-test 24 (80%) of them had adequate knowledge, 6 (20%) of them had moderate knowledge and none of them showed inadequate knowledge in post-test.

Table 8: Frequency and percentage distribution of pre-test and post-test level of knowledge on diagnosis of infertility among wives attending infertility clinic. N = 30

Level of Knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Inadequate	22	73	-	-
Moderate	8	27	10	33
Adequate	-	-	20	67

The above table 8 showed the frequency and percentage distribution of pre-test and post-test level of knowledge on diagnosis of infertility among wives attending infertility clinic. With respect to the level of knowledge majority22 (73%) of them had inadequate knowledge, 8 (27%) of them had moderate knowledge on diagnosis of infertility whereas in post-test 20 (67%) of them had adequate knowledge, 10 (33%) had moderate knowledge and none of them showed inadequate knowledge in post-test.

Table 9: Comparison of mean and standard deviation of pre-test and post-test knowledge on diagnosis of infertility among couples attending infertility clinic. N = 30

Level of Knowledge	Mean	Standard deviation	Paired 't' test
Pre-test	15.03	3.28	3.005^{**}
Post-test	24.9	2.80	

$^{**}p<0.01$

The above table 9 represented the comparison between mean and standard deviation of pre-test and post-test knowledge on diagnosis of infertility among couples attending infertility clinic. It shows that the mean and standard deviation of pretest knowledge among couples (m= 15.03, S.D= 3.28) were lesser than that of posttest knowledge (m= 24.9, S.D = 2.80) and thus indicates the effectiveness of Information education and communication package. Thus the study finding rejected the null hypothesis

The fourth objective was to associate the pre and post-test level of knowledge with the selected demographic variables.

Table 10: Association between selected demographic variables and pre-test level of knowledge of diagnosis of infertility among couples attending infertility clinic. N= 30

S. No	Demographic Variables	Level of Knowledge						Chi-square χ^2
		Inadequate		Moderate		Adequate		
		N	%	N	%	N	%	
1	**Type of marriage**							
	1st degree consanguineous	4	57	3	43	-	-	χ^2= 0.229
	2nd degree consanguineous	4	57	3	43	-	-	df = 2
	Non Consanguineous	10	63	6	37	-	-	NS
2	**Monthly family income**							
	Rs. 5001 - 8000	2	50	2	50	-	-	χ^2 =1.403
	Rs. 8001 - 11,000	3	75	1	25	-	-	df = 2
	Rs.11,001 & above	15	68	7	32	-	-	NS
3	**Years of infertility**							
	1 year	8	80	2	20	-	-	χ^2=1.415
	2 years	8	57	6	43	-	-	df = 2
	3 years	4	66	2	44	-	-	NS

*p<0.05 NS- Non significant

Table 10 observed the association between selected demographic variables pre-test level of knowledge among couples attending infertility clinic. The result shows there was no statistical association between the couple's knowledge on diagnosis of infertility and selected common demographic variables in pretest at p<0.05.

Table 11: Association between selected demographic variables and post-test level of knowledge of diagnosis of infertility among couples attending infertility clinic. N = 30

S. No	Demographic Variables	Level of Knowledge						Chi- square χ^2
		Adequate		Moderate		Inadequate		
		N	%	N	%	N	%	
1	**Type of marriage**							
	1st degree consanguineous	3	42	4	58	-	-	χ^2 = 0.082
	2nd degree consanguineous	3	42	4	58	-	-	df = 2
	Non Consanguineous	7	43	9	57	-	-	NS
2	**Monthly family income**							
	Rs. 5001 - 8000	1	25	3	75	-	-	χ^2 = 0.726
	Rs. 8001 - 11,000	2	50	2	50	-	-	df = 2
	Rs.11,001 & above	10	45	12	56	-	-	NS
3	**Years of infertility**							
	1 year	7	70	3	30	-	-	χ^2 = 0.403
	2 years	11	78	3	22	-	-	df = 2
	3 years	4	66	2	34	-	-	NS

*p<0.05 NS- Non significant

Table 11 represented the association between the selected demographic variable post-test level of knowledge among couples attending infertility clinic. The result shows there was no association between the couple's knowledge on diagnosis of infertility and the selected demographic variables in post-test at p<0.05.

Conclusion

From this study, the researcher found that the couples have gained knowledge regarding diagnosis of infertility. Hence the nurse midwife suggests that formulated teaching not only helps to gain knowledge on the particular area and it also helps them psychologically to develop positive attitudes towards fertility by decreasing their stress level and to maintain the healthier relationship with the society.

Conflict of Interest

Not available

Financial Support

Not available

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