Stress Level and Coping Strategies among Infertile Woman Attending a Private Hospital

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Abstract: *The aim of this study is to assess the level of stress and coping strategies of infertile women. A Cross-sectional descriptive study was conducted among 67 infertile women by using non-probability purposive sampling technique. The tools used are Semi Structured questionnaire, The Fertility Problem Inventory (FPI) and COMPI coping strategies scale. The study finding revealed that nearly half of respondents 41.8% have moderately high infertility stress & 6% have low infertility stress whereas majority of respondents 67.2% have highly use of passive avoidance coping strategies and 20.9% have highly use of active avoidance. Also, there was significant association between level of stress and subscale of coping strategies active avoidance, active confrontation and meaning based coping but insignificant with passive avoidance. The study concluded there is strong need for awareness regarding appropriate use of coping strategies and its practice among infertile women. Moreover, effective counselling may help reducing their stress.*

Keywords: Stress, Coping strategies, infertile women

1. Introduction

A failure to conceive within one or more years of regular unprotected coitus is infertility. [1]The ability to bear children is very important in Nepalese society. Most of the family member even relatives and neighbors are curious about the conception of the couple in the first year of life. Fertility is highly valued in most cultures and the wish for a child is one of the most basic of all human motivations. [2]

Many women face problems related to infertility in various aspects of their life. In addition, it is not comfortable to discuss on this issue. Because of this, the feelings and distress faced by women may not come out and the pent up emotions may lead to different stress related problems. [2]Despite various changes in attitudes toward sexuality in recent centuries, fertility has remained important in the human mind and one of the factors, which strengthens marital life, is the existence of a child. [3]In many cultures, women who do not have children suffer from stigmatization, discrimination and ostracism, even if the underlying cause lies in their male partners or husbands. [4]Stress has been identified as a 20th century disease and has been viewed as a complex and dynamic transaction between individuals and their environments. Coping has been viewed as a stabilizing factor that may assist individuals in maintaining psychosocial adaptation during stressful events. [2]

According to systematic analysis of national health survey in 2010, the infertility rate is increased from 42millions in 1990 to 48.5millions in 2010. Infertility is seen highest in South Asia, Sub-Saharan Africa, North Africa/Middle East, and Central/Eastern Europe and Central Asia. [5]The infertility rate in developing countries is estimated 6.9 to 9.3%. [6] According to WHO, one in every four couples in developing countries had been found to be affected by infertility & burden remain high in 2012. [7] Also in Nepal, the trend of infertility is seen increasing but exact prevalence is still unknown. In Nepal, infertility rate is about 13 -15%. [8]

Globally, the infertility rate increasing steadily. [9]When compared with western society, negative consequences of childlessness are experience greater degree in developing countries. [10]It affect both men & women but due to negative

social & economical consequence, more women are affected. [11]

2. Methodology

Participant and procedure
This study was approved by research committee of Om health Campus. A descriptive cross sectional study was done in a private infertile hospital, Kathmandu during a two weeks of period. A non-probability purposive sampling technique was used to obtain the sample of 67 primary and secondary infertile women who were literate.

The questionnaire were distributed to the participant. The time needed to complete the question was approximately 30 minute, after which the questionnaire were collected.

Study instrument
It consist of three section,
1) The brief introduction about nature of research, ethical requirement for confidentiality and socio-demographic information.
2) The Fertility Problem Inventory (FPI) developed by Newton et al. and colleagues (1999), was used to assess the level of stress. It comprises 46 items and contains five scales measuring Social concern, Sexual concern, Relationship concern, Need for parenthood, and Rejection of childfree lifestyle. The instrument is scored using a 6-point Likert scale and a total measure of Global stress can also be calculated by summing the five scales. The overall score ranges from 46 to 276, where the higher the score, the higher the fertility-related stress.For females, FPI scores of 0-97 indicate low infertility stress, 98-132 indicate average infertility stress 133-167 indicate moderately high infertility stress & 168 or greater indicated extremely high amounts of infertility stress.[12]
3) The COMPI Coping Strategy Scale was developed by Schmidt in 1996 which has 19 item scale with four subscales Active-avoidance (e.g. I avoid being with pregnant women or children) was measured by four items (items 1,2,3,4). Active confrontation (e.g. I ask other infertile women for advice) was measured by seven items (items 5, 6, 7, 8, 9, 18, 19). Passive-avoidance (e.g. I try to forget everything about our infertility) was measured

by three items (items 10,11,12) and meaning-based coping (e.g. I find other life goals) was measured by five items (items 13,14,15,16,17). Responses on the COMPI Coping Strategy Scales are made on a three-point Likert scale ranging from 0 for not use, 1 for low use, 2 for moderate use and 3 for high use.[13]

The collected data was checked, reviewed and organized for accuracy and completeness. The mode of data entry was computerized. Collected data was coded and entered and statistical analyses were performed using SPSS (version 21) software.

3. Result

Table 1: Socio- demographic information, n=67

Variable	Frequency	Percentage (%)
Age (in completed years)	1	1.5
below 20	33	49.3
21-30	30	44.8
31-40	3	4.5
41-50		
Mean = 31.10, ± 5.408		

Religion		
Hindu	59	88.1
Buddhist	7	10.4
Kirat	1	1.5

Level of education		
Primary	10	14.9
Secondary	18	26.9
Higher secondary	20	29.9
More than above	19	28.4

Family income		
Less than 12000	10	14.9
12000-25000	19	28.4
25000-60000	24	35.8
Above 60000	14	20.9

Types	56	83.6
Primary infertility	11	16.4
Secondary infertility		

Duration (in years)		
5-Jan	37	55.2
10-Jun	25	37.3
15-Nov	5	7.5

Duration of treatment (in years)		
Less than 1 year	15	22.4
1-2 years	23	34.3
3-4 years	13	19.4
More than 5 years	16	23.6

Table 1 shows that among 67 respondents, nearly half 49.3% are in the age group of 21-30years with mean age 31.10 years , most of respondents 88.1% are Hindu religion, maximum 29.9% has higher secondary level of education and higher 35.8% have family income in between 25000-60000 range. most of respondents 83.6% have primary infertility, majority 55.2% have below 5 years duration of

infertility, higher respondents (34.3%) have 1-2 years range duration of infertility treatment.

Table 2: Respondents stress level related to infertility, n=67

Level of stress	Frequency	Percentage (%)
Low	4	6
Average	13	19.4
Moderately high	28	41.8
High	22	32.8

Table 2 shows that among 67 respondents, maximum of respondents 41.8% have moderately high infertility stress, 32.8% have high infertility stress, 19.8% have average infertility stress & 6% have low infertility stress.

Table 3: Respondents coping strategies, n = 67

Coping strategies level	Frequency	Percentage (%)
Active- avoidance subscale		
Low use	20	29.9
Moderate use	33	49.3
High use	14	20.9
Active-confronting subscale		
Low use	6	9
Moderate use	26	38.8
High use	35	52.2
Passive-avoidance subscale		
Low use	6	9
Moderate use	16	23.9
High use	45	67.2
Meaning-based coping		
Low use	18	26.9
Moderate use	19	28.4
High use	30	44.8

Table 3 shows that among 67 respondents, majority of respondents 67.2% have high use of passive avoidance coping strategies,52.2% have high use of active confrontation, 44.8% have high use of meaning based coping and 20.9% have high use of active avoidance coping strategies.

Table 4: Association between level of stress and coping strategies (active avoidance), n=67

Coping strategies Active avoidance	Stress level				Chi-square
	Extremely high	Moderately high	Average	Low	
Low use	3 15.0%	2 10.0%	11 55.0%	4 20.0%	18.385
Moderate use	1 3.0%	10 30.3%	14 42.4%	8 24.2%	
High use	0 0.0%	1 7.1%	3 21.4%	10 71.4%	

df= 6 at P <0.05, Significant

The absolute value of the calculated chi- square (18.385) is greater than the tabulated value (12.59).Thus, it shows that there is significant association between level of stress and active avoidance which is the subscale of coping strategies scale.

Table 5: Association between level of stress and coping strategies (Active confrontation), n= 67

Coping strategies Active confrontation	Stress level				Chi – square value
	Extremely high	Moderately high	Average	low	
Low use	1 16.7%	1 16.7%	5 83.3%	0 0.0%	14.518
Moderate use	3 11.5%	8 30.8%	8 30.8%	7 26.9%	
High use	0 0.0%	5 14.3%	15 42.9%	15 42.9%	

df=6 at P <0.05, Significant

The absolute value of the calculated chi-square (14.518) is greater than the tabulated value (12.59). Thus, it shows that there is significant association between level of stress and active confrontation which is the subscale of coping strategies.

Table 6: Association between level of stress and coping strategies (Passive avoidance), n= 67

Coping strategies Passive avoidance	Stress level				Chi-square value
	Extremely high	Moderately high	Average	low	
Low use	1 16.7%	3 50.0%	2 33.3%	0 0.0%	11.370
Moderate use	0 0.0%	4 25%	9 56.3%	3 18.8%	
High use	3 6.7%	6 13.3%	17 37.8%	19 42.2%	

df=6 at P <0.05, insignificant

The absolute value of the calculated chi-square (11.370) is greater than the tabulated value (12.59). Thus, it shows that there is insignificant association between level of stress and passive avoidance which is the subscale of coping strategies.

Table 7: Association between level of stress and coping strategies(meaning based coping), **n= 67**

Coping strategies Meaning based coping	Stress level				Chi-square value
	Extremely high	Moderately high	Average	low	
Low use	0 0.00%	1 5.60%	13 72.20%	4 22.20%	15.841
Moderate use	1 5.30%	2 10.50%	9 47.40%	7 36.80%	
High use	3 10.00%	10 33.30%	6 20.00%	11 36.70%	

df=6 at P <0.05, significant

The absolute value of the calculated chi-square (15.841) is greater than the tabulated value (12.59). Thus, it shows that there is significant association between level of stress and meaning based coping which is the subscale of coping strategies.

4. Discussion

The present study finding revealed that among 67 sample, nearly half of respondents 41.8% have moderately high infertility stress, 32.8% have high infertility stress,19.8% have average infertility stress & 6% have low infertility stress which is comparatively lower than the a study done by T.sujatha and H. shantamaryin which majority of women 57 (85.1%) having a moderate level of stress, 10 (14.9%) of the women having a severe level of stress and none of them having a mild level of stress. Thus, both studies have contrast finding.[14]

The present study also revealed that among 67 respondents, majority of respondents 67.2% have highly use of passive avoidance coping strategies. 52.2% have high use of active confrontation, 44.8% have high use of meaning based coping, 20.9% have high use of active avoidance. The finding is comparatively lower than a study done by Nemat Ismail, Abdel Aziz Ismail and AmalAwadAbdelnabi Moussa which revealed that passive-avoidance coping was highly used by 96.5% of infertile women. Meaning-based coping was highly used by 47.5% of them. Active-confronting coping was highly used by 37% of infertile women. While active-avoidance coping was highly used by only 15% of them. Thus finding of the study is contrast.[15]

Furthermore, the finding indicated that there was significant association between level of stress and subscale of coping strategies active avoidance, active confrontation and meaning based coping where as insignificant with passive avoidance. The finding is differ from the study conducted by AbdulazizAflakseir and Masoumeh Zarei which show that active-avoidance (β=0.35, p<0.001) and meaning-based coping (β=-0.50, p<0.001) predicted infertility stress significantly. [16]

5. Limitation of the study

Some limitation of this study to be discussed are, first the sample was limited to only one hospital and it is not generalized. The time duration of data collection also short as there was repetition of same women. Secondly their inclusion criteria as only the literate women are participate in this study. Also, the sample size is not adequate.

6. Conclusion

The study concluded that nearly half of population have moderately high stress & minority of population have low infertility stress. Majority of the respondents were highly used passive avoidance coping and minority respondents were highly used active avoidance coping. In fact the result of the study shows that there is strong need for awareness regarding appropriate use of coping strategies and its practice among infertile women. Moreover, effective counseling may help to reduce their stress.

7. Recommendation

Similar type of study can be done in other hospital with large sample size so that it can be generalized.

A comparative study can be done among male & female and also among primary & secondary infertile women.

8. Ethical Consideration

Ethical approval letter was taken from Om health campus and a private infertile hospital of Kathmandu to conduct research. A written informed consent was taken from respondent with the explanation of the questionnaire and permission was granted before the distribution of the questionnaire. The goal of ethics to ensure that no one was harmed from the research activities. Confidentiality of the respondents was maintained.

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