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ORIGINAL RESEARCH ARTICLE

KNOWLEDGE REGARDING SUBFERTILITY AMONG REPRODUCTIVE AGE WOMEN IN SELECTED VDC OF BAGLUNG DISTRICT

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ABSTRACT

Introduction: The infertile couples experience stress in relationships with family and friends. They cut off themselves from other as they are uncomfortable to share it and they consider subfertility a private problem. Knowledge is a key factor associated with fertility self-care and initiation of the treatment when needed. The main objective of the study was to assess the Knowledge regarding Subfertility among Reproductive Age Women. Methods: A descriptive cross sectional research study was carried out to assess Knowledge regarding Subfertility among Reproductive Age Women in Baglung District. Non-probability purposive sampling technique was used to select the sample. Data were collected by using structured questionnaire through face to face interview. Obtained data were analyzed using descriptive statistics like mean, frequency, percentage and inferential statistics such as Chi-square test to find out association between knowledge and selected socio-demographic variables. Results: Findings of the study showed that majority of the respondents (72.2%) had inadequate knowledge, 25.0% had moderate knowledge and only 2.8% had adequate knowledge. There was significant association between knowledge and types of family at p=0.003. Conclusion: The findings highlighted lack of knowledge regarding subfertility in women. Thus, knowledge should be provided through mass media, different health campaign for the improvement of knowledge regarding subfertility among reproductive age women.

Key words: Reproductive Age, Sub-fertility, Women

INTRODUCTION

Subfertility is a neglected aspect of reproductive health. The inability to have children affects couples worldwide and causes emotional and psychological distress in both men and women. Subfertility is estimated to affect as many as 186 million people worldwide. Although male subfertility contributes to more than half of all cases of global childlessness, subfertility remains a woman's social burden.[1]

Worldwide, million couples were unable to have a child. 1.9 % of women aged 20-44 years were unable to have their first live birth and 10.5 % of women who had previously give birth were unable to have second baby after five years of trying.[2]

In United States, 6% are infertile among 1.5 million women, irregular or abnormal ovulation accounts for approximately 25% of all female subfertility problems. About 25% of sub fertile couples have more than one factor that contributes to their subfertility. The cause of female subfertility up to 25% is due to cigarette smoking.[3]

A study conducted to assess infertility knowledge among 1,010 women aged 24 to 35 years in United State showed that 78% women were aware of infertility and also they were aware of risk factors associated with infertility in which 82% found age and 78% hereditary factors/genetic as a risk factors.[4]

A cross-sectional study conducted on knowledge, perceptions and myths regarding subfertility among 447 adults in Pakistan showed that knowledge of subfertility was found to be limited amongst the participants. Only 25% correctly identified subfertility is pathological and only 46% knew about the fertile period in women's cycle.[5]

A cross-sectional study conducted on knowledge regarding subfertility among reproductive age group in Kathmandu showed that the proportion of knowledge on infertility by literacy status was strongly significant. Among the people of literacy group, 92% had knowledge about the subfertility whereas among illiterate group only 40% had knowledge about the subfertility.[6]

In Nepal, it is expected that about 13 -15% of the married couples face this problem. About 40% of these couples have male factor subfertility, 40% female factor & remaining 10% are those in whom no diagnosis can be made even after complete investigation.[7]

In our context, very few studies have been conducted which has been done only on subfertility couple. Research done in knowledge regarding subfertility have shown lack in knowledge level due to which, the couple are not comfortable in sharing their problems and lacking in seeking the health facilities for appropriate treatment. So, researcher selected this topic to find out the knowledge regarding subfertility among reproductive age women.

General Objective of the study was to assess the knowledge regarding the subfertility among the reproductive age women. The Specific Objectives were to find out the level of knowledge regarding subfertility and to measure the association between knowledge and different demographic variables.

METHODS

A descriptive cross-sectional research design was used to assess the knowledge regarding subfertility among reproductive age women. The study was conducted in Narayansthan VDC Ward no. 5, 6 in Baglung District. The study population was the reproductive age women of age 19-49 years. Non probability purposive sampling technique was used to select sample size. Total sample size was 108. Data were collected by face to face interview using structured questionnaire. The content validity of instrument was maintained by developing the questionnaire on the basic of research objectives by reviewing literature, consulting with concerned teachers, adviser, subject expert, research expert, etc. Reliability was maintained by pre testing the instrument in 10% of the sample size i.e. 11 in similar setting of Narayansthan VDC. Study was conducted after getting formal written permission from ethical board of Nepal Health Research Council (NHRC). Formal written permission was taken from the Narayansthan VDC through written request letter from the Principal of JFIHS. Written informed consent was obtained from each respondent and the respondents were informed about the objectives of the study. Anonymity was maintained by not disclosing the name of the participants and confidentiality was maintained by using the data only for study purpose. The collected data were edited, classified, organized, coded and entered into the Statistical Package for Social Sciences (SPSS version 23). The data obtained was analyzed on the basis of research objectives using descriptive statistics like mean, frequency, percentage and inferential statistics such as Chi-square test to find the association between knowledge and different socio-demographic variables.

RESULTS

Table 1: Past surgery in cases of incisional hernia

Variables	Frequency	Percentage
Age in Year		
20-34	81	75.00
35-49	27	25.00
Mean	**±30.8**	
Marital status		
Unmarried	4	3.70

Variables	Frequency	Percentage
Married	104	96.30
Religion		
Hindu	106	98.14
Buddhist	2	1.85
Ethnicity		
Dalit	13	12.00
Janajati	58	53.70
Bhraman/chettri	37	34.26
Type of Family		
Nuclear	61	56.48
Joint	47	43.51
Education Status		
illiterate	4	3.70
literate	104	96.30
If literate (n=104)		
Primary	40	37.03
Secondary	53	49.07
Higher secondary level and above	11	10.19
Occupation		
Business	17	15.74
Agriculture	50	46.29
Home maker	28	25.92
Teacher	13	12.03

Table 1 shows that majority of the respondents (75%) were from age groups 20-34 years. It also shows that 96.30% were married, 98.14% were Hindu, 53.70% were Janajati, 43.51% belong to joint family, 49.07% had academic qualification of Secondary Level and 46.29% involves in agriculture.

Table 2: Respondents' Knowledge regarding Meaning of Fertility and Subfertility (n=108)

Characteristics	Frequency	Percentage
Define Fertility		
Capable to conceive a child	73	67.59
Failure to give birth	3	2.78
Occurrence of menstrual cycle	5	4.62
Don't know	27	25.00
Define subfertility		
Failure to conceive within one or more years of regular unprotected sex	91	84.25
Occurrence of menstrual cycle	4	3.70

Characteristics	Frequency	Percentage
Failure to give birthto male child	6	5.56
Don't know	7	6.48
Responsible for subfertility		
Male	4	3.67
Female	3	2.78
Both	101	93.51
Timing for subfertility diagnosis		
Less than 12 months of regular unprotected sex	45	41.67
12 – 24 months of regular unprotected sex	37	34.26
25+ months of regular unprotected sex	26	24.12
Most Fertile Period		
At the beginning of cycle	62	57.43
Mid cycle	36	33.33
At the end of cycle	10	9.34

Table 2 shows that more than half of the respondents (67.59%) can define fertility correctly that is capable to conceive a child. Majority of respondents (84.25%) answered the correct meaning of subfertility that is failure to conceive within one or more years of regular unprotected sex. Most of the respondents (93.51%) responded correctly that both partners are responsible for subfertility whereas 3.67% answered male is responsible and 2.78% answered female are responsible. Similarly, 34.26% of respondents responded that subfertility is diagnosed usually after one to two years of regular unprotected sex. Only 33.33% respondents answered correctly that mid-cycle is the most fertile period during women's menstrual cycle.

Table 3: Respondents' Knowledge regarding Causes of Male and Female Subfertility (n=108)

Characteristics	Frequency	Percentage
Male causes*		
Low sperm count or quality	50	46.67
Problems with tubes carrying sperm	36	33.56
Problems getting erection	45	42.11
Problem inejaculating	25	23.44
Female causes*		
Damage to the fallopian tubes	21	19.43
Ovulation problems	21	19.43
Tubal transport problems	11	10.22
Condition affecting the uterus	97	89.78
Risk factors of subfertility*		
Irregular menstrual cycle	57	52.78
Genital tract infection	28	25.89
Genetics	47	43.54
Abnormal sperm production	56	51.89
Sexually transmitted infection	19	17.56

Characteristics	Frequency	Percentage
Alcohol	12	11.11
Smoking	9	8.33
Environmental factors (lead, radiation)	27	25.00
Drugs	51	47.22

*Multiple Responses

Table 3 shows that 46.67% of respondents responded that causes of subfertility in male was low sperm count or quality, 33.56% answered problems with tubes carrying sperm whereas 42.11% answered problems getting erection and 23.44% answered problem in ejaculating. Regarding female causes, 89.78% respondents responded condition affecting the uterus, 19.43% answered damage to the fallopian tubes and ovulation problems and 10.22% answered tubal transport. Regarding risk factors, 52.78% of respondents answered irregular menstrual cycle followed by genital tract infection 25.89%, genetics 43.54%, abnormal sperm production 51.89%, STIs 17.56%, alcohol 11.11%, smoking 8.33%, environmental factors 25% and drugs 47.22%.

Table 4: Respondents' Knowledge regarding Preventive Measures and Availability of Treatment of Subfertility (n=108)

Characteristics	Frequency	Percentage
Preventive measures*		
Healthy lifestyle should be adopted	45	41.67
Awareness program on subfertility	53	49.07
Treatment of sexually transmitted diseases	68	62.96
Avoid exposure to the radiation or environmental toxins	23	21.30
Availability of treatment of sub fertility*		
Hospital	98	95.10
Subfertility center	22	20.33
Treatment Modalities*		
Test tube baby	64	59.26
Medicines	72	66.67
Artificial insemination (men)	9	8.33
Alternatives solutions for subfertility		
Adoption of child	8	7.40

*Multiple Responses

Table 4 reveals that regarding the prevention of sub-fertility, 41.67% respondents answered maintaining healthy life styles, 49.07% responded awareness program on subfertility, 62.96% answered treatment of sexually transmitted disease and 21.30% answered avoiding exposure to the radiation or environmental toxins. It also reveals that 95.10% and 20.33% of respondents were aware that treatment of subfertility is available in Hospital and subfertility center respectively. Regarding treatment modalities, 59.26%of respondents knew about test tube baby as a treatment options for subfertility followed by medicines 66.67%, artificial insemination 8.33%. About 7.40% of respondents said that adaptation of child is as an alternative solution for subfertility.

Table 5: Respondents' Level of Knowledge regarding Subfertility (n=108)

LEVEL OF KNOWLEDGE	FREQUENCY	PERCENT
Inadequate	78	72.22
Moderate	27	25.00
Adequate	3	2.78

Table 5 shows that 72.22% of the respondents had inadequate level of knowledge, 25.00% had moderate level of knowledge and only 2.78% had adequate level of knowledge regarding subfertility.

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Table 5 shows that 72.22% of the respondents had inadequate level of knowledge, 25.00% had moderate level of knowledge and only 2.78% had adequate level of knowledge regarding subfertility.

Table 5: Association of level of knowledge with Age, Ethnicity, Type of family, Education and Occupation of Respondents (n=108)

Knowledge regarding Subfertility				
Demographic Variables	**Inadequate**	**Adequate**	**chi-square value**	**p-value**
Age of the respondents				
20-34	59	22	.062	.804
35-49	19	8		
Ethnicity				
Dalit	7	6	4.960	.084
Janajati	40	18		
Bhraman/chettri	31	6		
Type of family				
Nuclear	51	10	9.055	.003
Joint	27	20		
Alternatives solutions for subfertility				
Business	12	5	7.478	.609
Agriculture	39	11		
Home maker	15	13		
Teacher	8	5		

Significantly p-value<0.05

Table 6 reveals that knowledge regarding subfertility was statistically significant with respondent's types of family at p value <0.05 but not statistically significant with ethnicity, education and occupation of the respondents.

DISCUSSION:

In the study, 84.3% of respondents had given correct meaning of subfertility that is failure to conceive within one or more years of regular unprotected sex. This finding is consistent with the findings of the study conducted by Quach & Librach (2008) which reported that 79.48% of respondents knew the meaning of subfertility. 8 Similarly, this finding is also similar with the finding of the study conducted by Sabarre et al., (2013) where 78.3% respondents were able to define subfertility correctly.[9]

In the study, 93.5% of the respondents gave correct answer that is both male and female are equally responsible for causing subfertility. This result is consistent with the findings of the study done by Quach & Librach (2008) which showed that 80% of respondents knew that both male and females are equally responsible for causing the subfertility.8 Similarly, this result is also similar with the finding of the study done by Sharma & Bhandari (2014) which showed that 86.4% of respondents recognized that both female and male are equally responsible.[6]

In the study, 34.3% of respondent correctly recognized that subfertility is diagnosed usually after one to two years of regular unprotected sex. The result is nearly similar to the study done by Ali et al., (2011) which showed that 25% of respondents correctly recognized that subfertility is diagnosed usually after one to two years of regular unprotected sex.[5]

Regarding the cause of the male subfertility, 46.7% of the respondents answered that the low sperm count or quality is main cause, 33.6% answered problems with tubes carrying sperm, 42.1% answered problems getting erection and 23.4% answered problem in ejaculating. This result is nearly similar with the study conducted by Olaitan (2012) which reported that 65.9% of respondents identify low sperm count or quality as major cause of subfertility.[10]

Regarding the cause of the female subfertility, 89.8% of the respondents answered condition affecting the uterus, 19.4% answered damage to the fallopian tubes and ovulation problems, 10.2% answered tubal transport problems. This finding is consistent with the findings of Olaitan (2012) which showed that 62% of the respondents identify a major cause of subfertility is condition affecting the uterus.[10]

In the study, regarding the risk factors of the subfertility, 52.8% of the respondents identified that irregular menstrual cycle is the risk factors of the subfertility, 51.9% answered abnormal sperm production, 43.5% answered genetics,17.6% answered sexually transmitted diseases, 25.9% answered genital tract infection, 25% identify environmental factors like lead and radiation, 11.1% and 8.3% recognized as alcohol and smoking respectively and 47.2% recognized the drugs as the risk factor of the subfertility. The results are supported by the findings of Rouchou & Forde (2015) which showed that 59.95% of respondents identify that irregular menstrual cycle is the risk factors of the subfertility. 11 The result is also supported by the study done by Sharma & Bhandari (2014) which showed that 50% of respondents recognized that genetics as the risk factors of the subfertility.[6]

Regarding preventive measures, 41.7% and 49.1% of the respondents answered healthy lifestyle and awareness program on subfertility respectively and 63.0% and 21.3% of respondents answered prompt treatment of sexually transmitted diseases and avoid exposure to environmental toxins respectively. The result is nearly similar to the study done by Sharma & Bhandari (2014) where 31.4% answered that maintain healthy practice, 28.57% of the respondents answered avoid exposure to environmental toxins are the preventive measures for subfertility.[6]

Regarding treatment modalities, 59.3% of the respondents answered test tube baby, 66.7% of respondents answered medicines and 8.3% answered artificial insemination as the treatment modalities and 7.4% of respondents perceived the adoption of child as other option for subfertility. This results are supported by the study done by Sharma & Bhandari (2014) which showed that 61.26% of respondents identified that test tube baby as the treatment of the subfertility. 6 Similarly, it is also similar with the

finding of the study done by Rouchou & Forde (2015) which showed that 65.4% of respondents answered fertility drugs for treatments.[11]

In the study, 72.2% of respondents had inadequate knowledge. There was significant association of knowledge with the type of family (p-value= 0.003). Contrast finding were reported in Neethu et al., (2015) which showed that there was no association between knowledge of respondent and type of family.12 This could be due to difference in research setting, the variance in sample size, background of respondents and perception of individual respondents.

CONCLUSION

Most of the respondents had inadequate level of knowledge, followed by moderate level of knowledge and very few of the respondents had adequate level of knowledge. In association with different variables, respondents' level of knowledge was associated with type of family. On the basis of above findings, it is concluded that most of the respondents had inadequate level of knowledge so it is recommended to concerned authority to create awareness program regarding subfertility, its causes, risk factors and the treatment modalities.

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