

A CROSS-SECTIONAL STUDY OF KNOWLEDGE, ATTITUDE, PERCEPTION & AWARENESS ABOUT INFERTILITY AMONG MEN AND WOMEN OF REPRODUCTIVE AGE¹Michelle Susan Jiju and ^{2*}Dr. Srabani Bhattacharya¹MBBS Student, Rajiv Gandhi Medical College & CSM Hospital, Thane, Maharashtra. India.²Professor of Physiology Department, Rajiv Gandhi Medical College CSM Hospital, Thane, Maharashtra. India.***Corresponding Author: Dr. Srabani Bhattacharya**

Professor of Physiology Department, Rajiv Gandhi Medical College CSM Hospital, Thane, Maharashtra. India.

Article Received on 07/03/2022

Article Revised on 28/03/2022

Article Accepted on 17/04/2022

ABSTRACT

It is a Cross-Sectional Study. Total no of adult participants were 124. Among the participants 54% were female & 46% were male adults of reproductive age. 47% were among the age group 25-30yrs, 16% in 31-35yrs, 17% in 36-40yrs & 41-45yrs were 20%. 100% of participants were from Urban area. Among the participants 42% were unmarried & 58% were married. 13% were smokers, 69% among smokers take one packet of cigarette per day, 31% two packets per day. 42% of them consume alcohol. 79% of participants confirmed that the best age to become a mother biologically is between 20- 30yrs. 54% of the participants agreed that COVID-19 has impact on both male & female fertility. Knowledge about infertility is inadequate in many parts of the world.

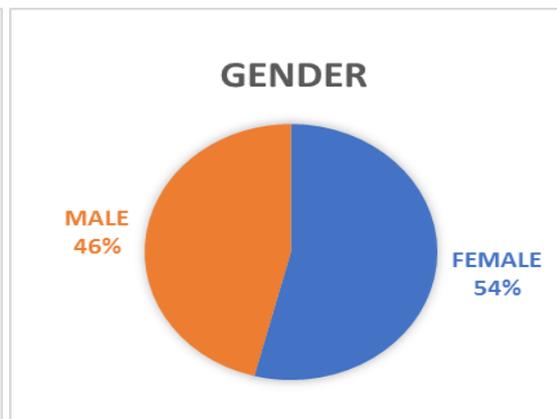
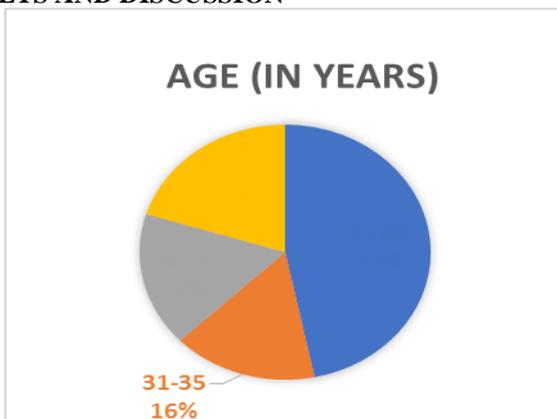
KEYWORDS: Infertility, Male, Female, Perception, Awareness.**INTRODUCTION**

Infertility is the incapability of the couple to conceive for up to 12 months or 1-year in spite of having regular & unprotected sex. The problem may affect both gender & people of all race, colour, countries, socioeconomic status etc. Various conditions can affect the fertility of women.^[1] Fertility & reproductive health are important aspects of life, both for people of reproductive age & for the whole community.^[2] Semen quality is affected by numerous genetic and environmental factors.^[3] Infertility places a huge psychological burden on infertile couples, especially for women. Greater Knowledge of the factors affecting fertility may help to decrease the incidence of infertility allowing couples to avoid certain risk factors.^[4] Educational programmes, regular campaigns & the

involvement of community are recommended to increase knowledge about the causes of infertility as well as decrease the stigma associated with this condition.^[5] With technological developments, creation of new industries, changing lifestyles infertility risk factors increase.^[6]

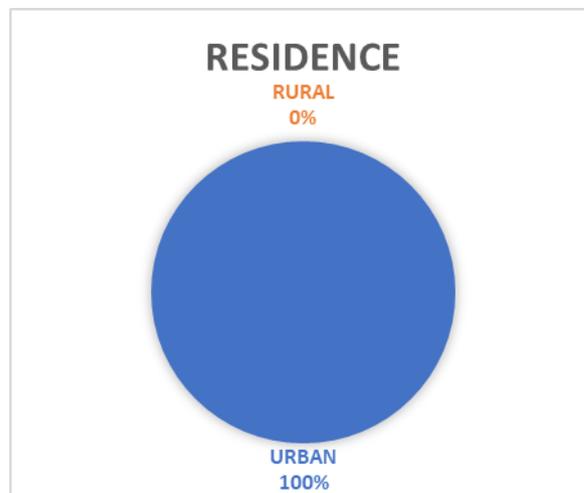
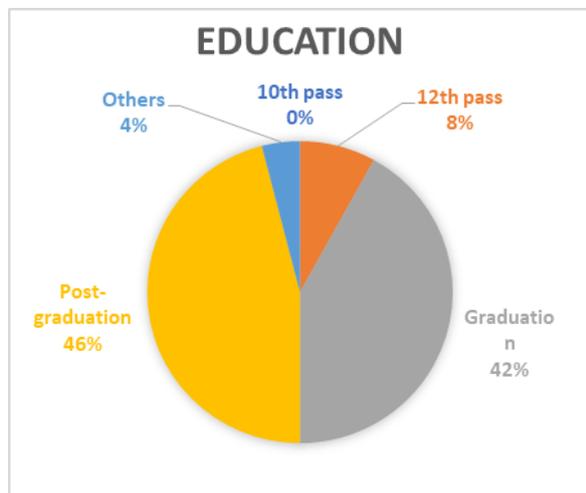
MATERIALS AND METHODS

This cross-sectional interview-based study was conducted with a pre-tested & pre validated questionnaire administered via Google forms to the adults of reproducing age who are residents of India. Informed consent was taken on the Google forms. Finally, the data was analysed.

RESULTS AND DISCUSSION

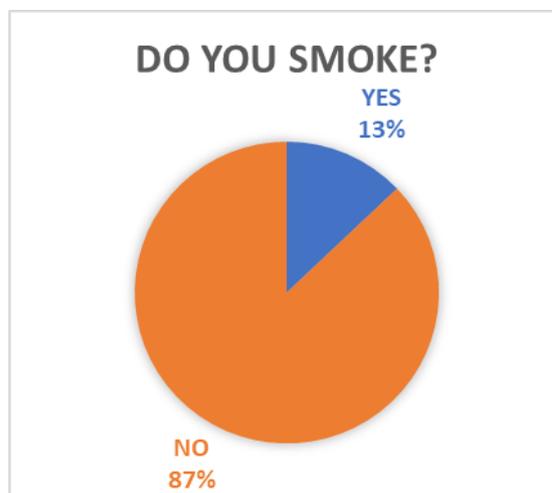
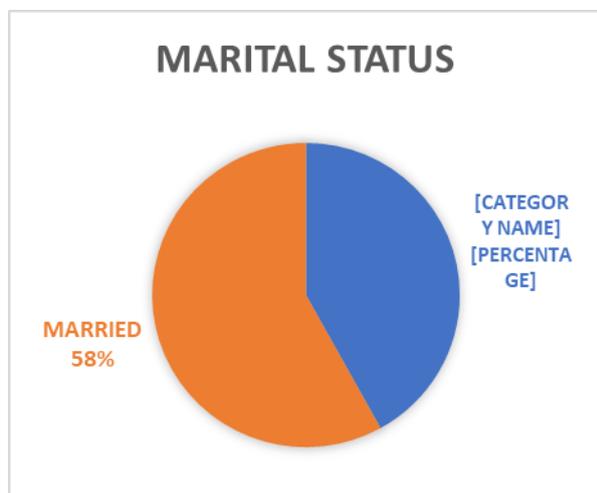
AGE (in years)	No. of participants (Out of -124)	Percentage (%)
25-30	58	47
31-35	20	16
36-40	21	17
41-45	25	20

GENDER	No. of participants (Out of-124)	Percentage (%)
FEMALE	67	54
MALE	57	46



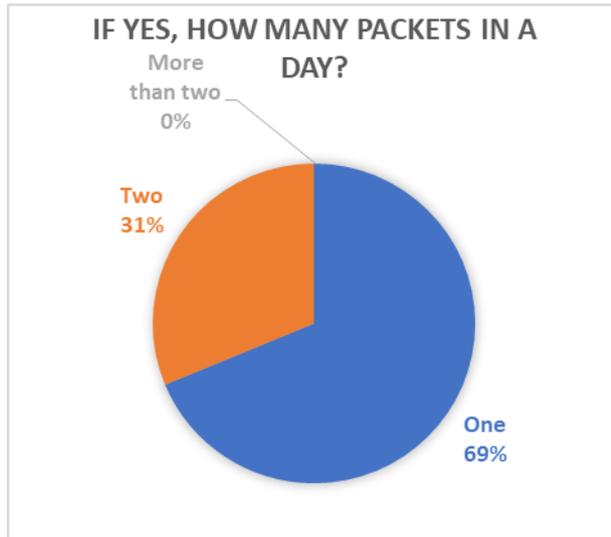
EDUCATION	No. of participants (Out of-124)	Percentage (%)
10 th pass	0	0
12 th pass	10	8
Graduate	52	42
Post graduate	57	46
Others	5	4

RESIDENCE	No. of participants (Out of -124)	Percentage (%)
Urban	124	100
Rural	0	0

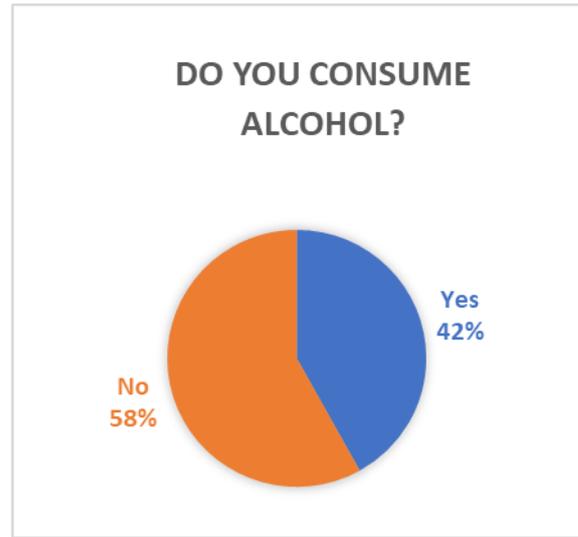


MARITAL STATUS	No. of participants (Out of-124)	Percentage (%)
UNMARRIED	52	42
MARRIED	72	58

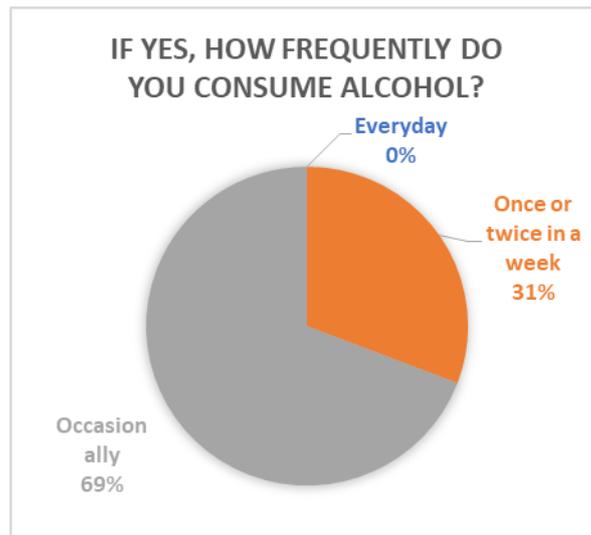
Do you smoke?	No. of participants (Out of-124)	Percentage (%)
YES	16	13
NO	108	87



If yes, how many packets in a day?	No. of participants (Out of-16)	Percentage (%)
One	11	69
Two	5	31
More than two	0	0

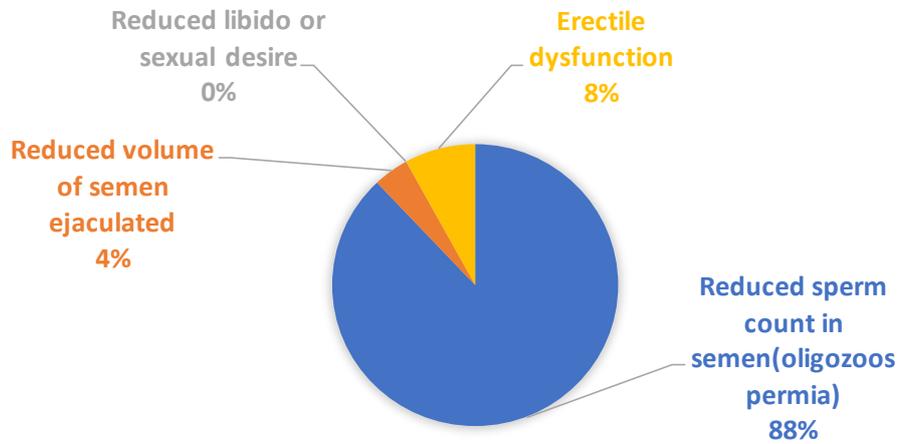


Do you consume alcohol?	No. of participants (Out of-124)	Percentage (%)
Yes	52	42
No	72	58



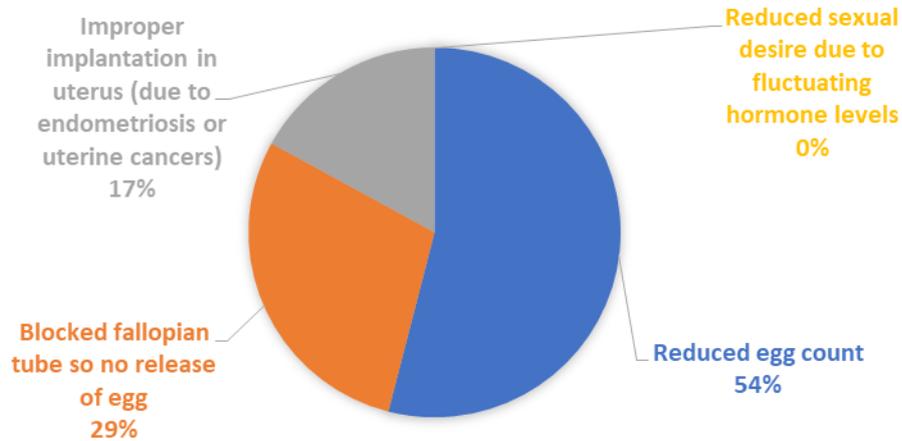
If yes, how frequently do you consume alcohol?	No. of participants (Out of-52)	Percentage (%)
Everyday	0	0
Once or twice in a week	16	31
Occasionally	36	69

WHAT DO YOU UNDERSTAND BY THE TERM INFERTILITY IN MALES?

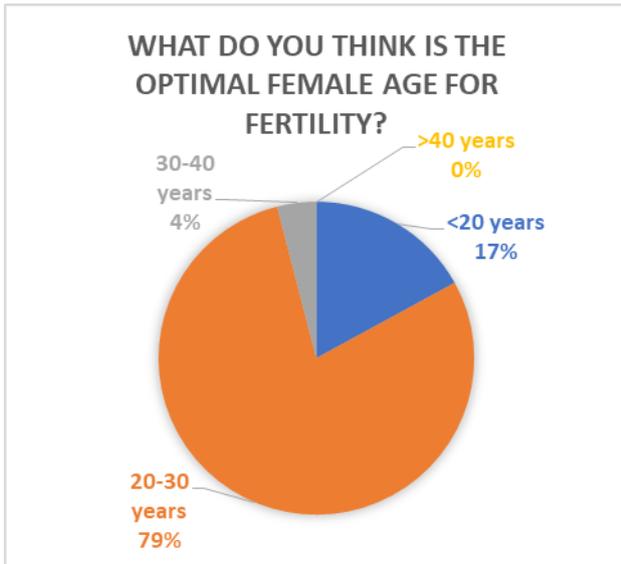


What do you understand by the term infertility in males?	No. of participants (Out of-124)	Percentage (%)
Reduced sperm count in semen(oligozoospermia)	109	88
Reduced volume of semen ejaculated	5	4
Reduced libido or sexual desire	0	0
Erectile dysfunction	10	8

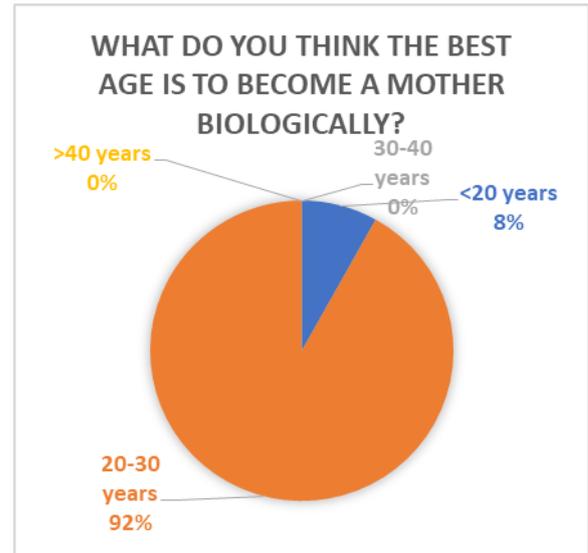
WHAT DO YOU UNDERSTAND BY THE TERM INFERTILITY IN FEMALES?



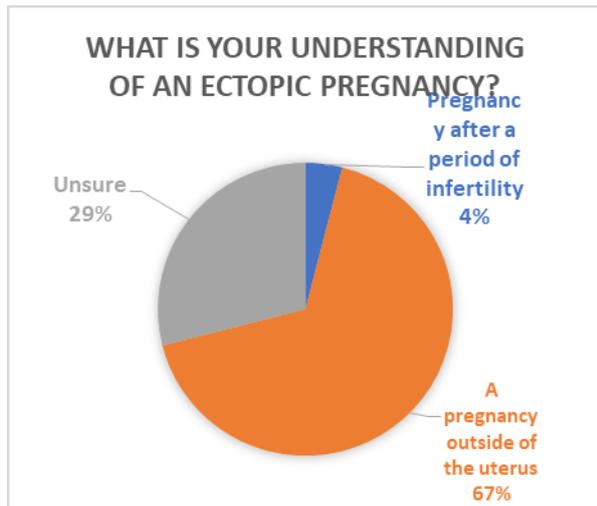
What do you understand by the term infertility in females?	No. of participants (Out of-124)	Percentage (%)
Reduced egg count	67	54
Blocked fallopian tube so no release of egg	36	29
Improper implantation in uterus (due to endometriosis or uterine cancers)	21	17
Reduced sexual desire due to fluctuating hormone levels	0	0



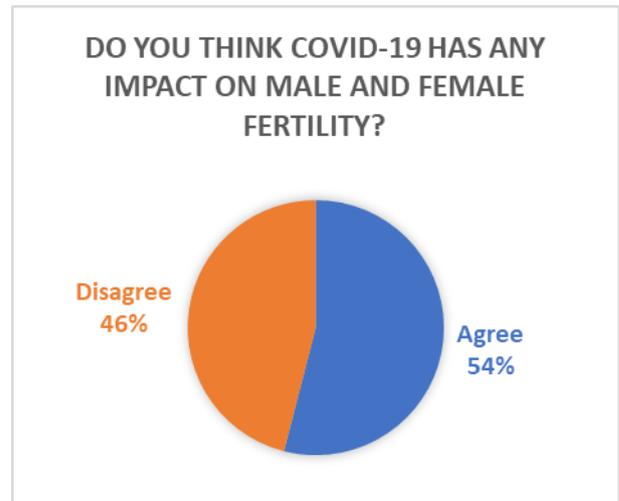
What do you think is the optimal female age for fertility?	No. of participants (Out of-124)	Percentage (%)
<20 years	21	17
20-30 years	98	79
30-40 years	5	4
>40 years	0	0



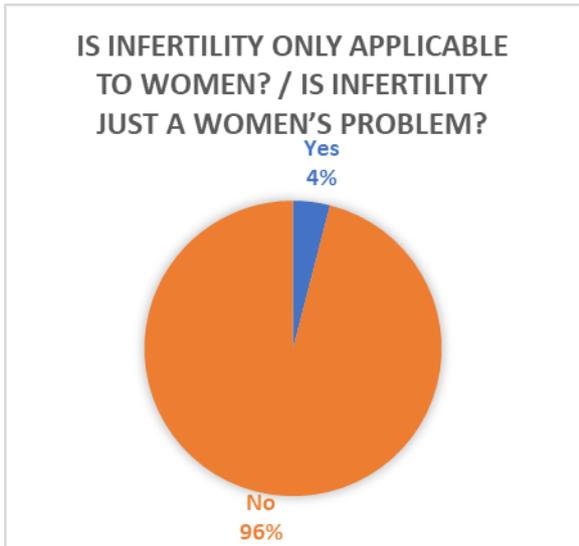
What do you think the best age is to become a mother biologically?	No. of participants (Out of-124)	Percentage (%)
<20 years	10	8
20-30 years	114	92
30-40 years	0	0
>40 years	0	0



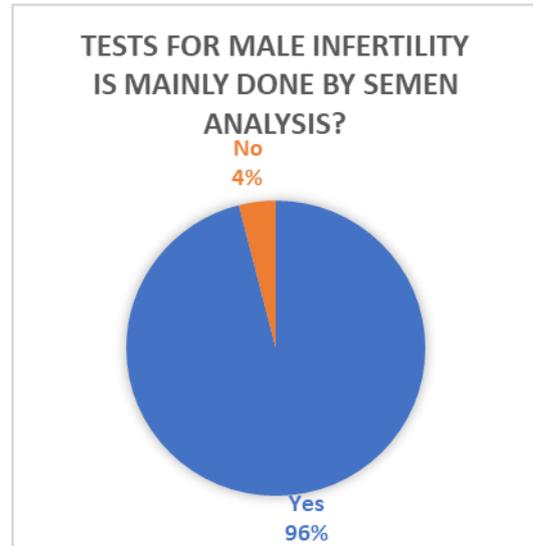
What is your understanding of an ectopic pregnancy?	No. of participants (Out of-124)	Percentage (%)
Pregnancy after a period of infertility	5	4
A pregnancy outside of the uterus	83	67
Unsure	36	29



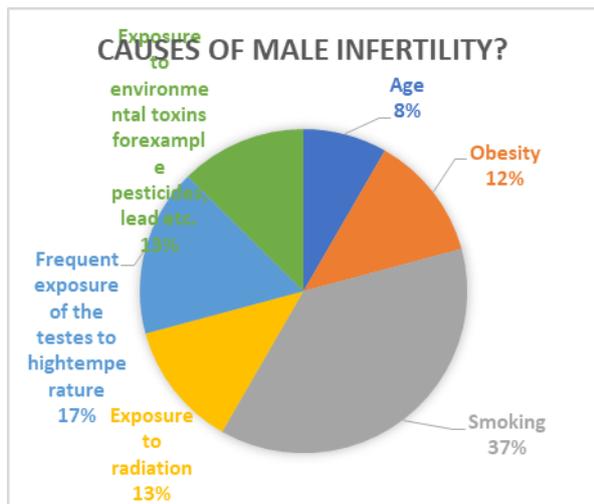
Do you think COVID-19 has any impact on male and female fertility?	No. of participants (Out of-124)	Percentage (%)
Agree	67	54
Disagree	57	46



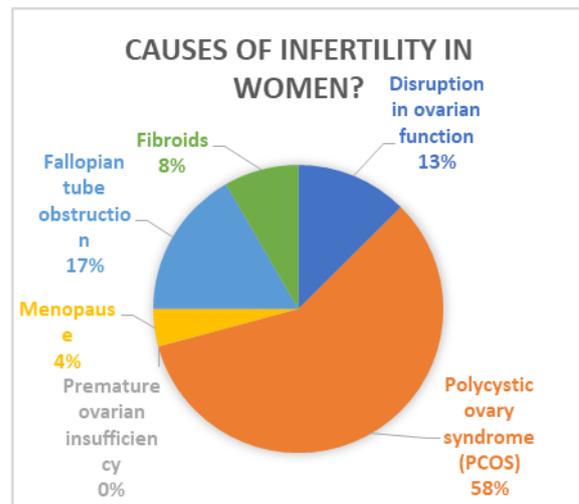
Is infertility only applicable to women? / Is infertility just a women's problem?	No. of participants (Out of-124)	Percentage (%)
Yes	5	4
No	119	96



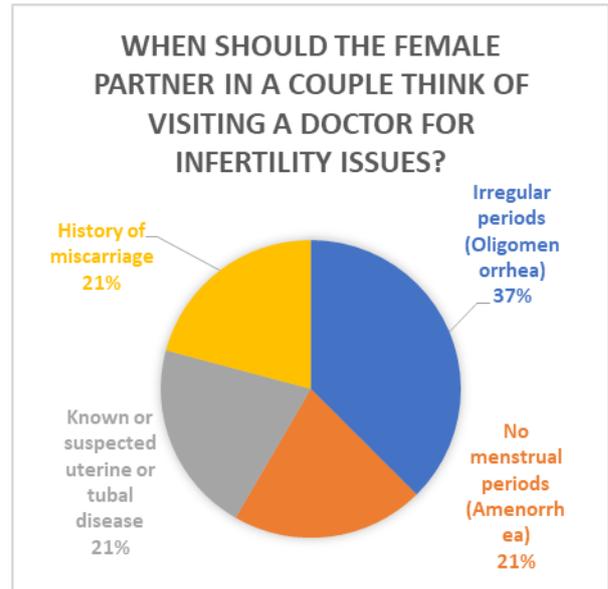
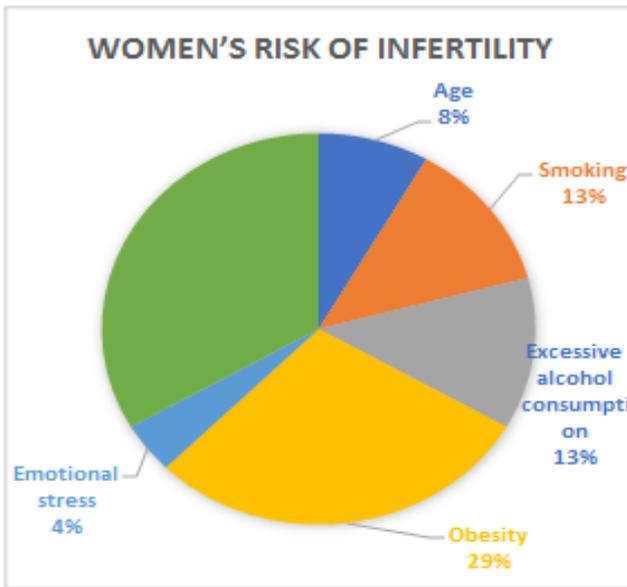
Tests for male infertility is mainly done by semen analysis?	No. of participants (Out of-124)	Percentage (%)
Yes	119	96
No	5	4



Causes of male infertility?	No. of participants (Out of-124)	Percentage (%)
Age	10	8
Obesity	16	12
Smoking	47	37
Exposure to radiation	15	13
Frequent exposure of the testes to high temperature	21	17
Exposure to environmental toxins for example pesticides, lead etc.	15	13

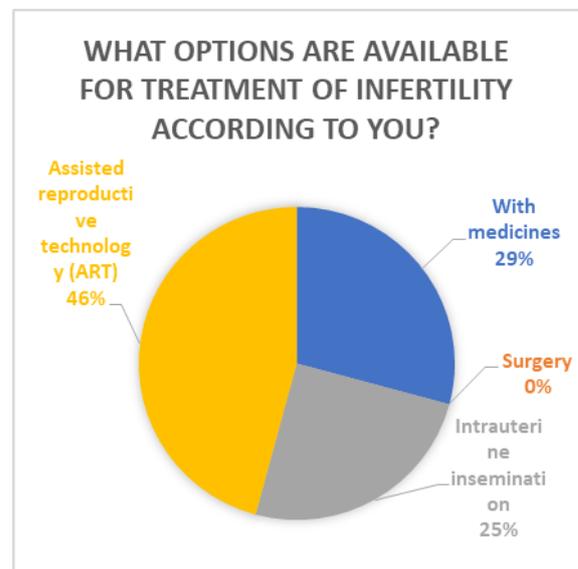
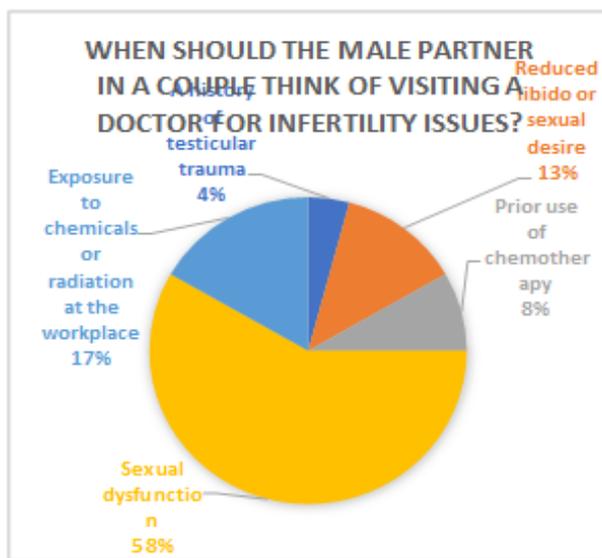


Causes of infertility in women?	No. of participants (Out of -124)	Percentage (%)
Disruption in ovarian function	16	13
Polycystic ovary syndrome (PCOS)	72	58
Premature ovarian insufficiency	0	0
Menopause	5	4
Fallopian tube obstruction	21	17
Fibroids	10	8



Women's risk of infertility	No. of participants (Out of-124)	Percentage (%)
Age-10	10	8
Smoking-16	16	13
Excessive alcohol consumption-16	16	13
Obesity-36	36	29
Emotional stress-5	5	4
Long term use of birth control agents-41	41	33

When should the female partner in a couple think of visiting a doctor for infertility issues?	No. of participants (Out of - 124)	Percentage (%)
Irregular periods (Oligomenorrhea)	46	37
No menstrual periods (Amenorrhoea)	26	21
Known or suspected uterine or tubal disease	26	21
History of miscarriage	26	21



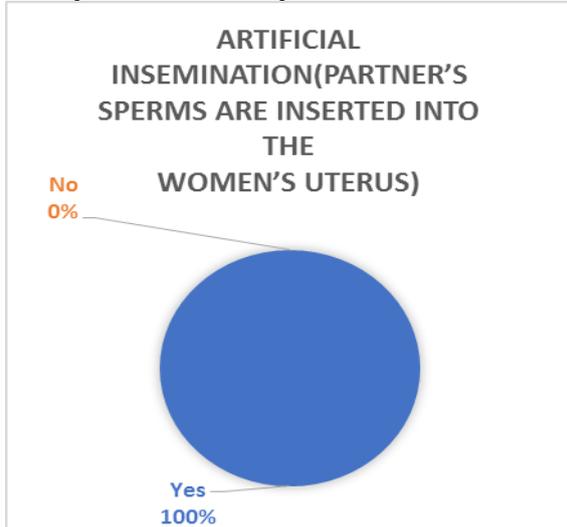
When should the male partner in a couple think of visiting a doctor for infertility issues?	No. of participants (Out of- 124)	Percentage (%)
A history of testicular trauma	5	4
Reduced libido or	16	13

What options are available for treatment of infertility according to you?	No. of participants (Out of-124)	Percentage (%)
With medicines	36	29
Surgery	0	0

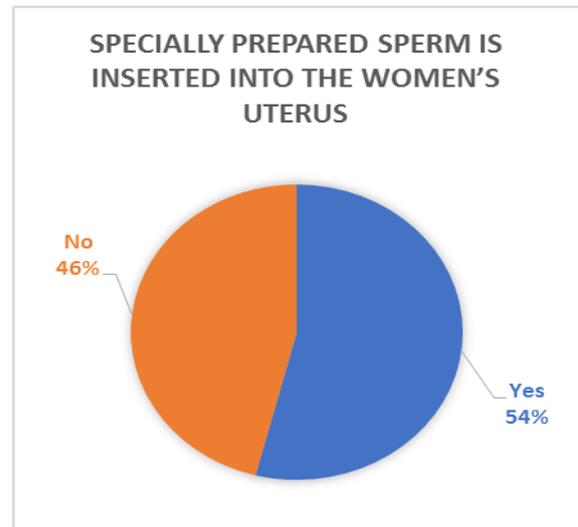
sexual desire		
Prior use of chemotherapy	10	8
Sexual dysfunction	72	58
Exposure to chemicals or radiation at the workplace	21	17

Intrauterine insemination	31	25
Assisted reproductive technology (ART)	57	46

What do you understand by intrauterine insemination?

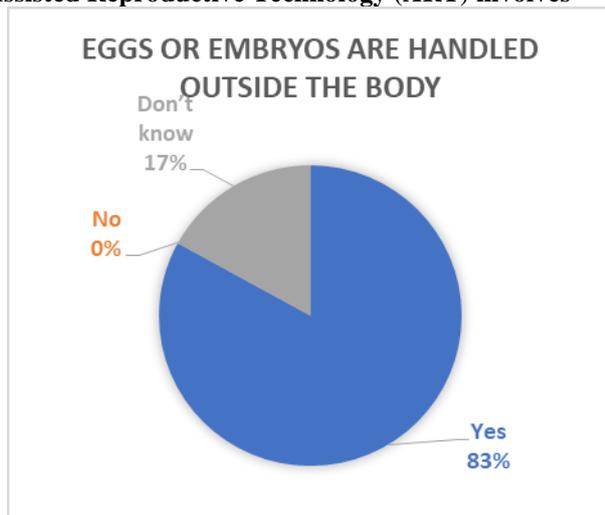


Artificial insemination (Partner's sperms are inserted into the women's uterus)	No. of participants (Out of-124)	Percentage (%)
Yes	124	100
No	0	0

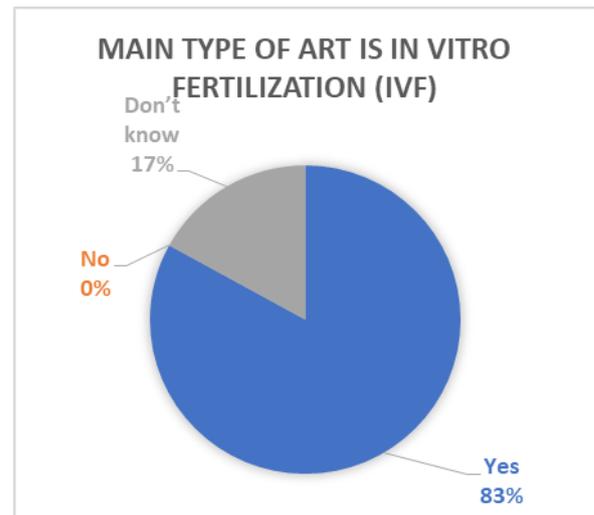


Specially prepared sperm is inserted into the women's uterus	No. of participants (Out of-124)	Percentage (%)
Yes	67	54
No	57	46

Assisted Reproductive Technology (ART) involves



Eggs or embryos are handled outside the body	No. of participants (Out of-124)	Percentage (%)
Yes	103	83
No	0	0
Don't know	21	17



Main type of ART is in vitro fertilization (IVF)	No. of participants (Out of-124)	Percentage (%)
Yes	103	83
No	0	0
Don't know	21	17

Total number of respondents were 124. Among them 54% were female & 46% were male.

An accurate understanding & knowledge of reproductive facts are essential for women & couples for appropriate decision making regarding whether, when & how to conceive.^[7] As age at first conception is increasing globally, the epidemic of infertility looms large.^[8]

In the present study 13% of respondents smoke & 69% of them take one packet per day whereas 31% of them take 2 packets per day. Tobacco smoking is said to have shocking impact on reproductive health irrespective of gender status.^[9] Smoking has a stronger reasonable effect on semen quality.^[10]

Among the respondents 42% of them consume alcohol. Besides being a public & social issue, alcohol consumption can also significantly impact male reproduction.^[11] Male fertility can be damaged by excessive alcohol consumption.^[12]

The respondents answered about the ectopic pregnancy as 4% pregnancy after a period of infertility, a pregnancy outside of the uterus 67% & remaining could not answer. Ectopic pregnancy is a condition presenting as a major health problem for women of child bearing age.^[13]

Regarding the question about understanding of the term infertility in females, 54% answered it is due to reduced egg count, 17% improper implantation in uterus & 29% replied it is due to blocked fallopian tube. Tubal obstruction is a cause of female infertility.^[14]

Fibroids which distort the uterine cavity is associated with adverse effects on reproductive function in women.^[15]

CONCLUSION

Infertility is a fairly common problem. There are a lot of misconceptions. Knowledge about infertility is inadequate in many parts of the world. Educational programmes, regular campaigns & the involvement of the community may increase the knowledge about infertility.

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