

PERCEPTION, ATTITUDE AND AWARENESS ABOUT ASSISTED REPRODUCTIVE TECHNOLOGY(ART) AMONG ADULT WOMEN AND MEN IN INDIA

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ABSTRACT

It is a Cross-Sectional Study. Total number of adult respondents were 100. Both male and female were 50%. Among them 74% 18-25 yrs, 5% 26-35 yrs, 13% 36-45 yrs, 4% 46-50 yrs, 2% were 51-55 yrs of age. 4% were rural residents, 14% semi-urban residents and 82% urban residents. Regarding their education 27% were 12th Standard Pass, 52% Undergraduate, 9% Graduate, 12% Post-Graduate. Among them 26% of their relatives/close friends opted for Assisted Reproductive Technology(ART). 22% of the respondents believe that infertility is a disease. Among the participants 20% believe that infertility is largely gender influenced. 31% of them knew the cost of In-vitro Fertilization (IVF). Among the respondents 11% were aware about ART.

KEYWORDS: ART, Awareness, Infertility.

INTRODUCTION

Assisted Reproductive Technology(ART) is no longer considered experimental. The success rates obtained are improving.^[1] ART is the application of laboratory or clinical technology to gametes (human eggs/sperm) and/or embryo for the purpose of reproduction. ART has been reported to relieve more than 50 percent of infertility cases, however to set up this technology in the developing world is capital intensive and to access the treatment is reciprocally expensive.^[2] Identifying some factors associated with decreased approval of infertility treatments serves as a crucial starting point for formulating strategies for wider public understanding.^[3] The global trend in delaying parenthood is being attributed to a number of factors, primarily pursuit of

higher education and career goals, desire for a stable job.^[4] Health education regarding fertility has to be a part of broader health promotion programs aimed towards men and women.^[5] Many infertile couples opt for ART treatment. This has led to an enormous increase in the number of ART clinics all over the world.^[6]

MATERIALS AND METHODS

This Cross-Sectional interview-based Study was conducted with a pre-tested and pre-validated questionnaire administered via Google forms to the adult residents in Maharashtra, India. Informed consent was taken on Google forms. The data was adapted to Microsoft Excel Spread Sheet.

RESULTS AND DISCUSSION

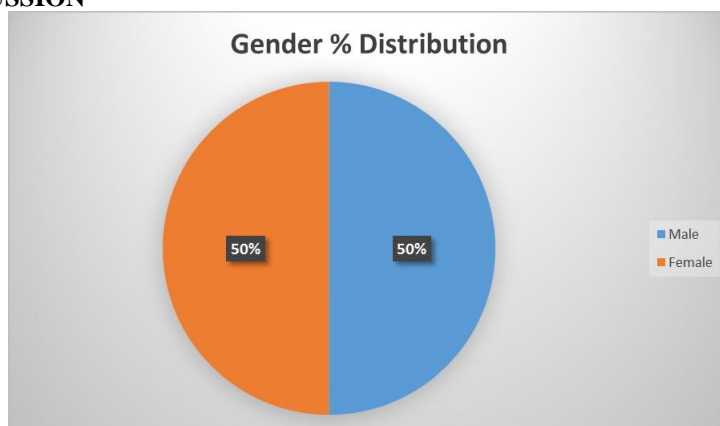


Fig 1: Sex Distribution.

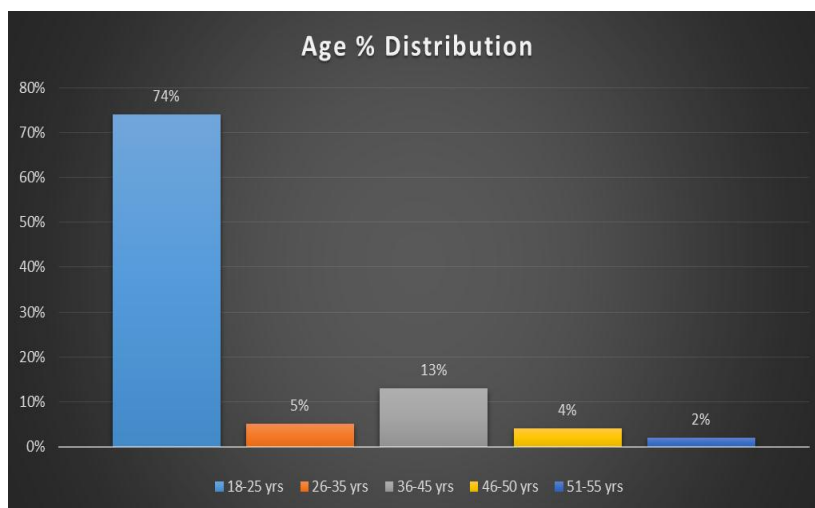


Fig 2: Age Distribution.

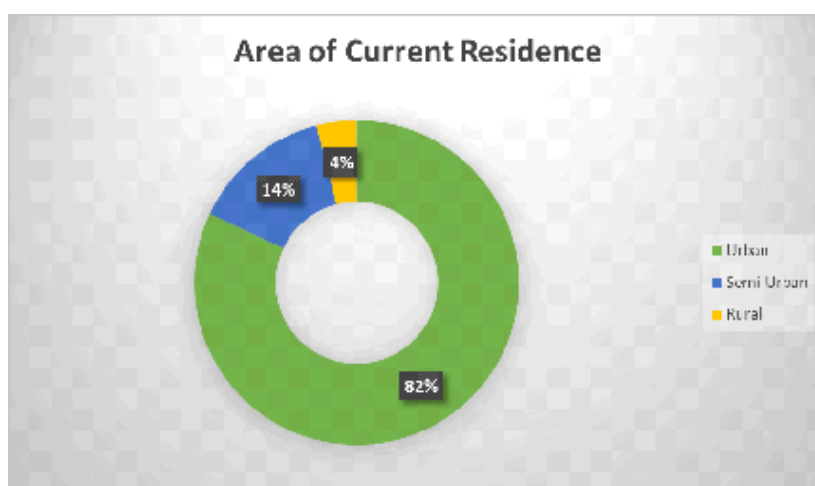


Fig 3: Area of Current Residence.

Table 1: Area of Current Residence.

Area Of Current Residence	Count of Participants
Rural	4
Semi-urban	14
Urban	82
Grand Total	100

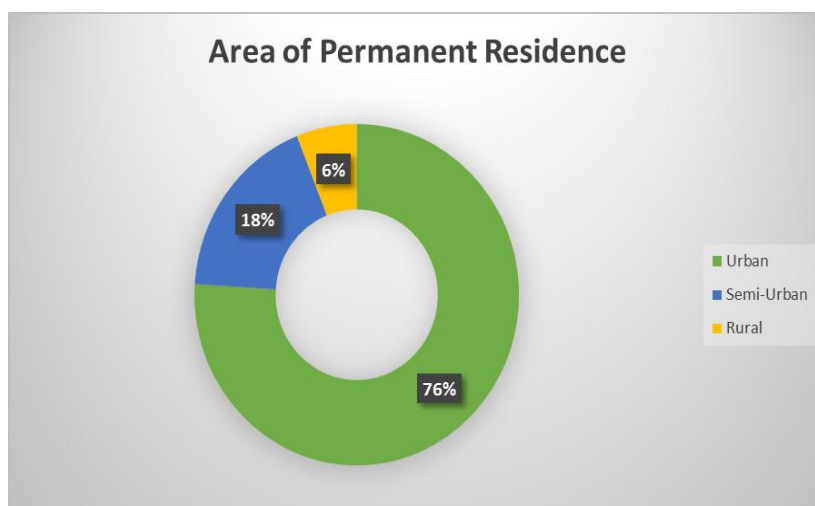


Fig 4: Area of Permanent Residence.

Table 2: Area of Permanent Residence.

Area of permanent residence	Count of participants
Rural	6
Semi-urban	18
Urban	76
Grand Total	100

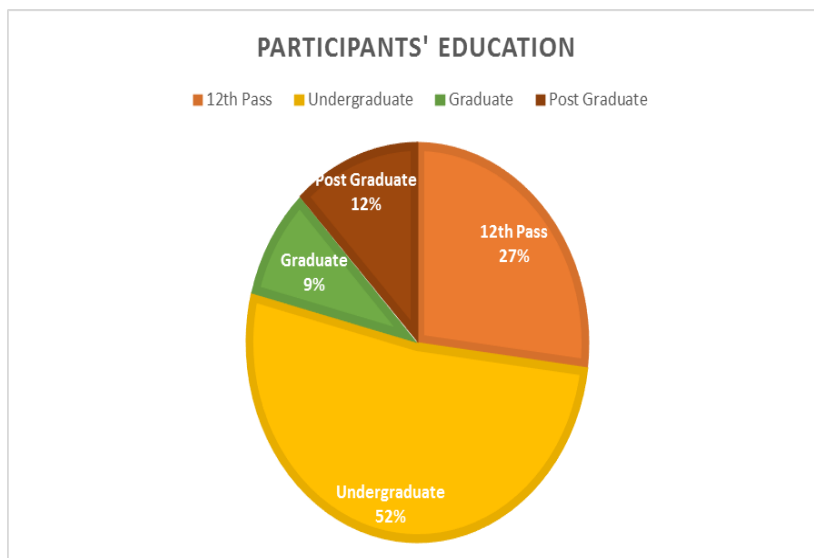


Fig 5: Participants' Education.

Table 3: Participants' Education.

Response	12th Pass	Graduate	Postgraduate	Undergraduate	Grand Total
Female	14	4	3	29	50
Male	13	5	9	23	50
Grand Total	27	9	12	52	100

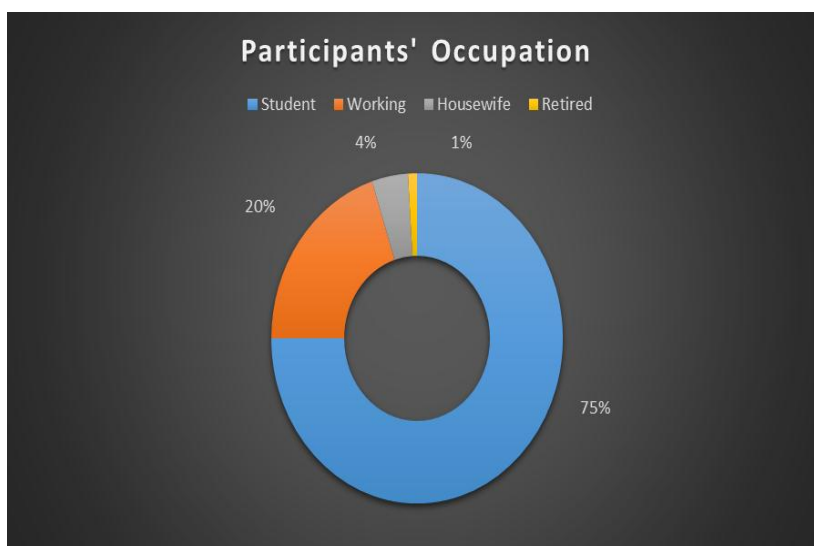


Fig 6: Participants' Occupation.

Table 4: Participants' Occupation.

Response	Housewife	Retired	Student	Working	Grand Total
Female	4	1	39	6	50
Male	0	0	36	14	50
Grand Total	4	1	75	20	100

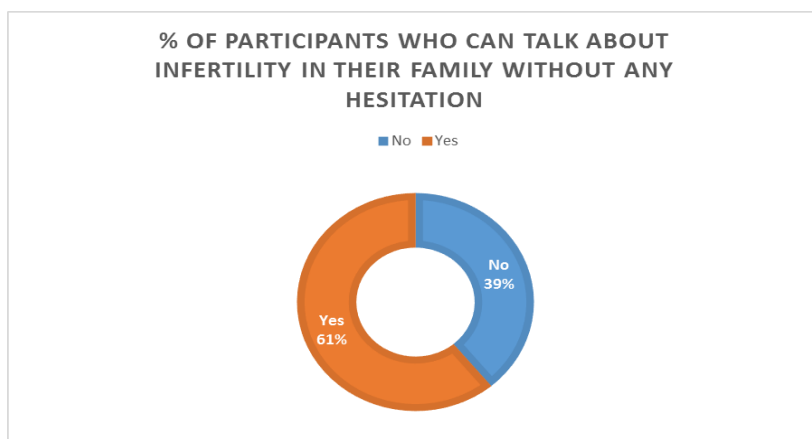


Fig. 7: Participants who can talk about infertility in their family without any hesitation.

Table 5: Participants who can talk about infertility in their family without any hesitation.

Response	Female	Male	Grand Total
No	16	23	39
Yes	34	27	61
Grand Total	50	50	100

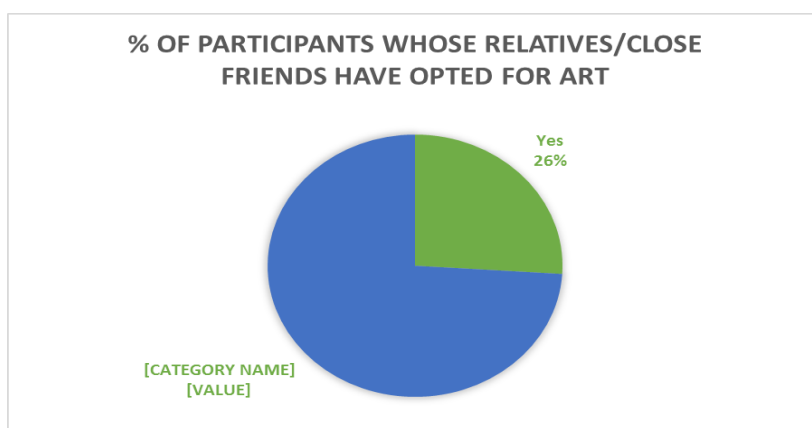


Fig 8: Participants whose relatives/close friends have opted for ART.

Table 6: Participants whose relatives/close friends have opted for ART.

Response	Female	Male	Grand Total
No	34	40	74
Yes	16	10	26
Grand Total	50	50	100

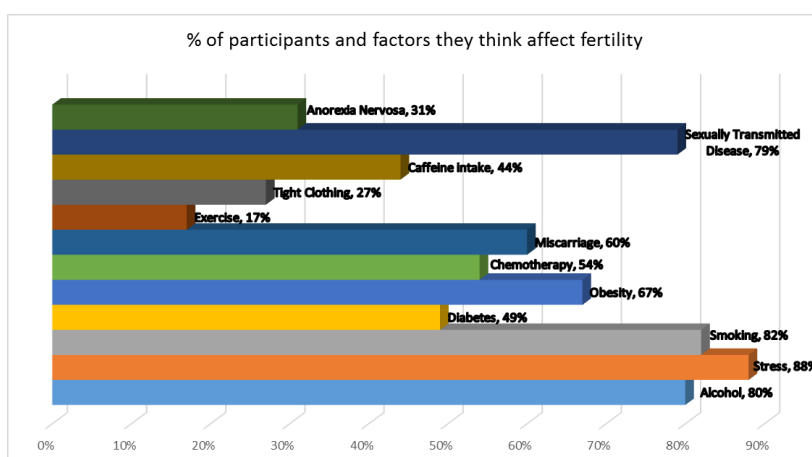


Fig 9: Factors affecting fertility.

Table 7: Factors affecting fertility.

Factors Affecting Fertility	Male	Female	Grand Total
<i>Alcohol</i>	41	39	80
<i>Stress</i>	41	47	88
<i>Smoking</i>	40	42	82
<i>Diabetes</i>	23	26	49
<i>Obesity</i>	30	37	67
<i>Chemotherapy</i>	26	28	54
<i>Miscarriage</i>	23	37	60
<i>Exercise</i>	9	8	17
<i>Tight Clothing</i>	16	11	27
<i>Caffeine Intake</i>	26	18	44
<i>Sexually Transmitted Diseases(STD)</i>	35	44	79
<i>Anorexia Nervosa</i>	14	17	31

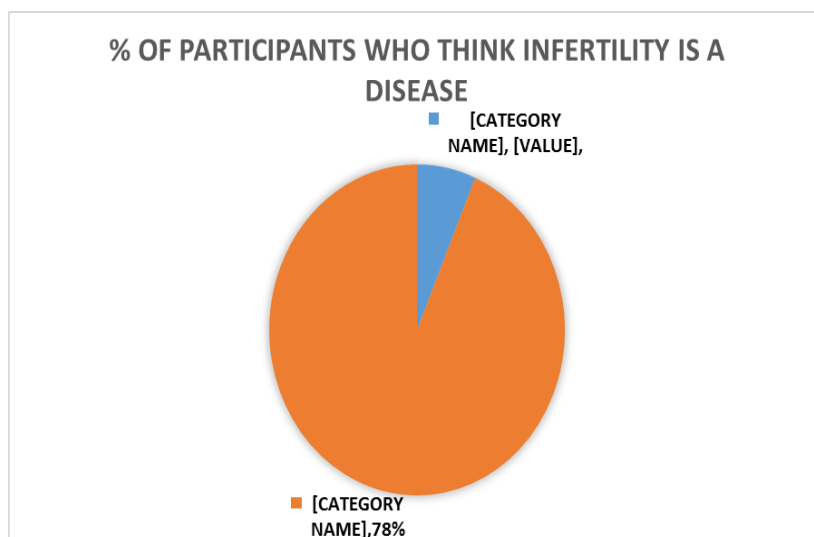


Fig 10: Participants who think infertility is a disease.

Table 8: Participants who think infertility is a disease.

Response	Female	Male	Grand Total
No	43	35	78
Yes	7	15	22
Grand Total	50	50	100

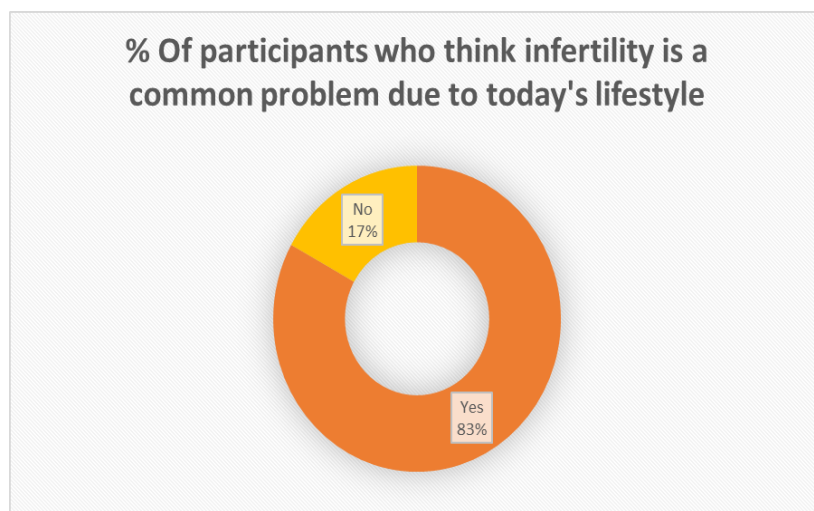


Fig 11: Participants who think infertility is a common problem due to today's lifestyle.

Table 9: Participants who think infertility is a common problem due to today's lifestyle.

Response	Female	Male	Grand Total
No	8	9	17
Yes	42	41	83
Grand Total	50	50	100

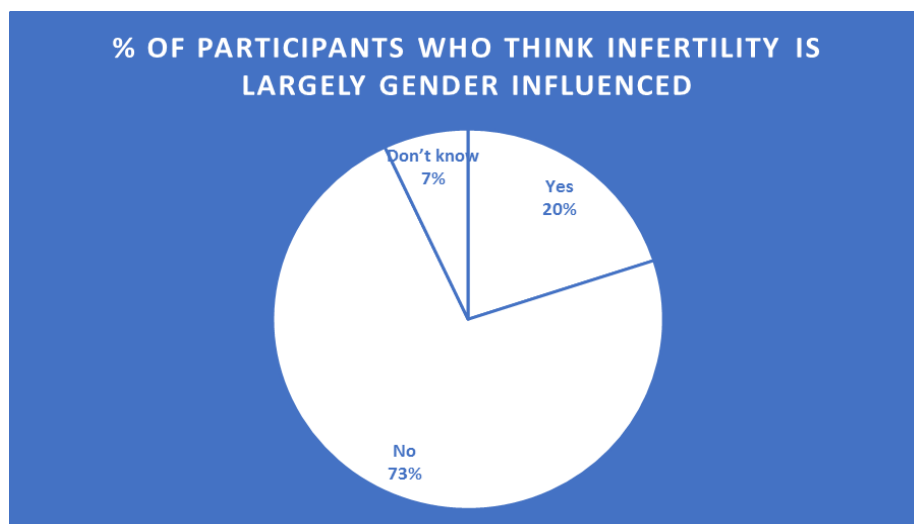


Fig 12: Participants who think infertility is largely gender influenced.

Table 10: Participants who think infertility is largely gender influenced.

Response	Female	Male	Grand Total
I don't know	3	4	7
No	36	37	73
Yes	11	9	20
Grand Total	50	50	100

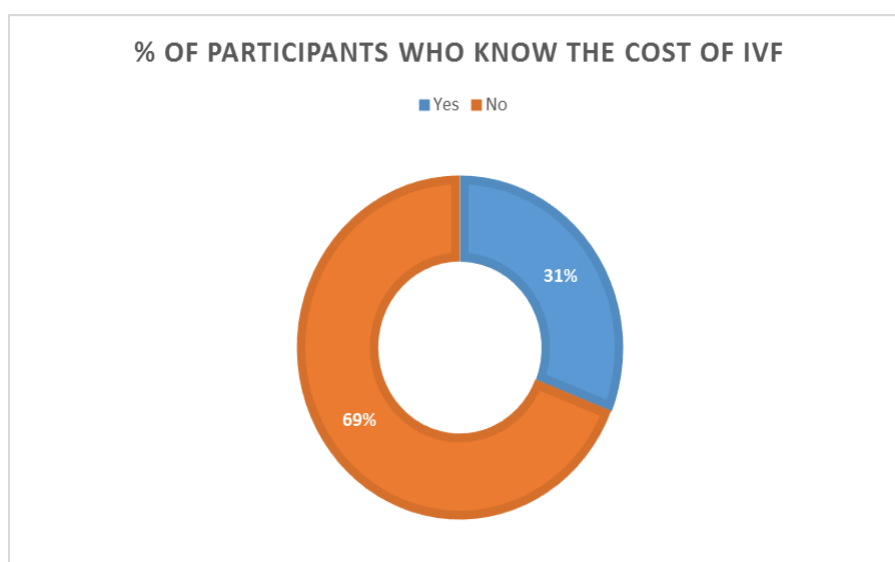


Fig 13: Participants who know the cost of IVF.

Table 11: Participants who know the cost of IVF.

Response	Female	Male	Grand Total
No	35	34	69
Yes	15	16	31
Grand Total	50	50	100

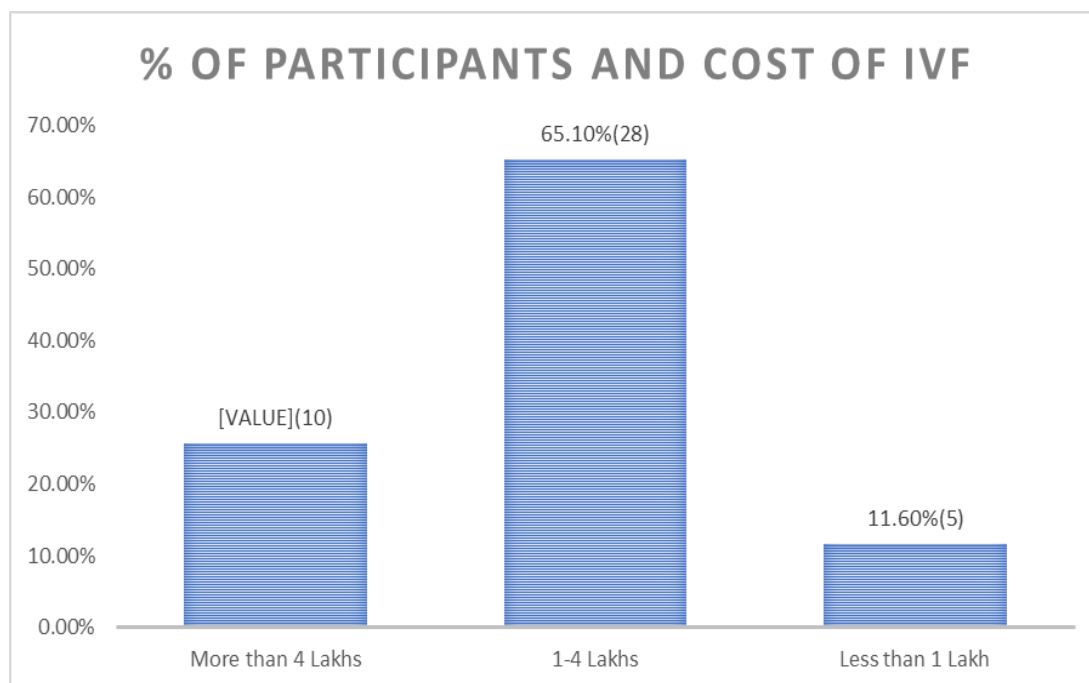


Fig. 14: Cost of IVF.

Table 12: Cost of IVF.

Gender	1-4 Lakhs	Less than 1 Lakh	More than 4 Lakhs	Grand Total
Female	14	3	3	20
Male	14	2	7	23
Grand Total	28	5	10	43

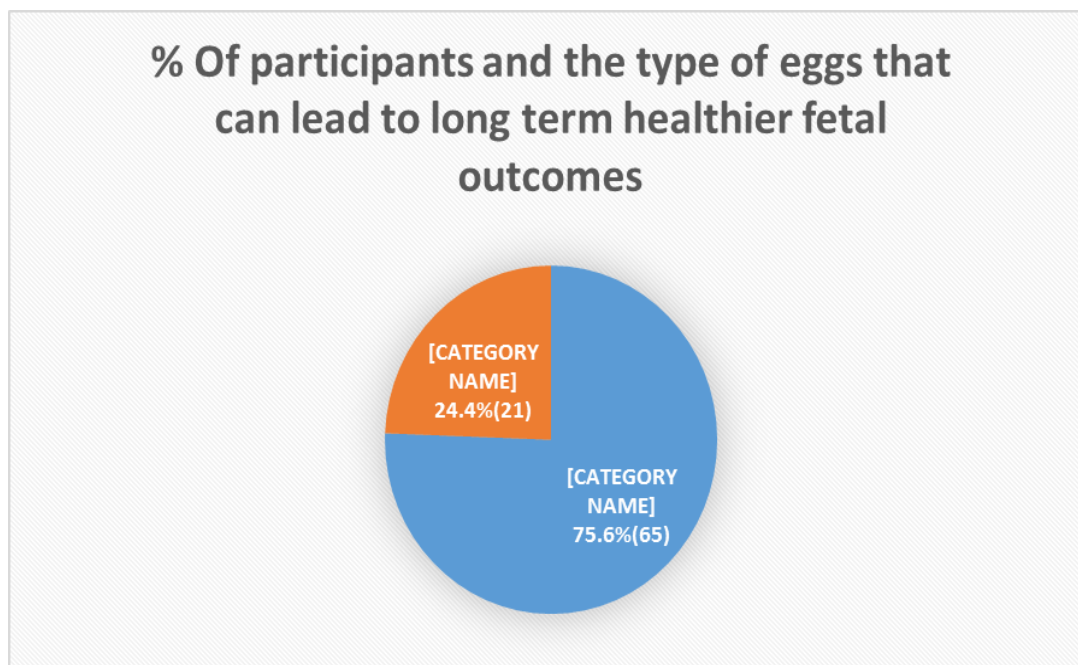


Fig. 15: Type of eggs that can lead to long term healthier fetal outcomes.

Table 13: Type of eggs that can lead to long term healthier fetal outcomes.

Type of Eggs	Female	Male	Grand Total
Fresh	30	35	65
Frozen	14	7	21
Grand Total	44	42	86

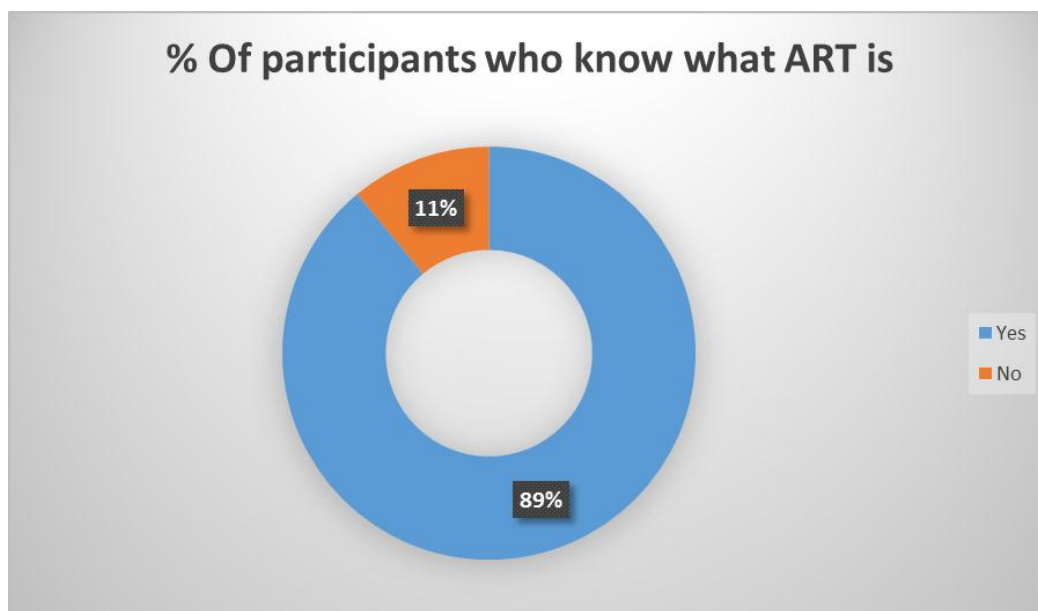


Fig. 16: Participants who know what ART is.

Table 14: Participants who know what ART is.

Gender	No	Yes	Grand Total
Female	4	46	50
Male	7	43	50
Grand Total	11	89	100

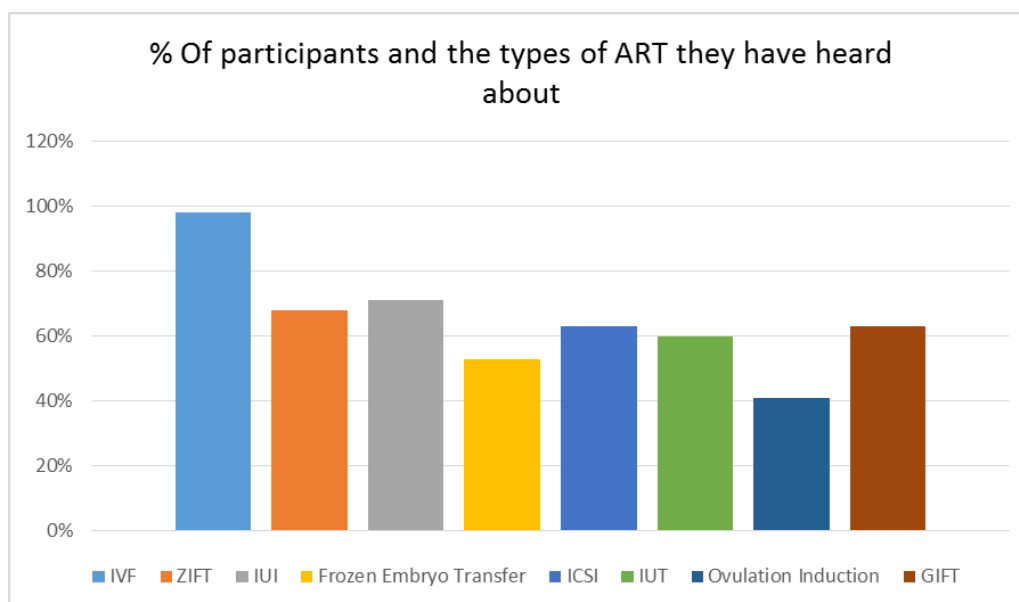


Fig 17: Types of ART heard about.

Table 15: Types of ART heard about.

Types Of ART	Male	Female	Grand Total
In-vitro Fertilization(IVF)	48	50	98
Zygote Intra-fallopian Transfer(ZIFT)	31	37	68
Intra Uterine Transfer(IUI)	33	38	71
Frozen Embryo Transfer	25	28	53
Intra Cytoplasmic Sperm Injection(ICSI)	29	34	63
Intra Uterine Transfer(IUT)	28	32	60
Ovulation Induction	21	20	41
Gamete Intra-fallopian Transfer(GIFT)	31	32	63

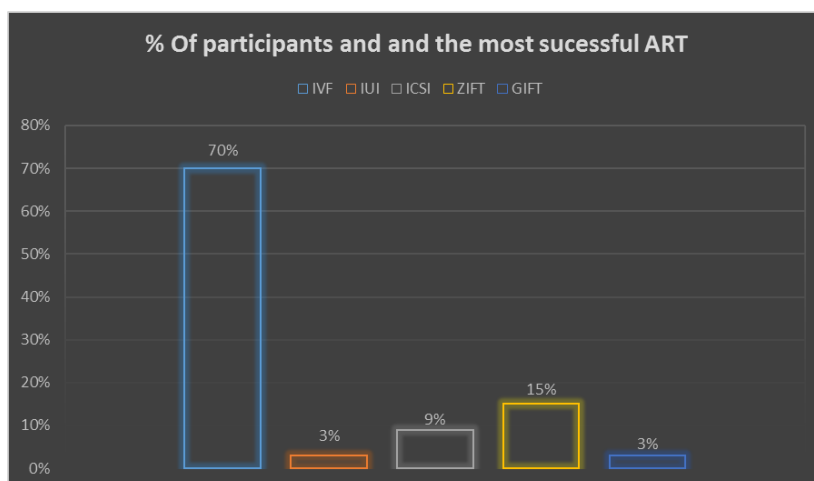


Fig 18: Most successful ART.

Table 16: Most successful ART.

Type of ART	Female	Male	Grand Total
GIFT	0	3	3
ICSI	3	6	9
IUI	1	2	3
IVF	39	31	70
ZIFT	7	8	15
Grand Total	50	50	100

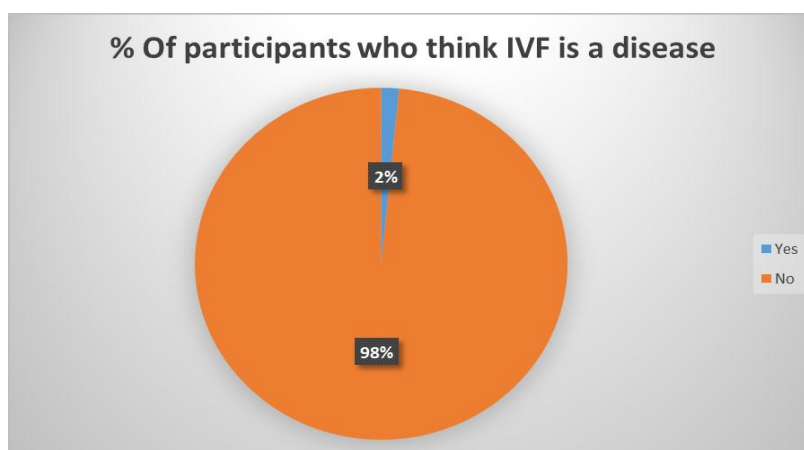


Fig. 19: Participants who think IVF is a disease.

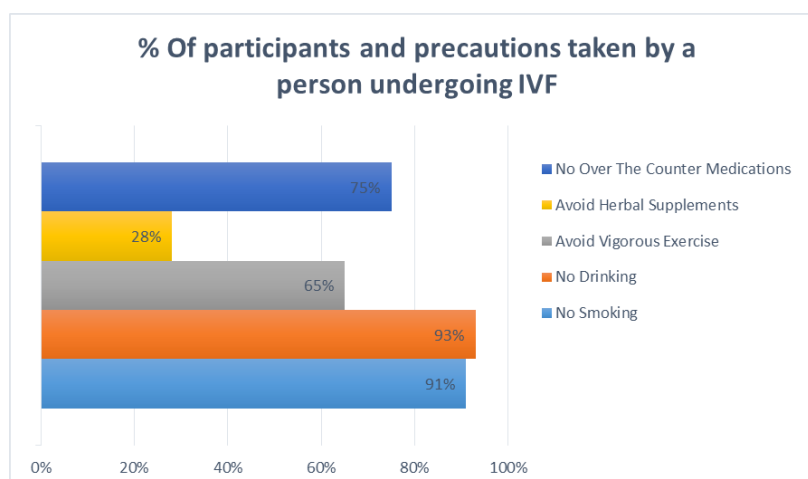


Fig. 20: Precautions taken a person undergoing IVF.

Table 17: Precautions taken a person undergoing IVF.

Precautions	Male	Female	Grand Total
No Smoking	46	45	91
No Drinking	47	46	93
Avoid Vigorous Exercise	35	30	65
Avoid Herbal Supplements	15	13	28
No Over The Counter Medications	39	36	75

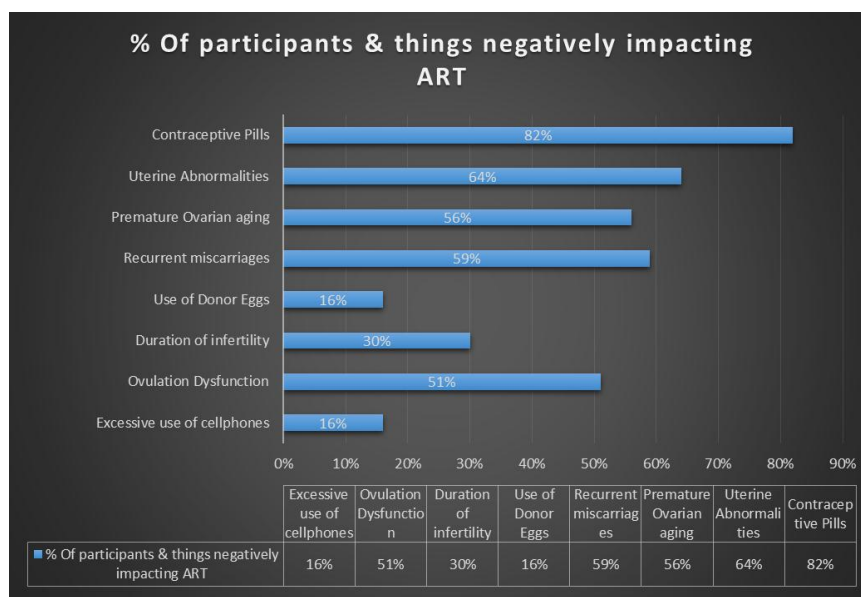


Fig. 21: Things negatively impacting success of ART.

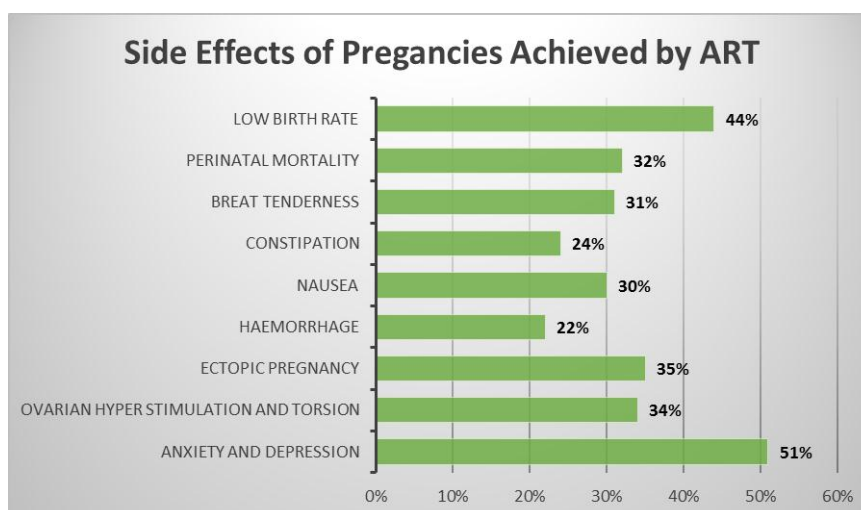


Fig. 22: Side effects of pregnancies achieved by ART.

Table 18: Side effects of pregnancies achieved by ART.

Side Effects	Male	Female	Grand Total
Low Birth Rate	24	20	44
Perinatal Mortality	19	13	32
Breast Tenderness	16	15	31
Constipation	12	12	24
Nausea	9	21	30
Hemorrhage	11	11	22
Ectopic Pregnancy	19	16	35
Ovarian Hyper Stimulation And Torsion	14	20	34
Anxiety And Depression	24	27	51

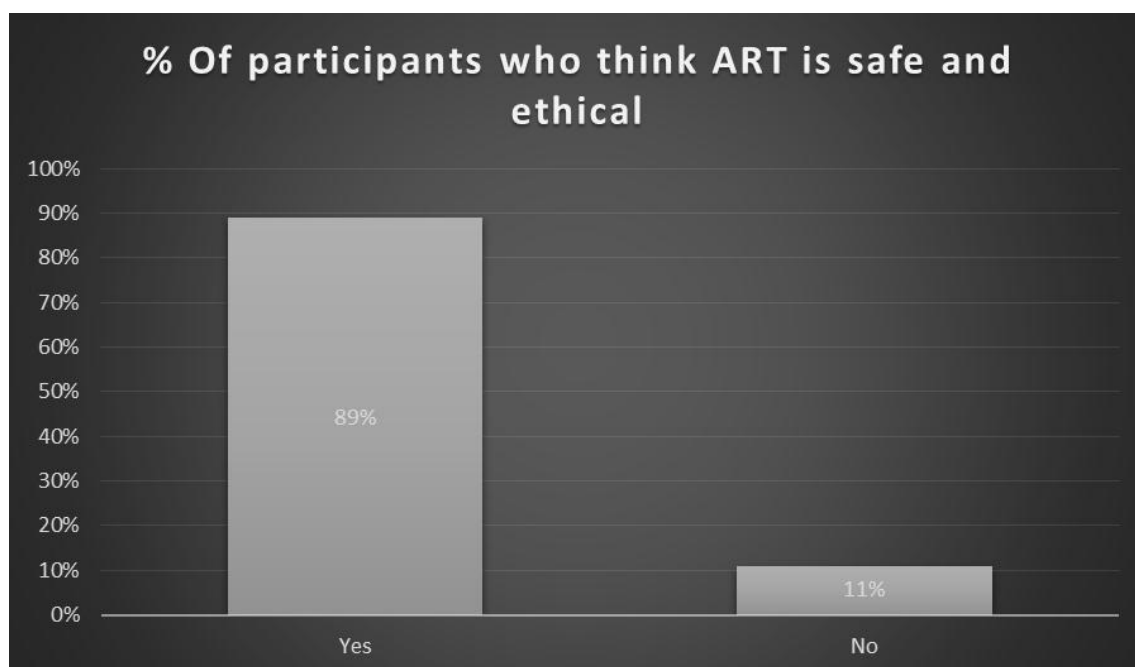


Fig. 23: Participants who think ART is safe and ethical.

Table 19: Participants who think ART is safe and ethical.

Response	Female	Male	Grand Total
No	4	7	11
Yes	46	43	89
Grand Total	50	50	100

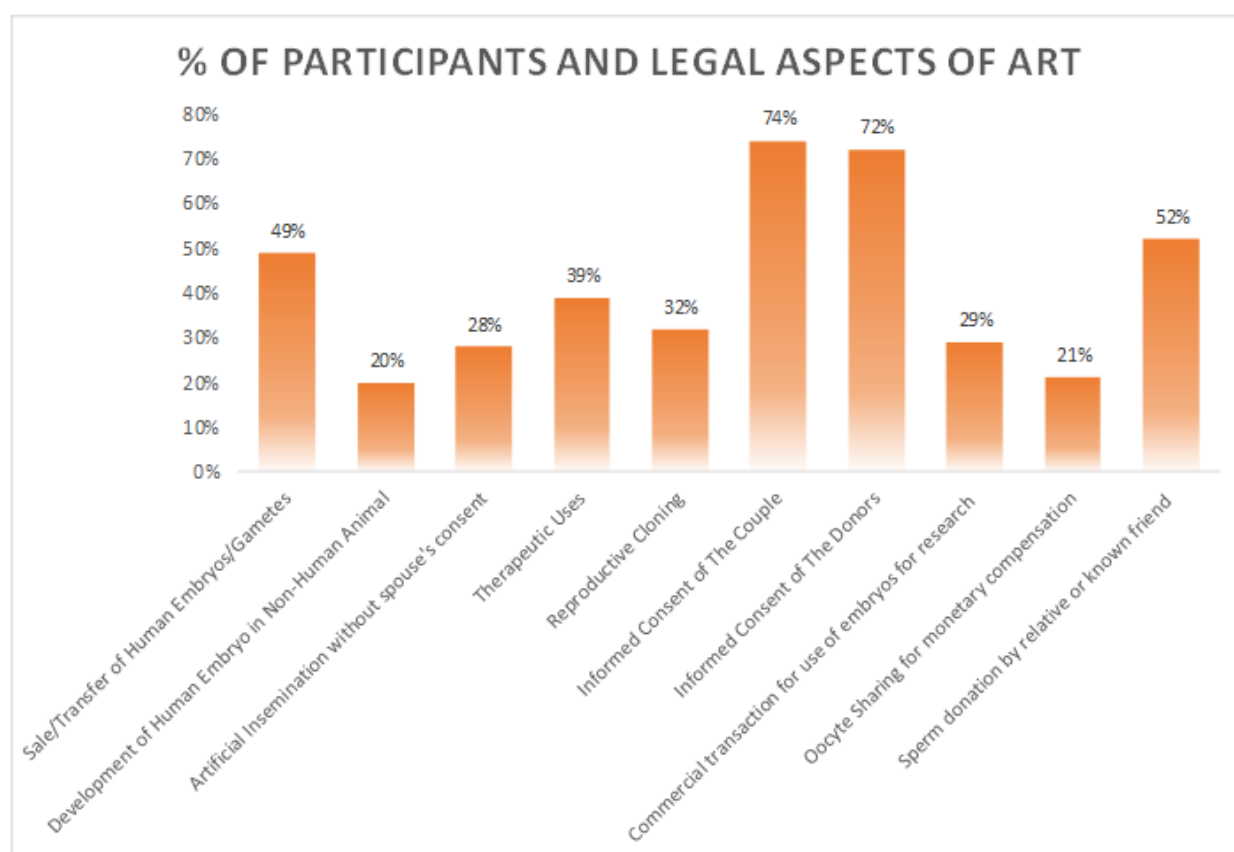


Fig. 24: Legal aspects of ART.

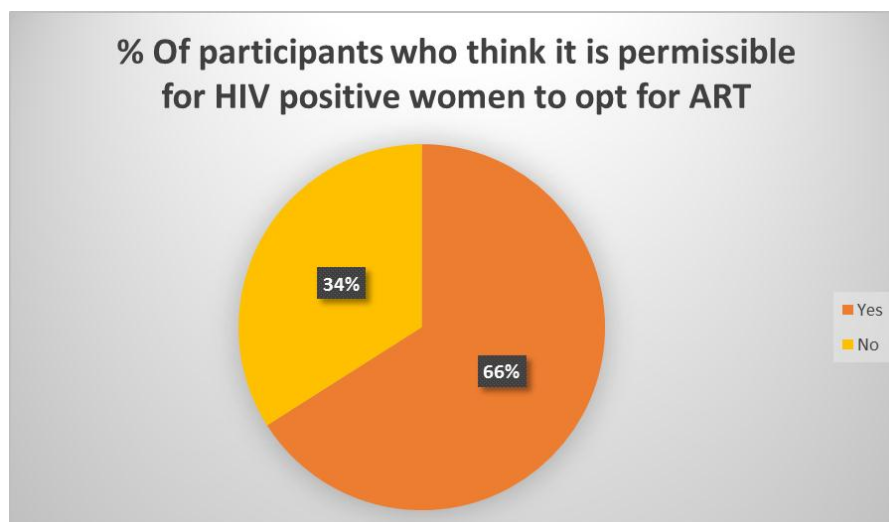


Fig. 25: Participants who think it is permissible for HIV positive women to opt for ART.

Table 20: Participants who think it is permissible for HIV positive women to opt for ART.

Response	Female	Male	Grand Total
No	34	32	66
Yes	16	18	34
Grand Total	50	50	100

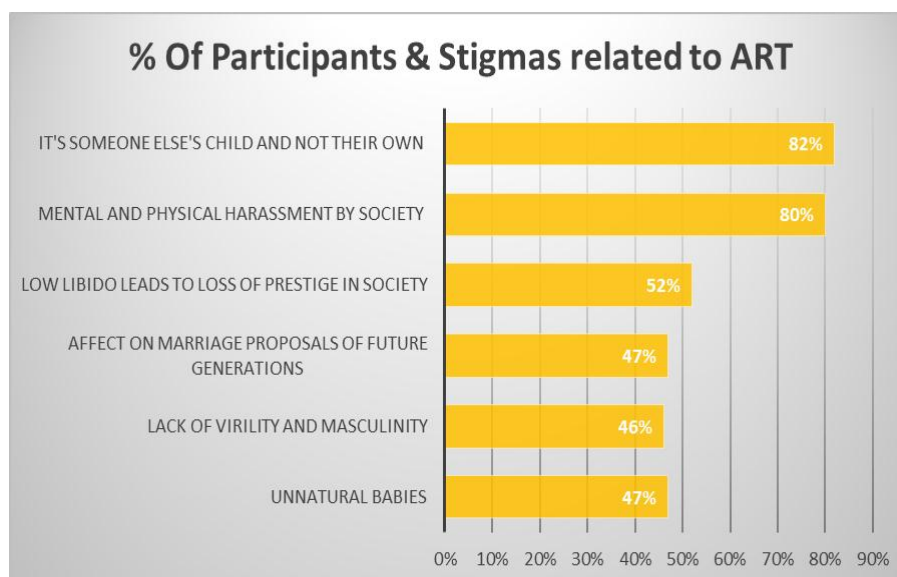


Fig 26: Stigmas related to ART.

Male infertility is an important cause of infertility with a strong impact on the psychology and physiology of couple.^[7] Fertility rates have a strong correlation with the number of live births in each family. Factors that affect fertility rates can be broadly characterized into regional factors and individual factors.^[8] In the present study 89% of the participants were aware regarding ART. In-vitro fertilization/ IVF has more than grown up with its increased demand in modern and urban era by adopting additional techniques day by day.^[9] Regarding the causes of infertility in women mainly, problems with fertilization arise mainly from either structural problems in fallopian tube or uterus or releasing eggs, in case of males the infertility is mainly due to low sperm count.^[10]

The study report of Pek J T et al. revealed that the current trend for the development of the low cost IVF is very encouraging and recent discoveries should prompt to enhance the support in bringing this effective service to the people in the need IVF.^[11]

CONCLUSION

Every couple who experienced infertility is in a distress than the general population. Stress related to infertility problems appears to increase marital conflict. Over the past few decades remarkable progress has been made in modern reproductive technology to solve this problem to some extent. The safety depends on procedural choices made. Clinical and policy guidance need to ensure that

the trade-offs involved are carefully considered by both patients and providers.

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