

Knowledge Attitude Practice Regarding Infertility in General Population

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Abstract: Infertility is a significant public health issue that affects many couples worldwide, often leading to emotional and psychological distress. Defined as the inability to conceive after one year of unprotected intercourse, As societal norms Evolve and family planning becomes increasingly diverse, the importance of understanding infertility has never been more critical. many people remain unaware of the various factors contributing to infertility, including lifestyle choices, medical conditions, and environmental influences Many Individuals are not aware of the exact meaning of infertility.

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I. INTRODUCTION

Infertility is a significant public health issue that affects many couples worldwide, often leading to emotional and psychological distress¹⁰. Defined as the inability to conceive after one year of unprotected intercourse, infertility is a complex condition that impacts millions of individuals and couples globally⁹. As societal norms evolve and family planning becomes increasingly diverse, the importance of understanding infertility has never been more critical. Despite advancements in medical science and reproductive technologies, many people remain unaware of the various factors contributing to infertility, including lifestyle choices, medical conditions, and environmental influences⁹. Many individuals are not aware of the exact meaning of infertility. Many peoples do not understand that infertility means seeking treatment after one year of unsuccessful attempts at conception⁵. Starts medication for conceiving early in fear of infertility.

Many individuals misunderstand the exact meaning of infertility, often equating it solely with the need for medical intervention after one year of unsuccessful attempts at conception¹. In some cases, while husbands temporarily return home from abroad, family members may prioritize medicinal support for their wives without assessing the necessity of medical intervention³.

This lack of awareness can lead to stigma, misinformation, and inadequate support for those experiencing fertility challenges². Furthermore, cultural beliefs and societal attitudes can significantly shape how individuals perceive infertility and their willingness to seek help⁸.

Therefore, exploring the knowledge, attitudes, and practices (KAP) regarding infertility within the general population is essential for fostering a more informed and supportive environment. This article aims to delve into the current state of knowledge about infertility, examine prevalent attitudes towards those affected, and assess the practices adopted by individuals and couples in response to infertility challenges. By highlighting gaps in understanding and areas for improvement, we hope to contribute to a broader dialogue that encourages education, empathy, and effective interventions in the realm of reproductive health.

II. MATERIALS AND METHODS

➤ Study Design and Study Population

A cross-sectional web-based survey was conducted adult participants from NOVEMBER 2024 to JAN 2025. An online questionnaire was administrated where social networks and all the possible networks to contact potential participants the link to the Google form was sent to the study participants which contain a brief introduction objective voluntary nature of participation, declaration of anonymity

and confidentiality the study protocol and procedures of informed concern before the Formal survey was done the participants had to confirm their willingness to participate voluntarily and the questionnaires were also printed in English, Urdu, Telugu and Hindi and the manual filling was done by the respondents themselves.

➤ Inclusion and Exclusion Criteria

Inclusion Criteria: Permanent residents of India, male and female both, married and Unmarried, from urban and rural areas between age group of 15-45yrs.

Exclusion Criteria: Nonresident Indians and transgender.

➤ Study tool

A self-structured, pre-tested questionnaire was used to collect information. It consisted of Four sections, these four sections contained questions assessing the socio-demographic data of Participants, their knowledge, attitude and practice regarding the infertility, respectively.

The basis for correct answer was selected from literature and clinical expert's knowledge. For Assessing knowledge, attitude and practice each correct answer was awarded a score of one and each incorrect answer was awarded a score of 0. Quartiles were generated for each Component. Based on quartiles, knowledge, attitude and practice were divided into adequate and inadequate.

➤ Statistical Analysis

Statistical analysis was performed using Microsoft Excel. Categorical data are presented as percentages, while continuous data are expressed as mean \pm standard deviation, analyzed through descriptive statistics. Data visualization was achieved through various Excel charting tools, which facilitated the representation of findings in a clear and comprehensible manner. Excel formulas were utilized to calculate percentages and summarize the data effectively, allowing for straightforward interpretation of knowledge, attitudes, and practices related to infertility. The results provide a comprehensive overview of the participants' understanding and behaviors, contributing valuable insights into the field of infertility.

III. RESULTS AND DISCUSSION

The social demographic data reveals that participants between each group of 15 to 25 were 21 and 25 to 50 were 67 [fig:1] out of which females were 72(75.8%) males for 23 (24.2%) [fig:3] It is observed that in the study, Muslims were 88 (92.6%) Hindus were 6 (6.3%) Christians were 1(1.1%) [fig:4]. In the study married were 87(92.6) person and married and 7.4% were unmarried was 25 that is 28.1% were married for more than one year, 31.5% less then 1 year, 29.2% more then 5year, 11.2% more then 10years of married life [fig 5] educational status reveals start 57 60.6% participants where 10th or inter passed, graduates for 29 30.9%, and post graduates were 8(8.5%) [fig 7].

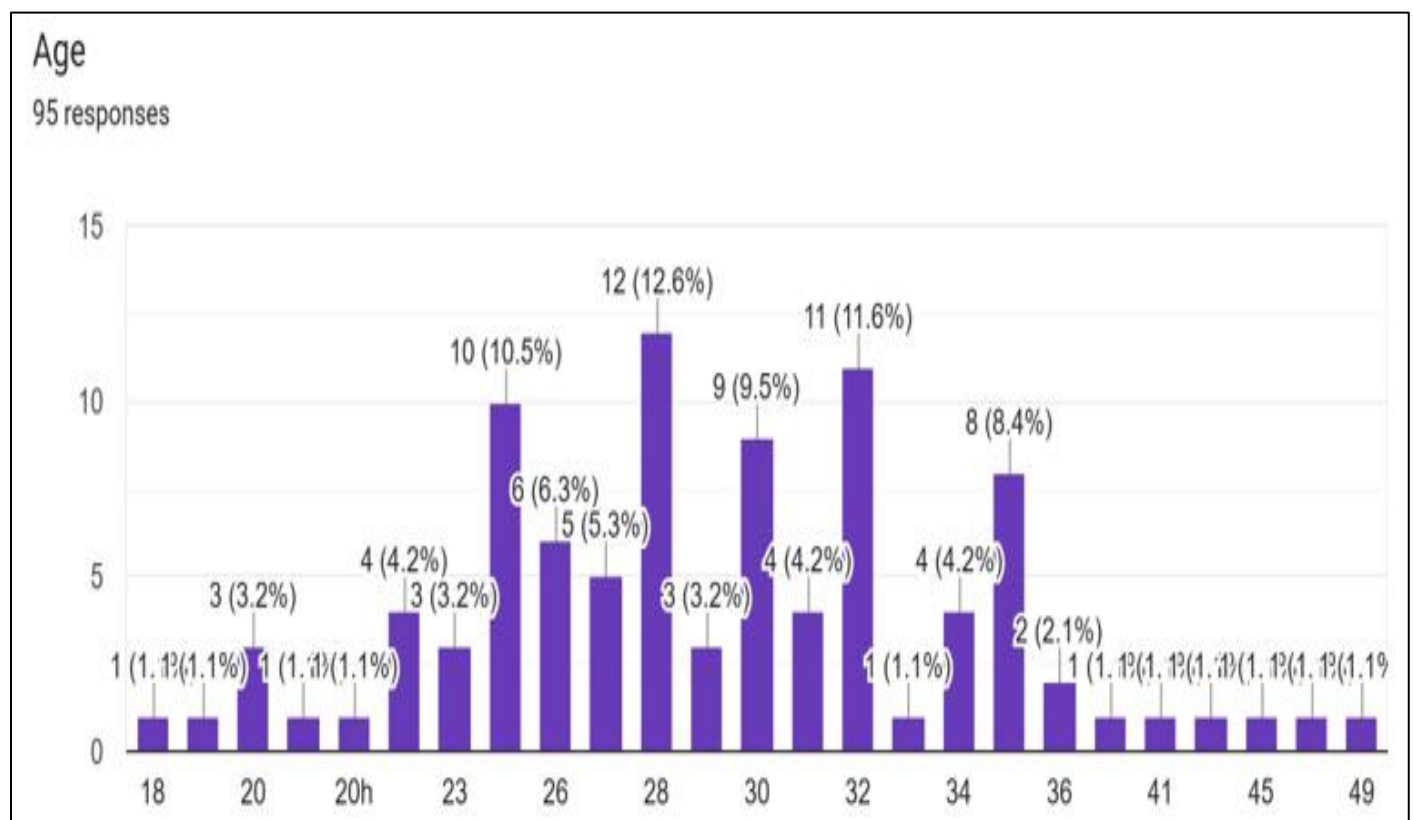


Fig 1 Age

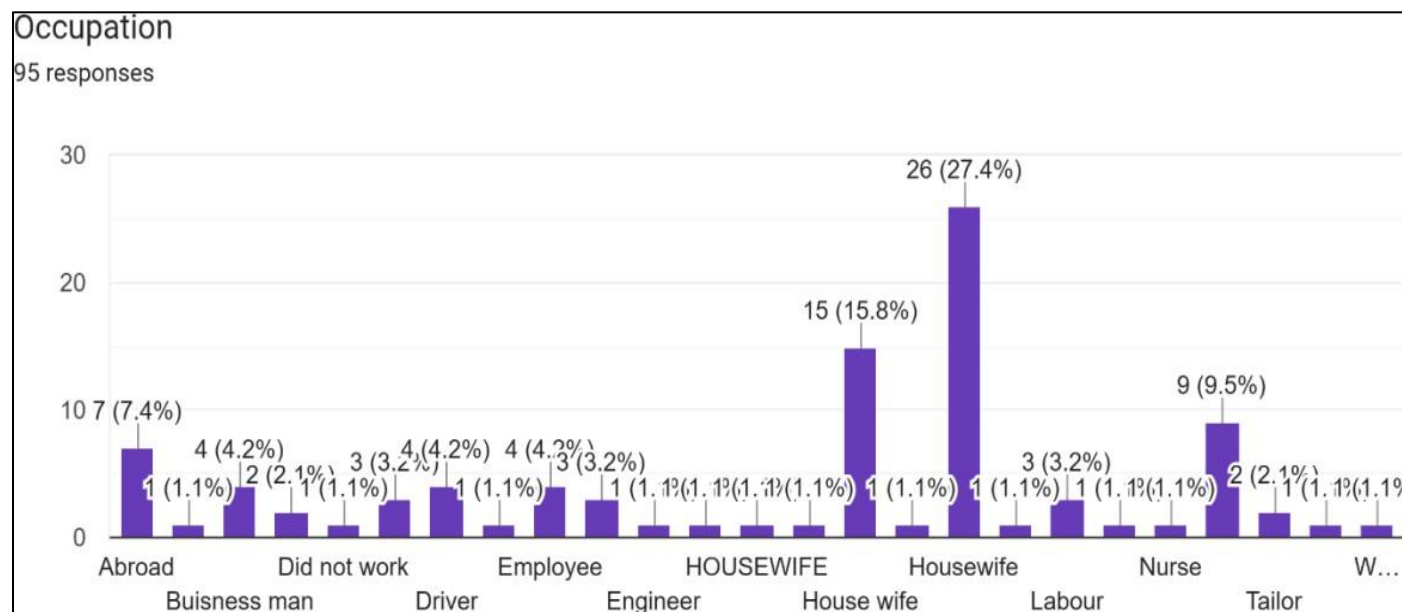


Fig 2 Occupation

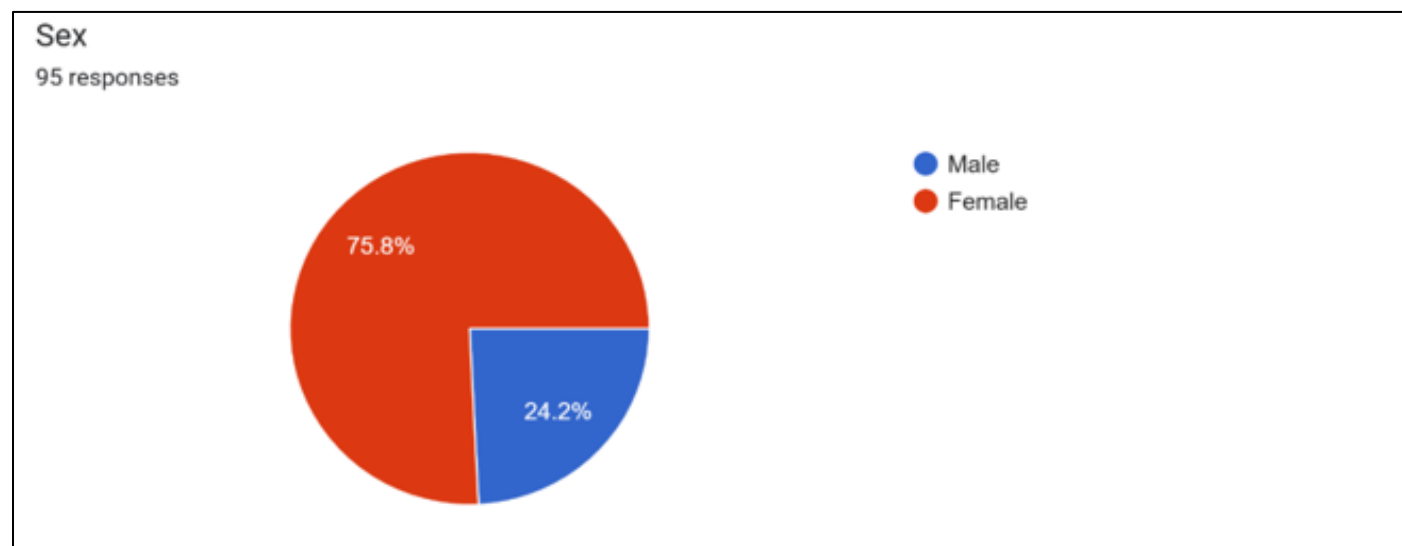


Fig 3 Sex

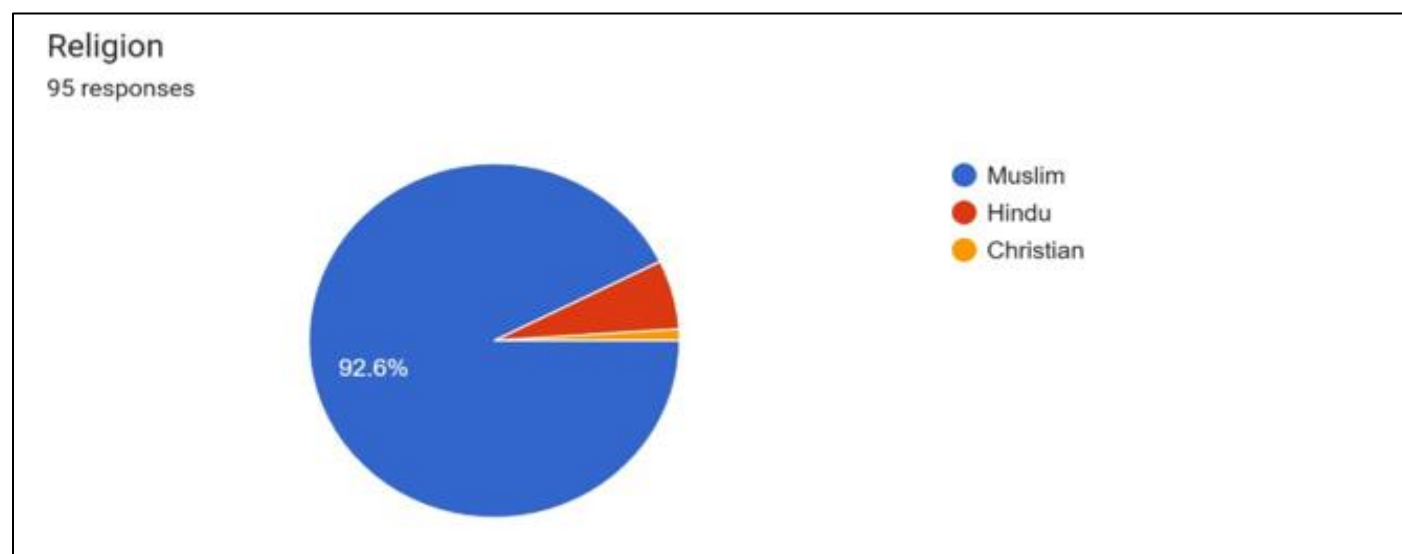


Fig 4 Religion

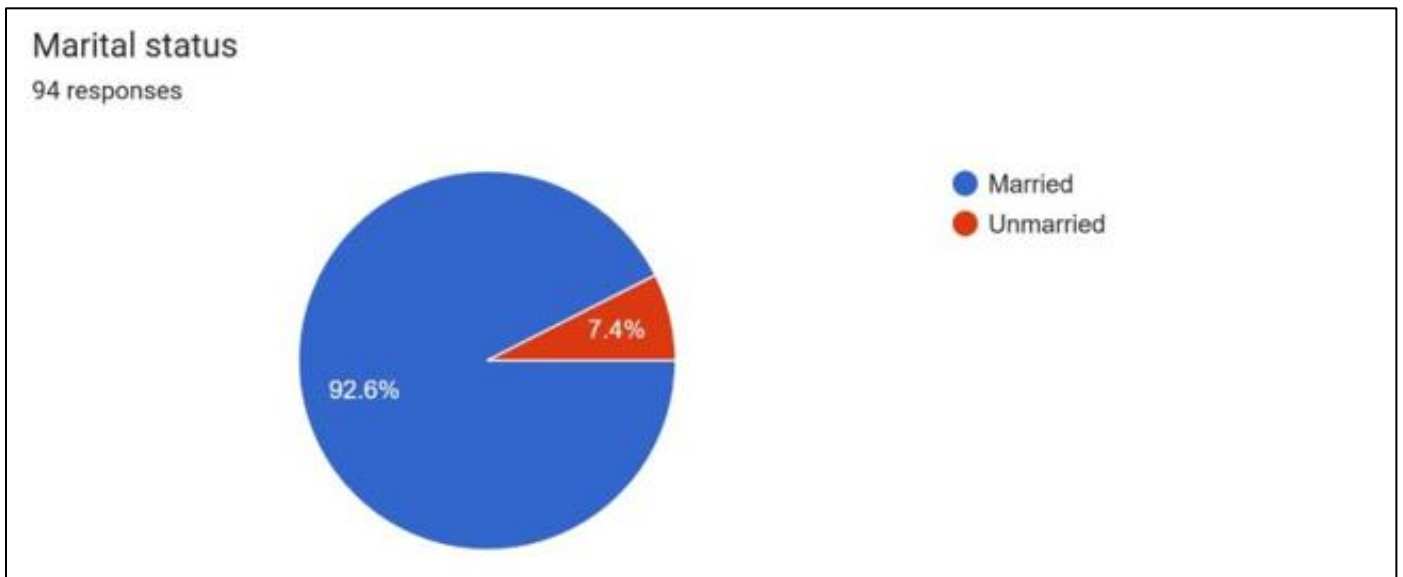


Fig 5 Marital Status

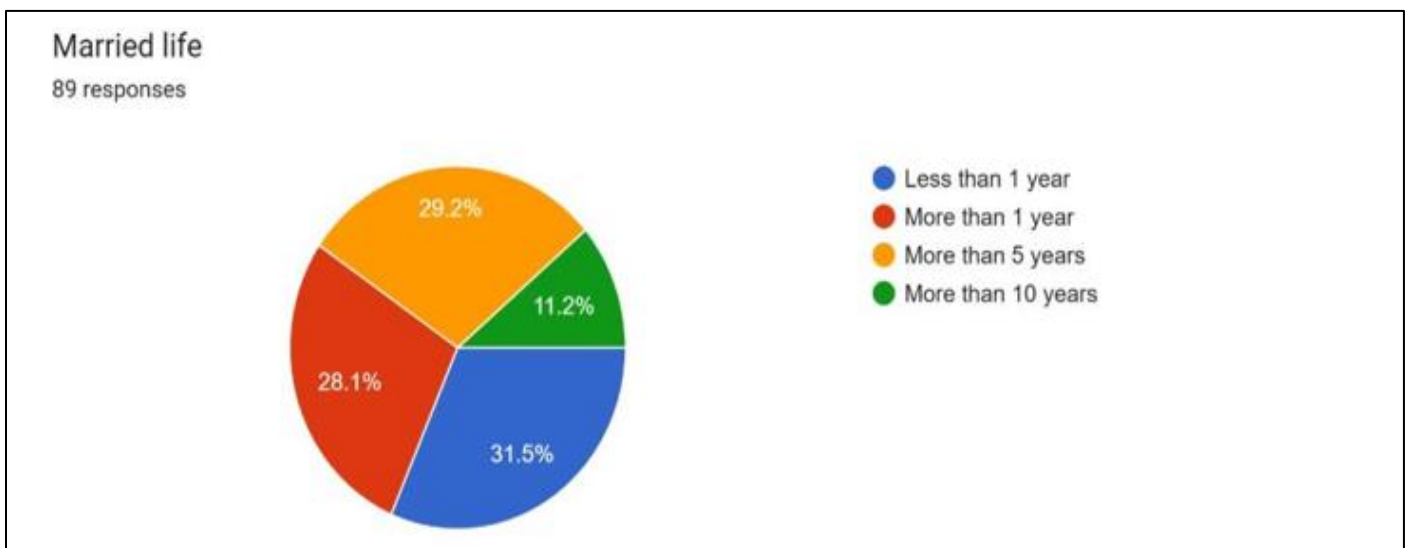


Fig 6 Married Life

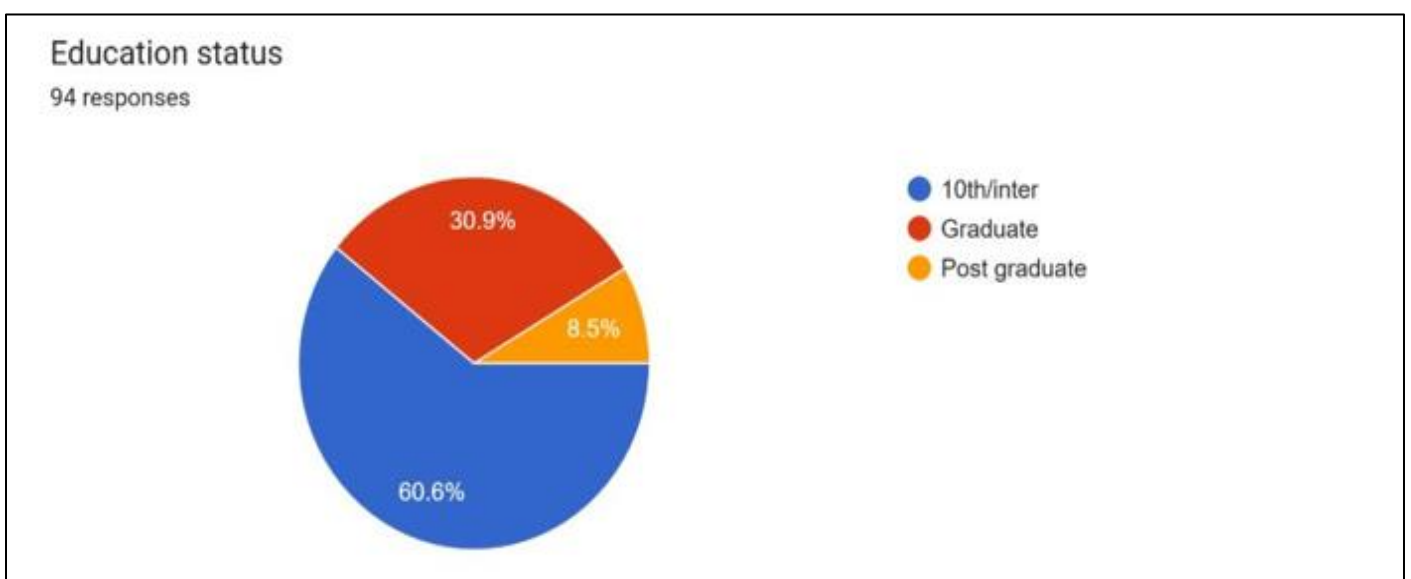


Fig 7 Education Status

➤ Knowledge

The different knowledge variables asked to the study participants to know about the knowledge about infertility in the participants and it is found that about 71 participants 72.4% are facing difficulty in conceiving [fig 8] whereas 22 participants that is 22.4% are not facing any difficulties in conceiving whereas 5 that is 5% don't know. It is found that 15 that is 15.2% participants think that the causes of infertility is with eggs and 3 that is 3% participants think that the causes of infertility is with tubal factor whereas 45 that is 45.5% participants think that the cause of infertility both the causes that is tubal as well as eggs 36 that is 36.4% don't know [fig 11]. It is found that 11 that is 11.2% participants think that days of the month where women are most likely to conceive are immediately after menstruation and 6 that is 6.1% participants think the days of month where women's are most likely to conceive are 10 days prayer to monthly date and 38 that is 38.8% correctly knows that days of month where women are more likely to conceive or 14 days prayer to menstrual date, 40 participant that is 40.8% don't know what are the days of month where women are most likely to conceive. [fig 10] 53 that is 54.1% participants correctly know that eggs are formed in the ovaries in female body, 10 that is 10.2% participants think eggs are formed in uterus, to that is 2% think that eggs are formed in fallopian tube, 30 that is 30.6% participants don't know where the eggs are formed in the female body [fig 14]. 60

that is 63.9% participants correctly know that diet stress obesity medication pcos causes infertility whereas 13 that is 13.4% participants do not agree and 22 that is 22.7% participants are not sure about it [fig 15] [fig 13]. When asked about the correct definition of infertility it is found that only 13 that is 13.1% participants know correctly the definition of infertility that it is a disease failure to achieve pregnancy after 12 months or more of regular and protected sexual intercourse that is without using condoms or any other contraceptive [fig 9], when asked about the artificial reproductive techniques like IUI and IVF it is found that only 39 that is 40.2% participants were aware about these artificial reproductive techniques whereas 32 that is 33% participants know little bit about it. When asked about the best treatment option among artificial reproductive techniques, participants expressed their preferences as 42 that is 61.8% participants are satisfied with IVF, where 22 that is 32.4% participants are satisfied with IUI and 4 that is 5.9% like surrogacy. When asked how many eggs are formed in each menstrual cycle in female then 44 that is 53.7% participants correctly know that one egg is formed each month that is in one menstrual cycle in female where are 31 that is 37.8% participants don't know how many eggs a female produces per month [fig 15]. 76 that is 84.4% participants think that lifestyle can be the cause of infertility like disturb sleep and big cycle smoking, diet, alcohol, tobacco, gutka etc. [fig 16]

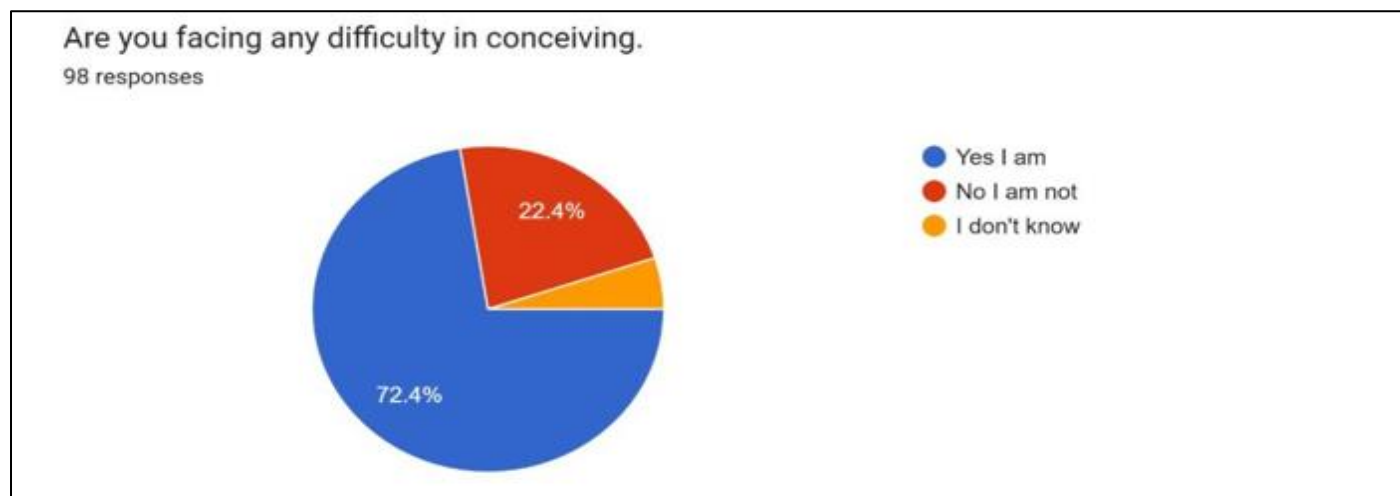


Fig 8 Are you Facing any Difficulty in Conceiving.

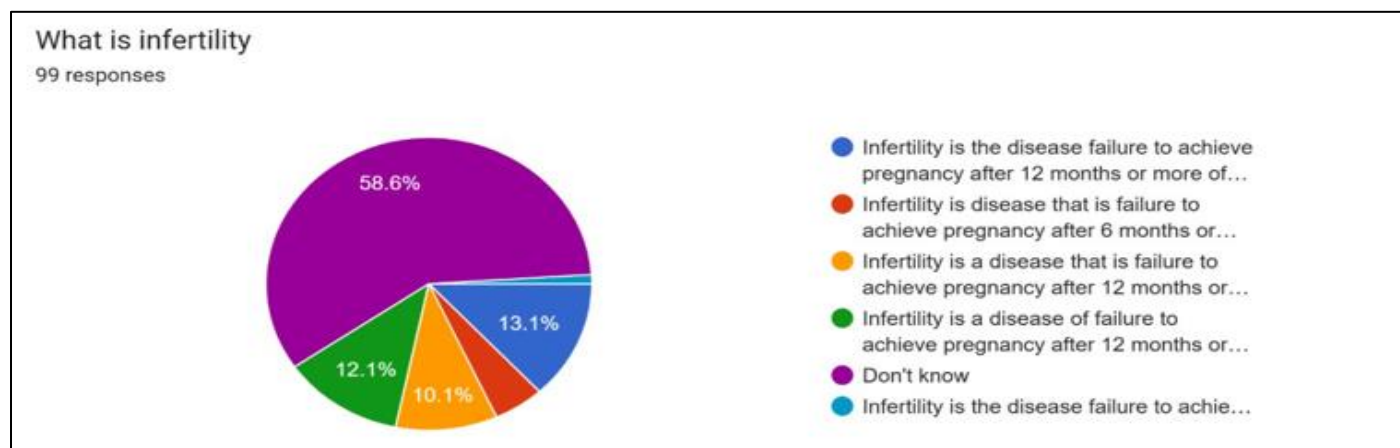


Fig 9 What is Infertility

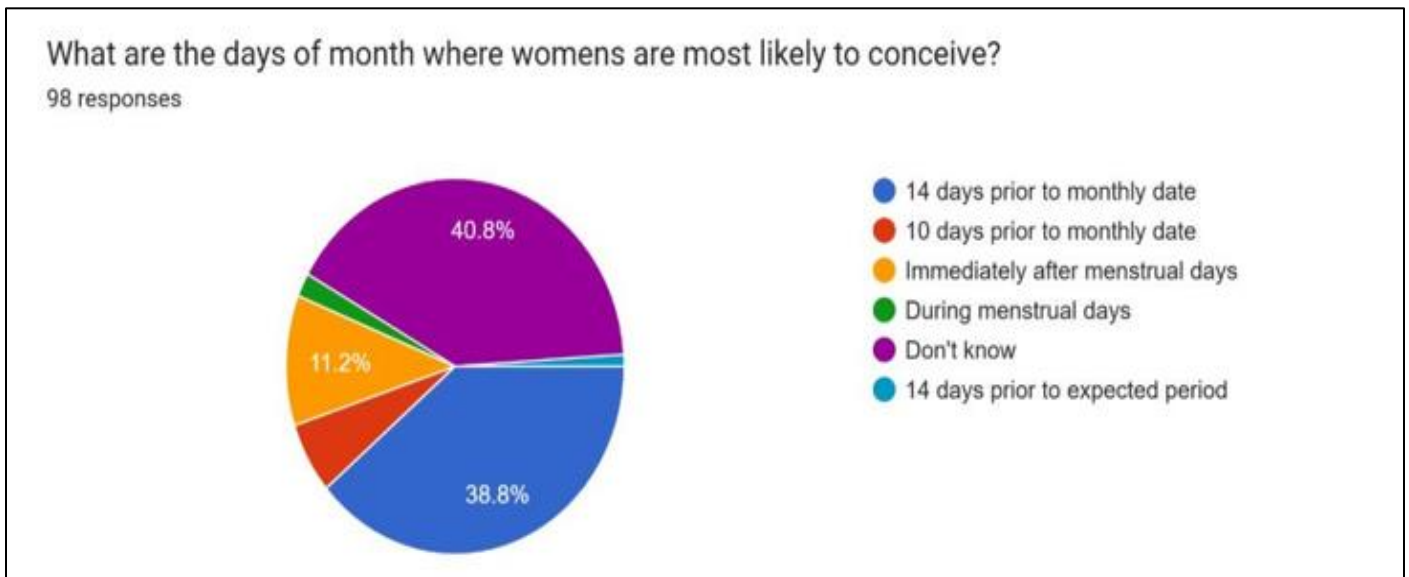


Fig 10 What are the days of month where womens are most likely to conceive?

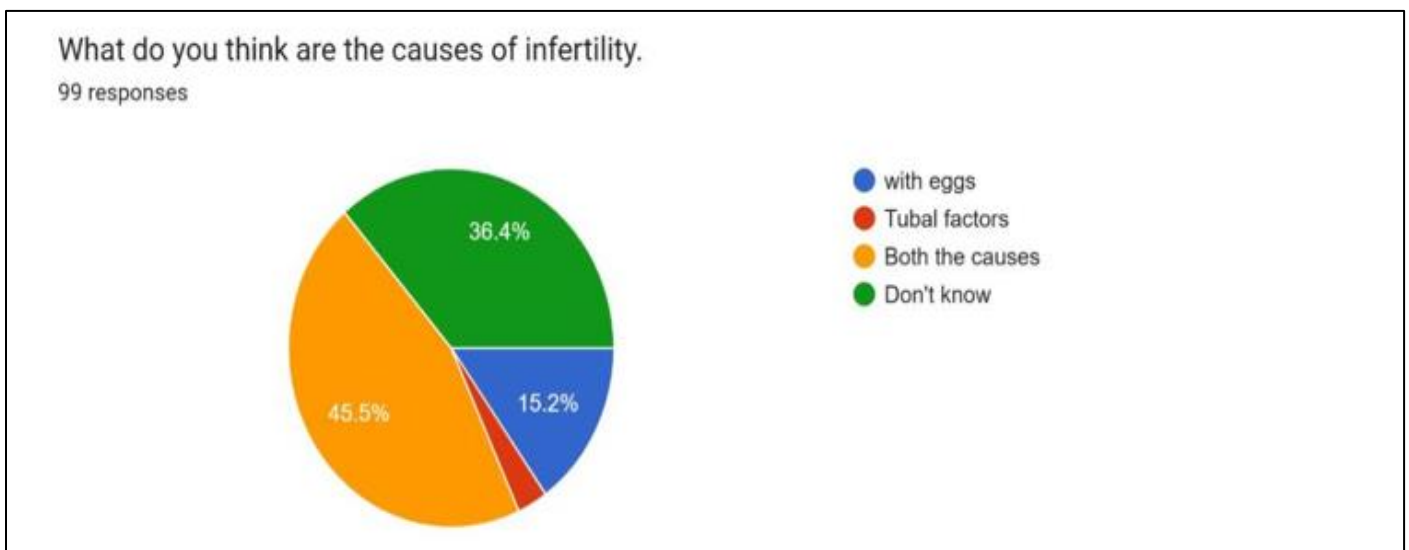


Fig 11 What do You Think are the causes of Infertility.

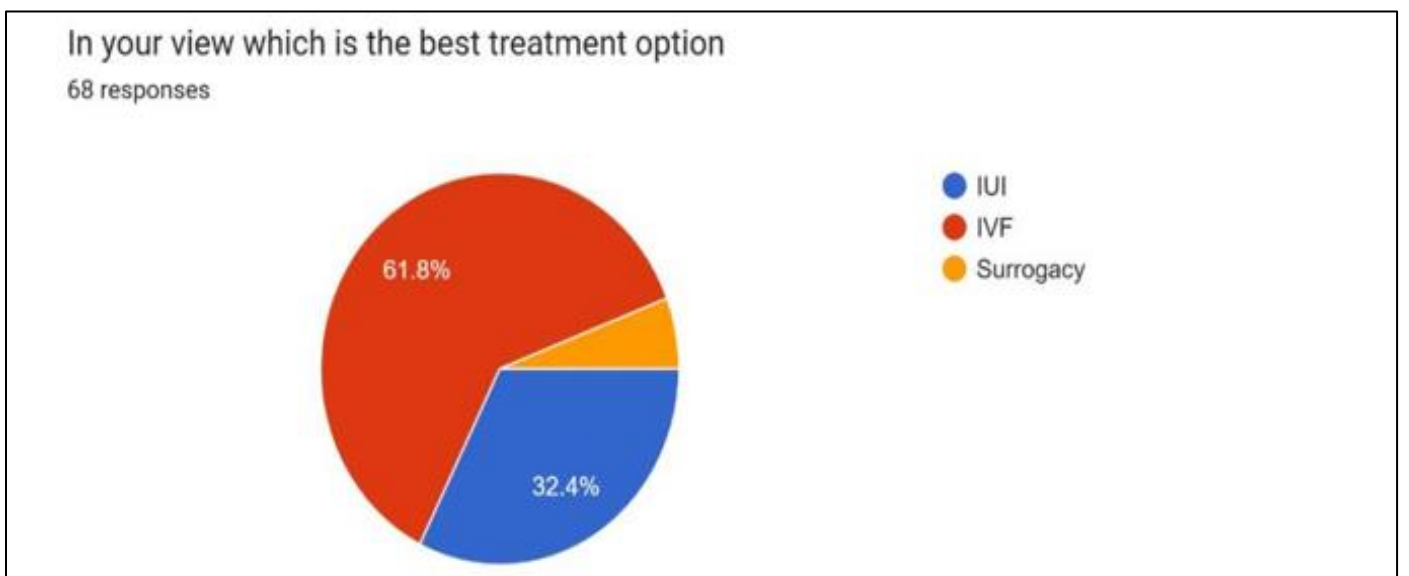


Fig 12 In your view which is the Best Treatment Option

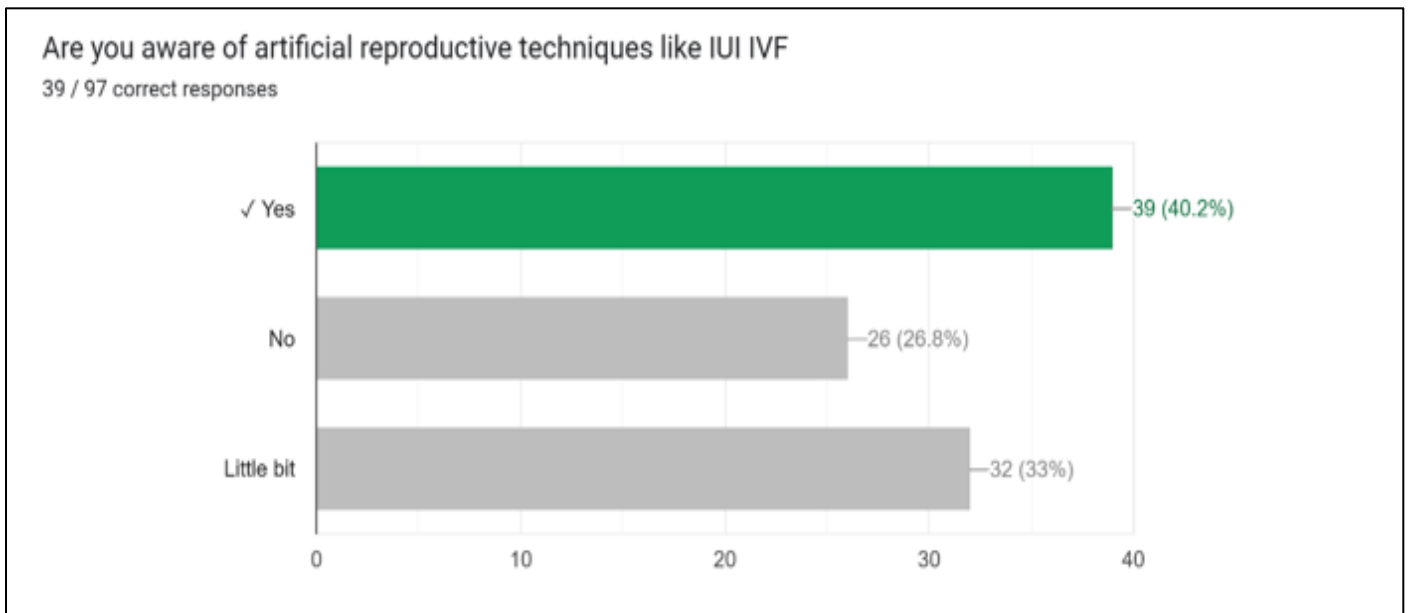


Fig 13 Are you aware of Artificial Reproductive Techniques like IUI IVF

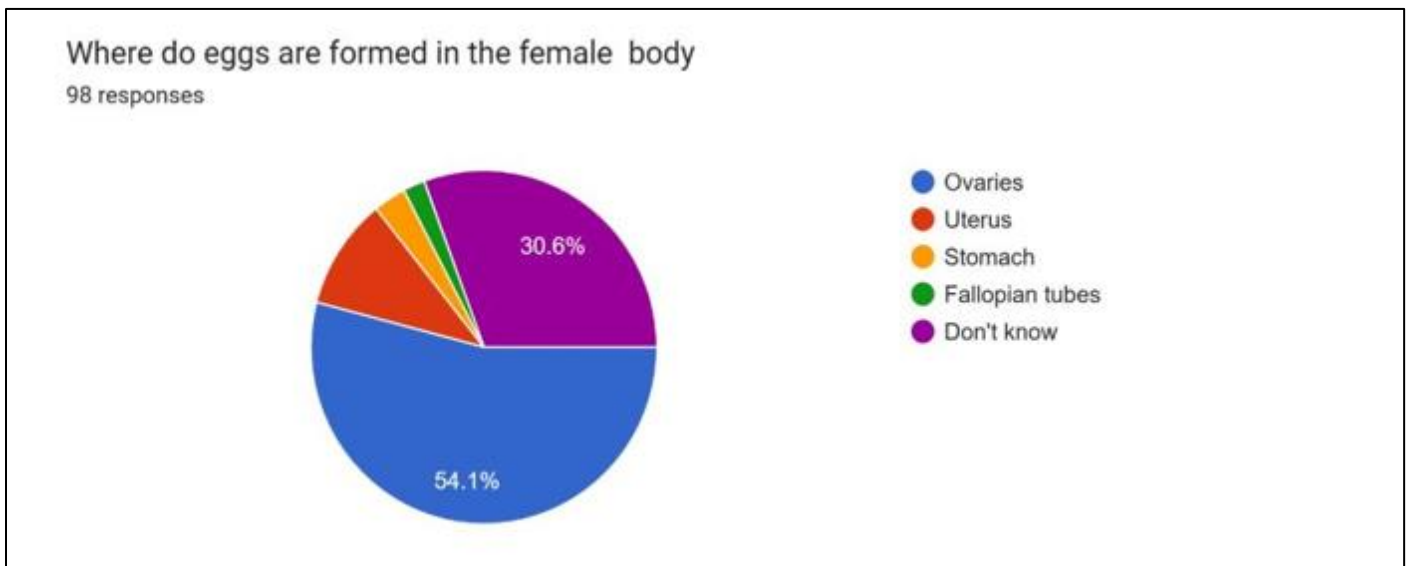


Fig 14 Where do Eggs are Formed in the Female Body

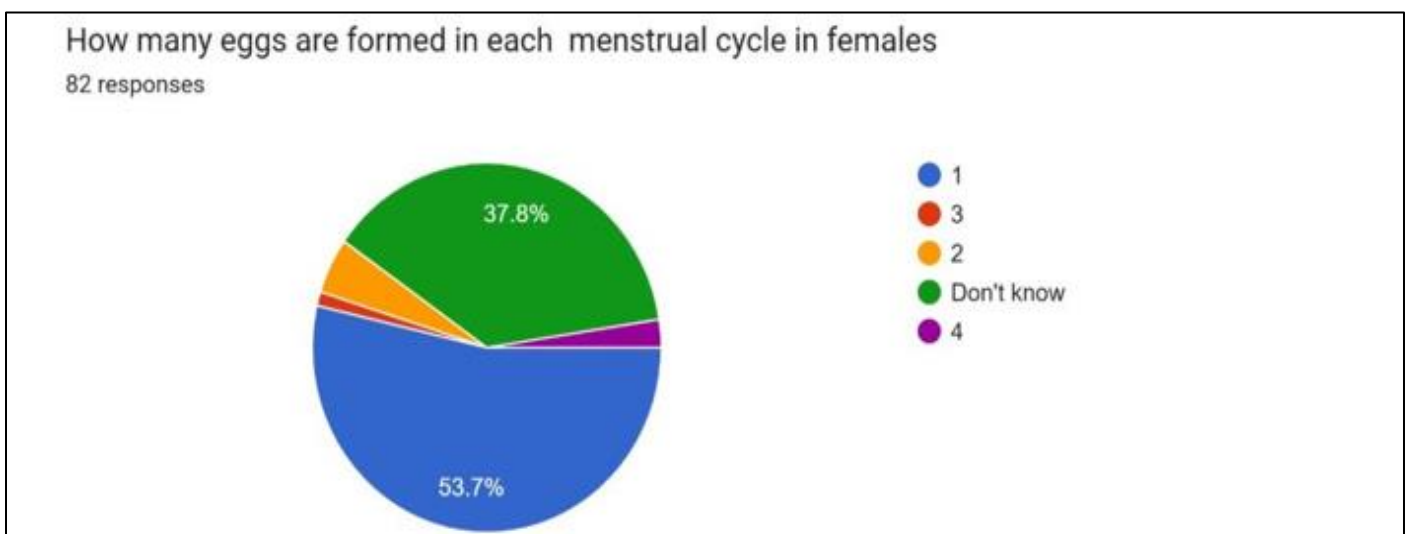


Fig 15 How many Eggs are Formed in each Menstrual Cycle in Females

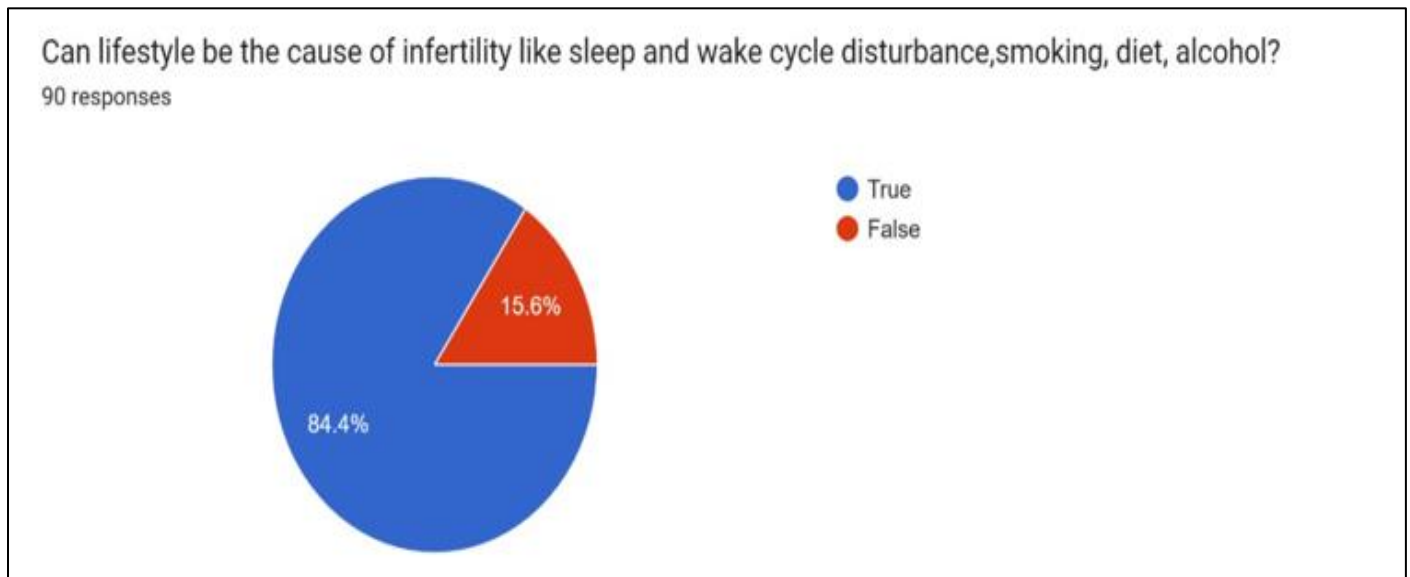


Fig 16 Can Lifestyle be the cause of Infertility Like Sleep and wake Cycle Disturbance, Smoking, Diet, Alcohol?

➤ Practice

In my study 69 that is 71.9% participants were taking treatment for infertility and 28 that is 28.1 participant not taking any treatment for infertility[fig16]. When asked about the treatment options for infertility 38 that is 42.7% choses Ayush medicine then 51 that is 57.3% choses allopathy [fig 17]. When ask do women need family support in their fight against in fertility 81 that is 85.3% said yes and 7 that is 7.4% said no [fig18]. In my study 39 that is 41.9% participants were dealing with primary infertility and 29 that is 31.2% participants were dealing with secondary infertility and 25 that is 26.5% participants were not dealing with any infertility[fig24]. In my study 56 that is 59.6% participant started planning for baby immediately after marriage, 16 that is 17% participants started planning for baby 1 year or more before starting the treatment, whereas live and that is 11.7% participants started planning for BB less than 1 year before starting the treatment, and 11 that is 11.7 participants were not planning for baby [fig 20]. When asked when they were

started taking medication for infertility 24 that is 26.4% participant started taking medication for infertility immediately after marriage and 34 that is 37.4% participants started taking medication for infertility after more than one year of their marriage life, 15 that is 16.5% participants started taking medication to conceive after less than 1 year of marriage life, 18 that is 19.8% participants were not taking any medication[fig21]. Then asked whether their husband got investigated for infertility 44 that is 47.8% participants or their husbands got investigated 29th is 31.5 denied[fig22]. When asked their views about donating eggs and donating sperms 47 that is 52.2% said it's a bad practice whereas 43 that is 47.8% said it's a good practice[fig23]. In my study 31 that is 37.8% participants weight gain as a post treatment complication, where has 9 that is 11% got a based 6 that is 7.3% are dealing with menstrual irregularities and 34 that is 41.5% are not dealing with any post treatment complications[fig24].

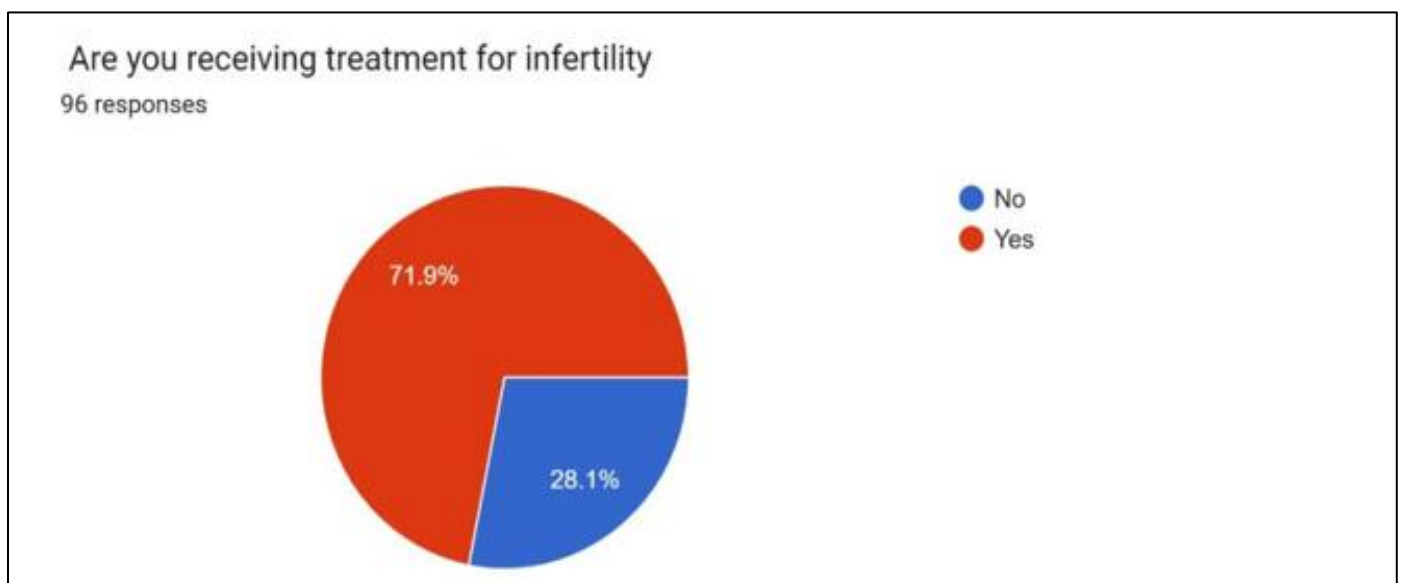


Fig 17 Are you Receiving Treatment for Infertility

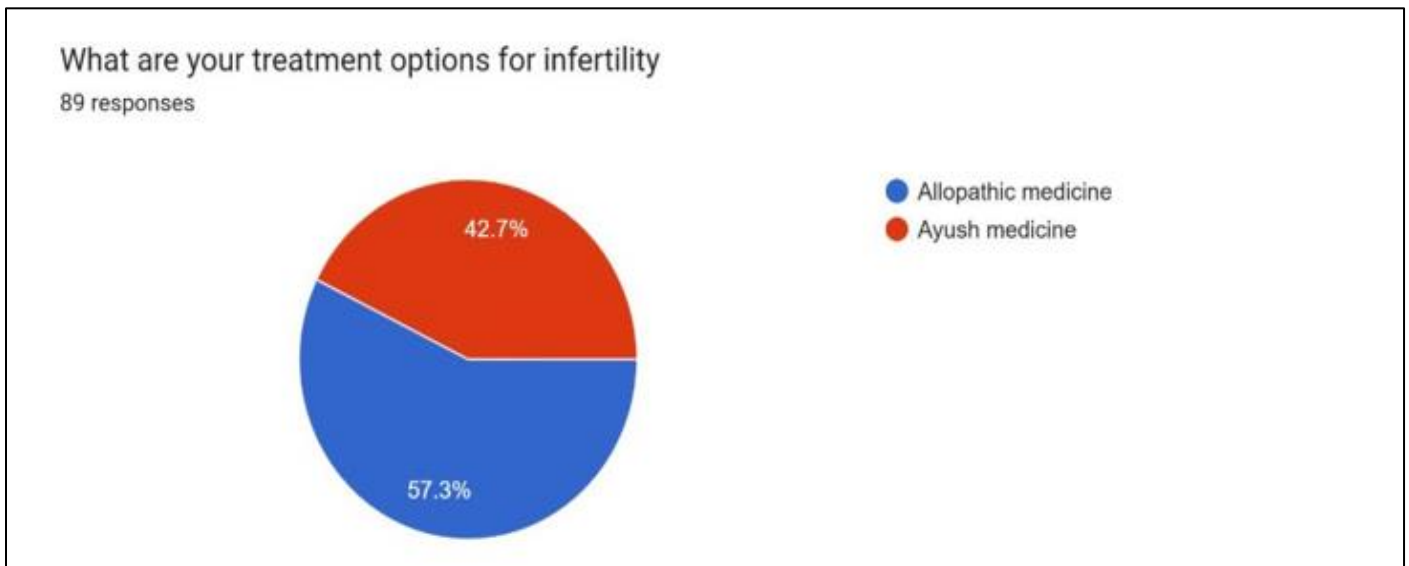


Fig 18 What are your Treatment Options for Infertility

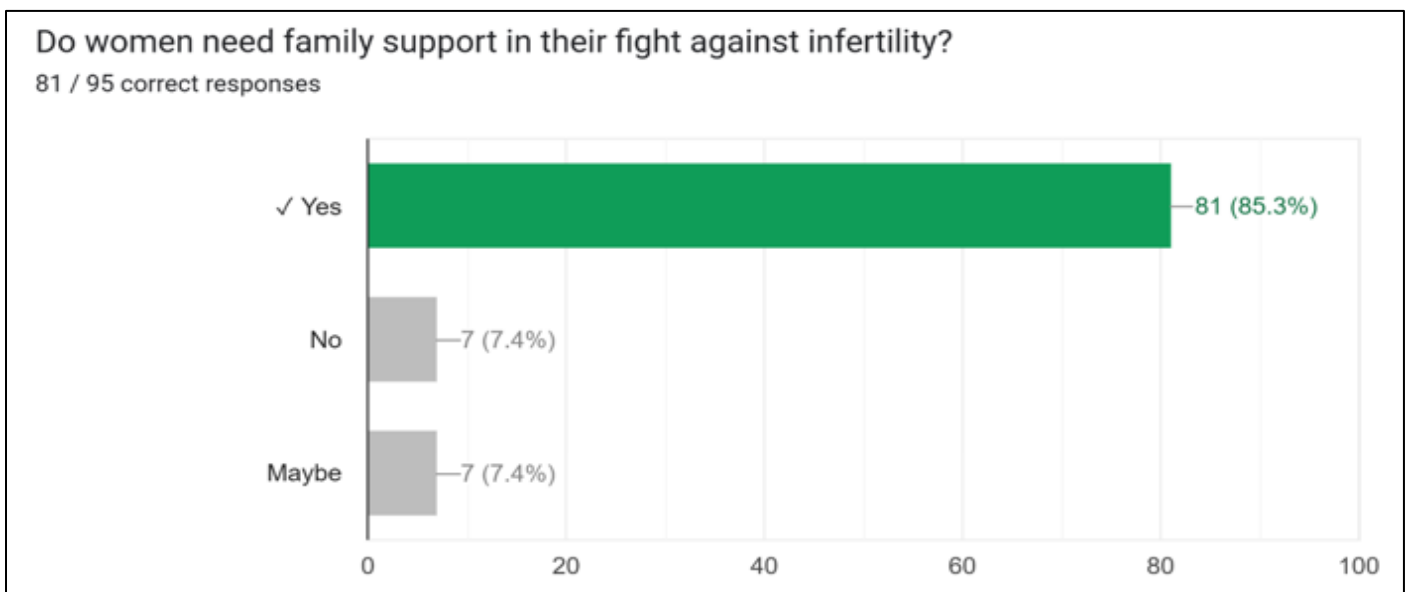


Fig 19 Do Women Need Family Support in their Fight against Infertility?

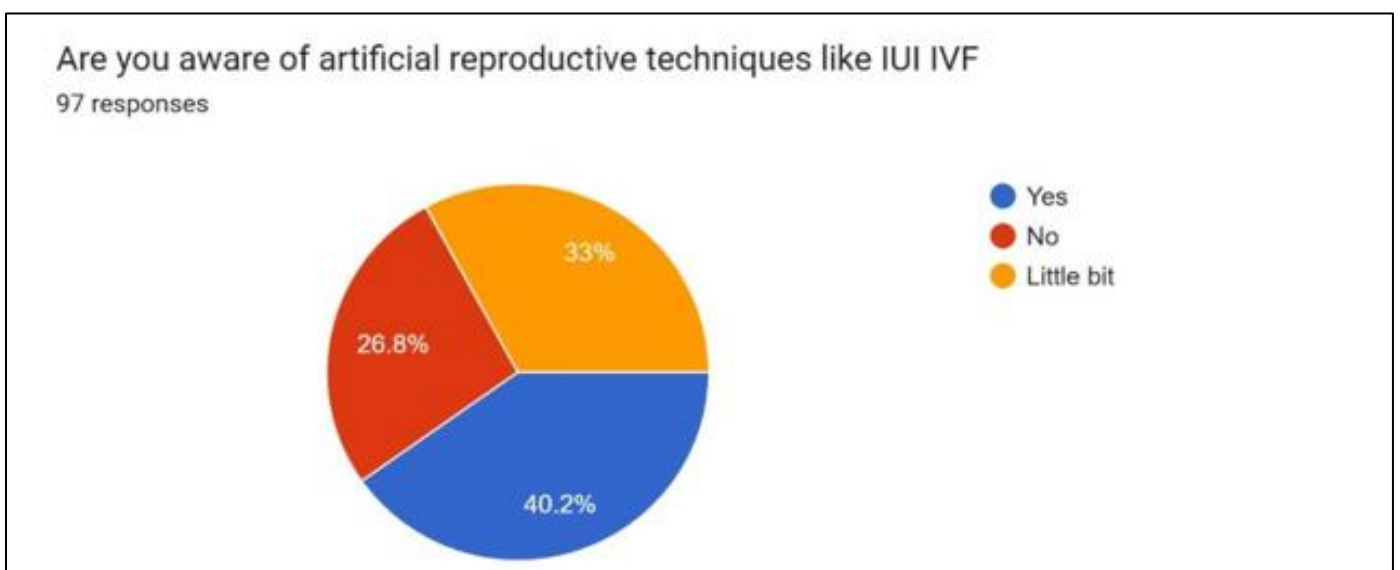


Fig 20 Are you aware of Artificial Reproductive Techniques Like IUI IVF

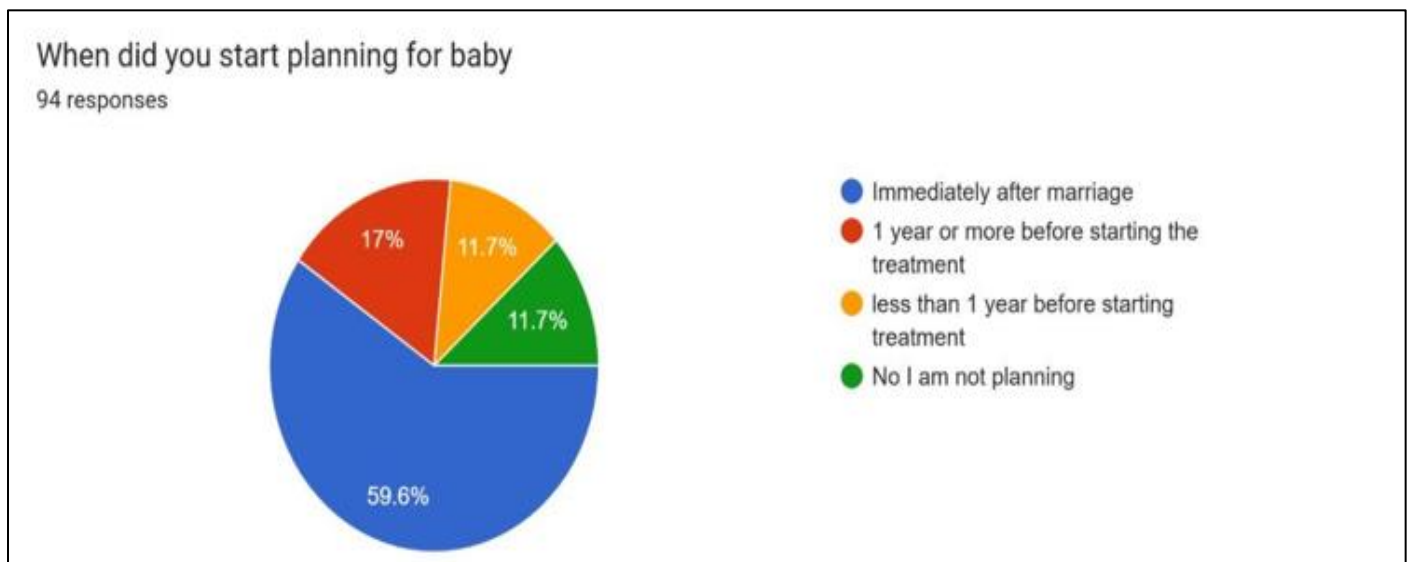


Fig 21 When did you Start Planning for Baby

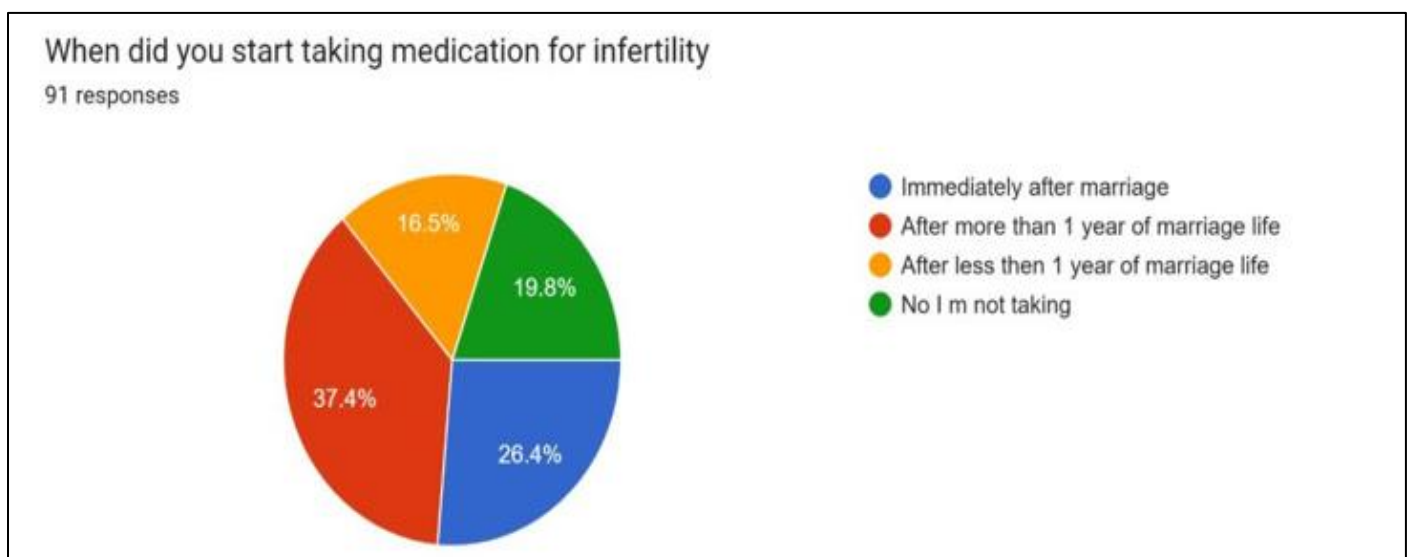


Fig 22 When did you Start taking Medication for Infertility

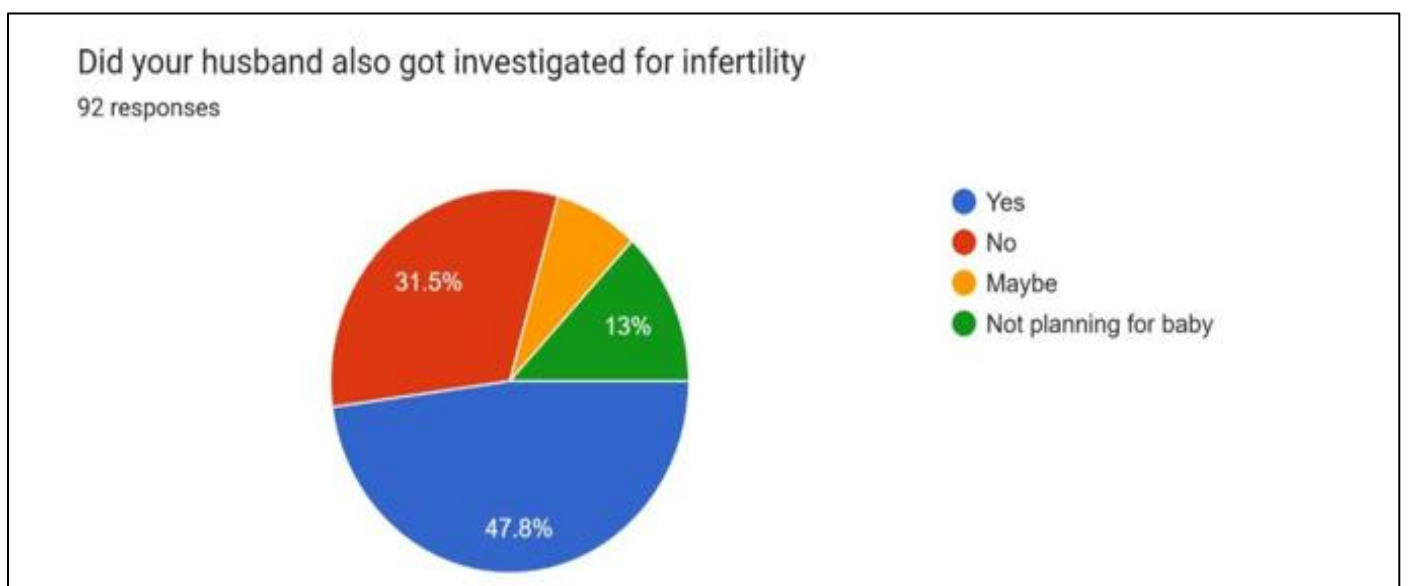


Fig 23 Did your Husband also got Investigated for Infertility

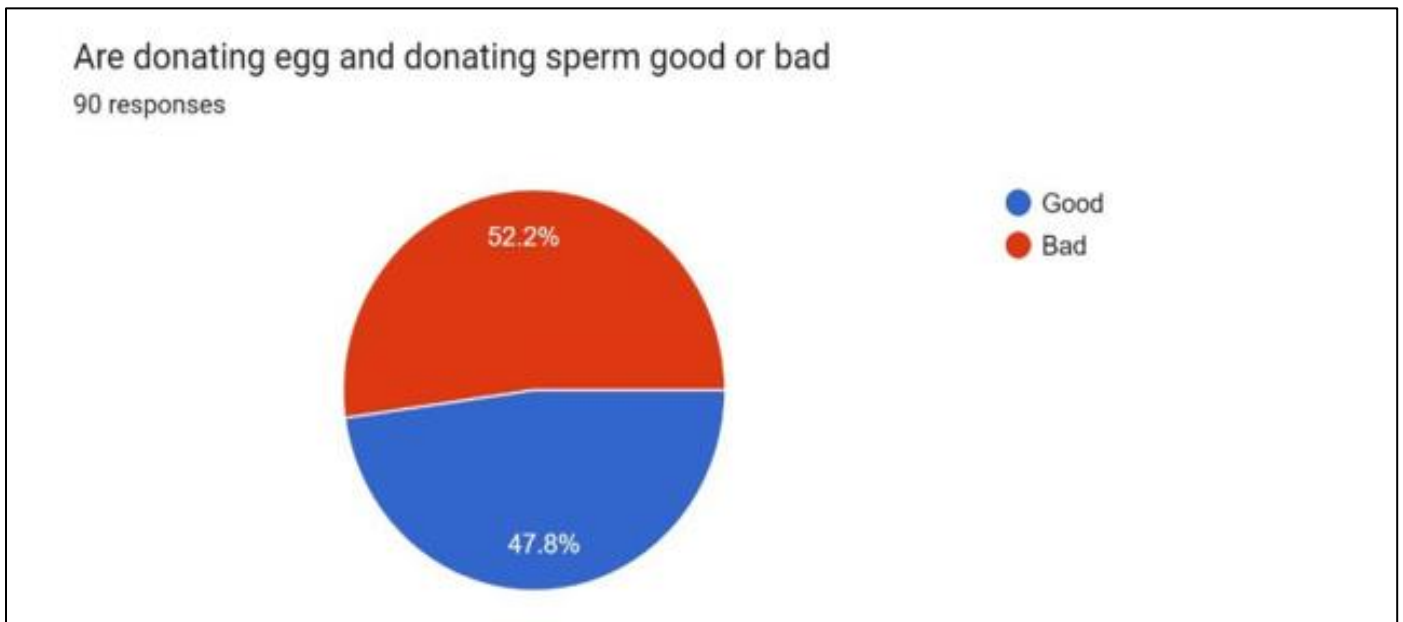


Fig 24 Are Donating Egg and Donating Sperm Good or Bad

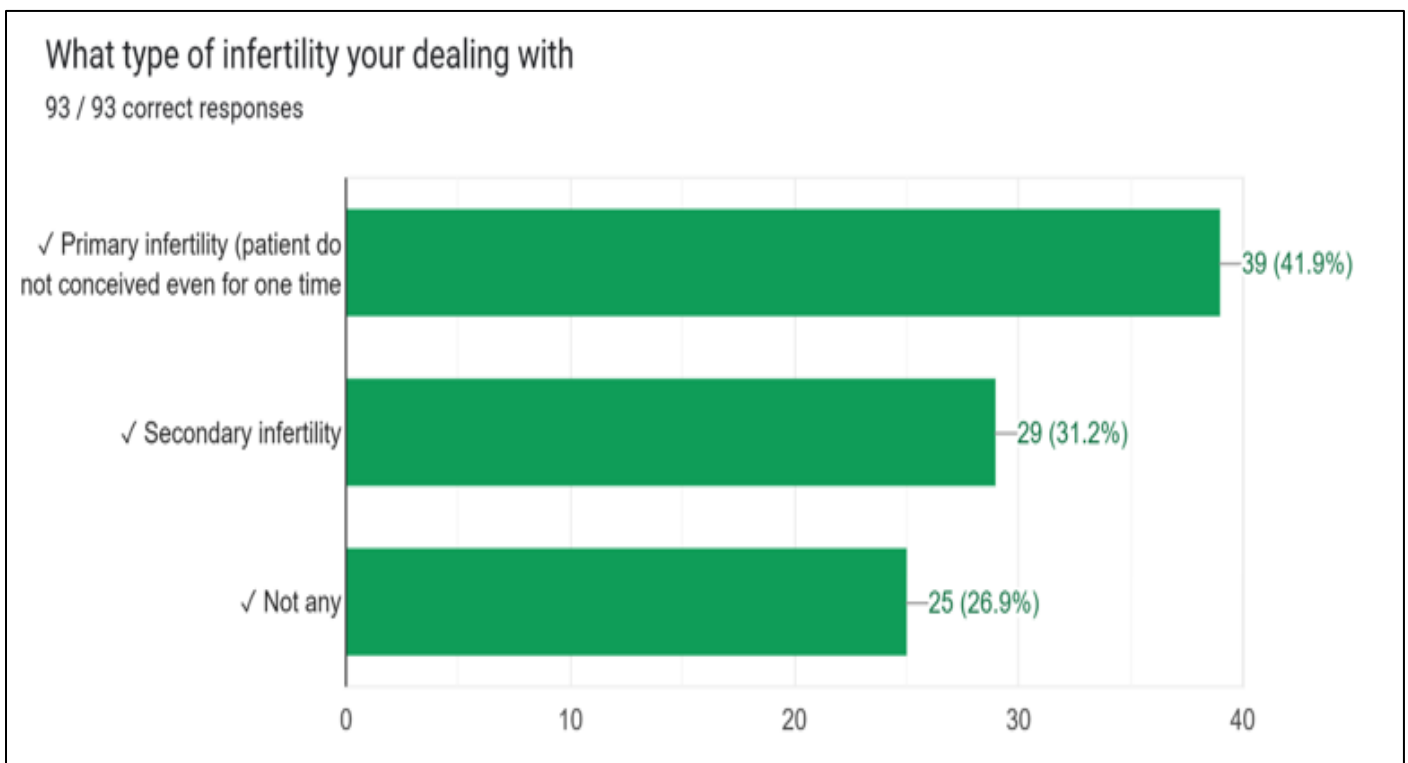


Fig 25 What type of Infertility your Dealing with

➤ Attitude

When ask whether infertility is a disease than 41 that is 44.6% participants agree 28 that is 30.4 participants strongly agreeing 17 that is 18.5 participants strongly disagree 6 36.5 participants were neutral[fig24]. When ask whether in fertility is a treatable condition than 43 that is 46.7% participants strongly agree 38 that is 41.3% participants agree 737.6 participants 1 neutral to that is 2.2% participants is agree and to that is 2.2% participants strongly disagree[fig25]. 25 that is 27.2% participants things that husband scan gave divorce to the wife on the basis that they

cannot have baby whereas 26 that is 28.3% show neutral behavior 20 that is 21.7% participants dis agree 13 that is 14.1% participants strongly disagree it that is 8.7% participants strongly agree[fig26]. On asking whether you think that in fertility is a social stigma 20 it is 21.7% participants strongly agree were 41 this 44.6% participants agree 22 that is 23.9% participants disagree and 9 this is 9.8% participants neutral[fig27]. 79 that is 89.8% participants things that are use is a best treatment option for infertility whereas 9 that is 10.3 participants think allopathic to be the best treatment option for infertility[fig28].

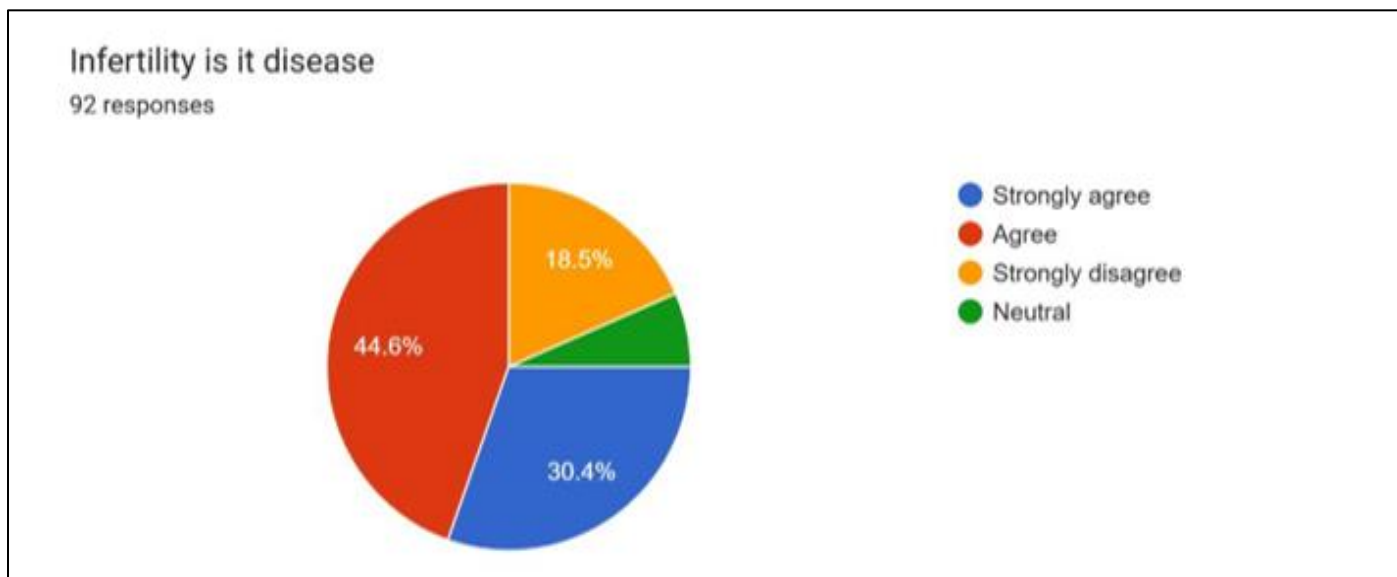


Fig 26 Infertility is it Disease

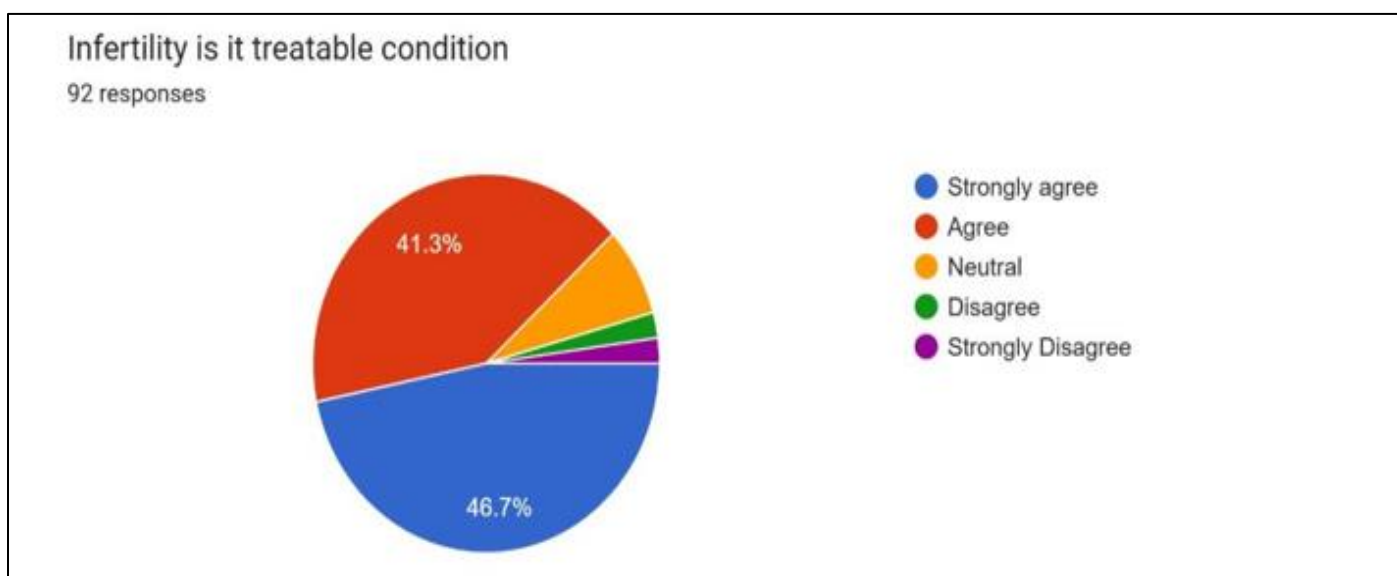


Fig 27 Infertility is it Treatable Condition

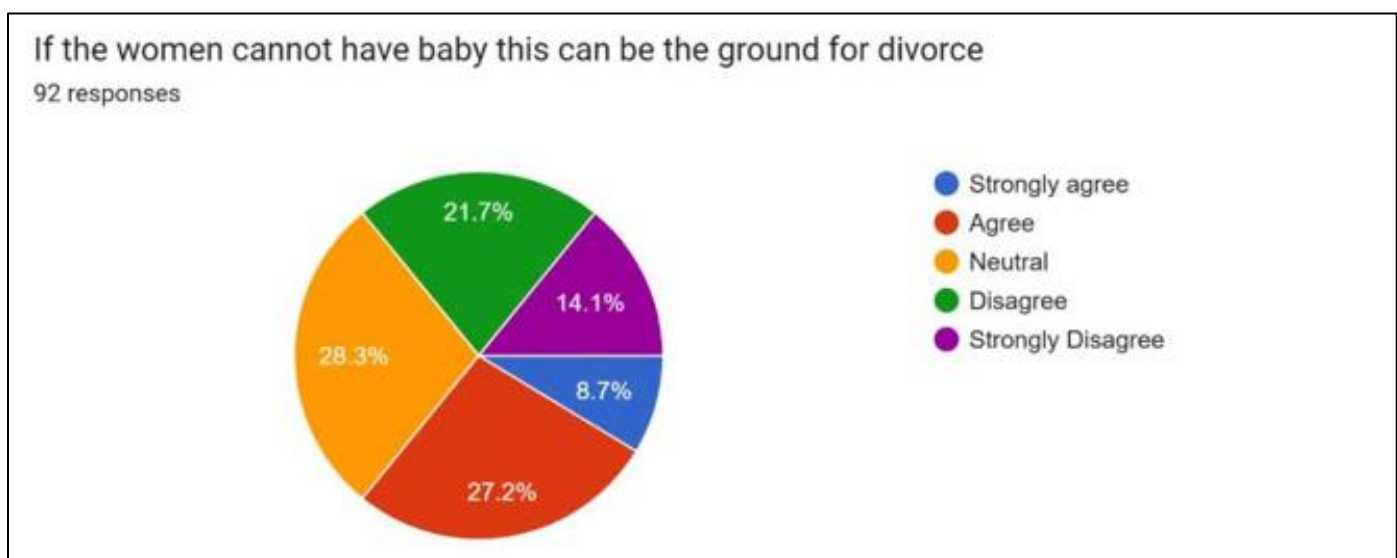


Fig 28 If the Women cannot have Baby this can be the Ground for Divorce

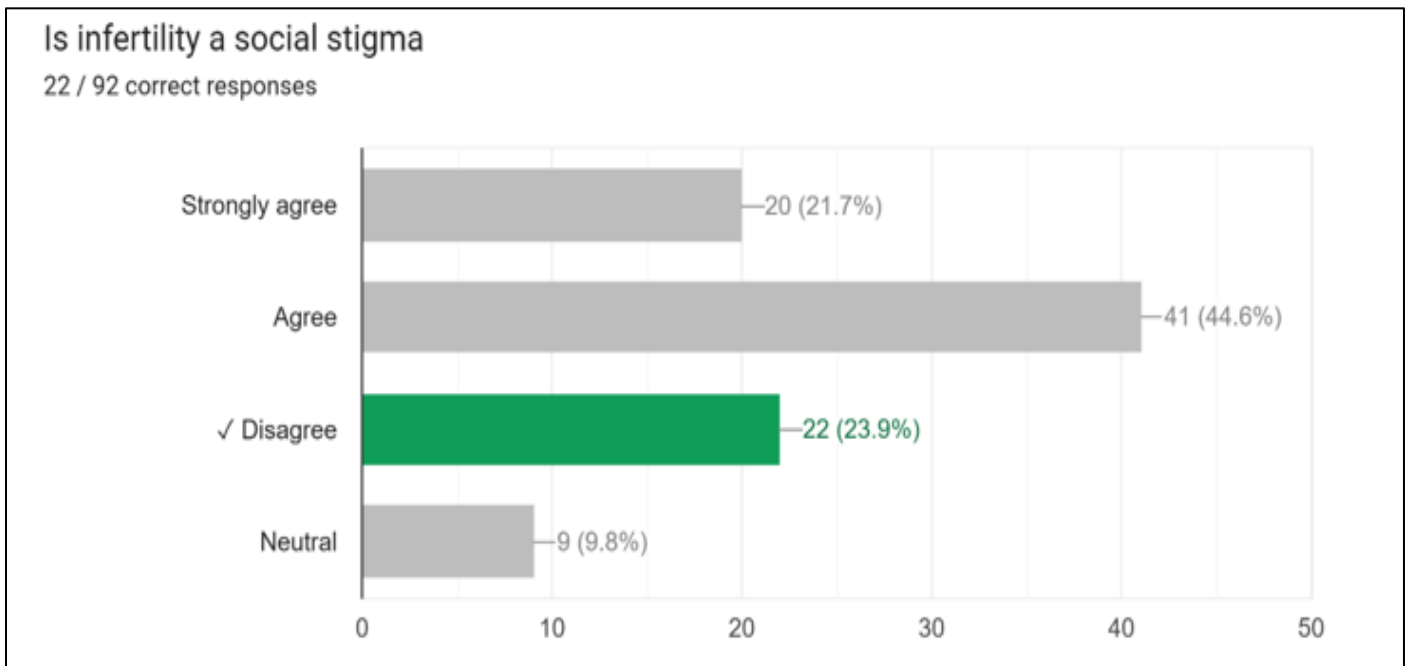


Fig 29 Is Infertility a Social Stigma

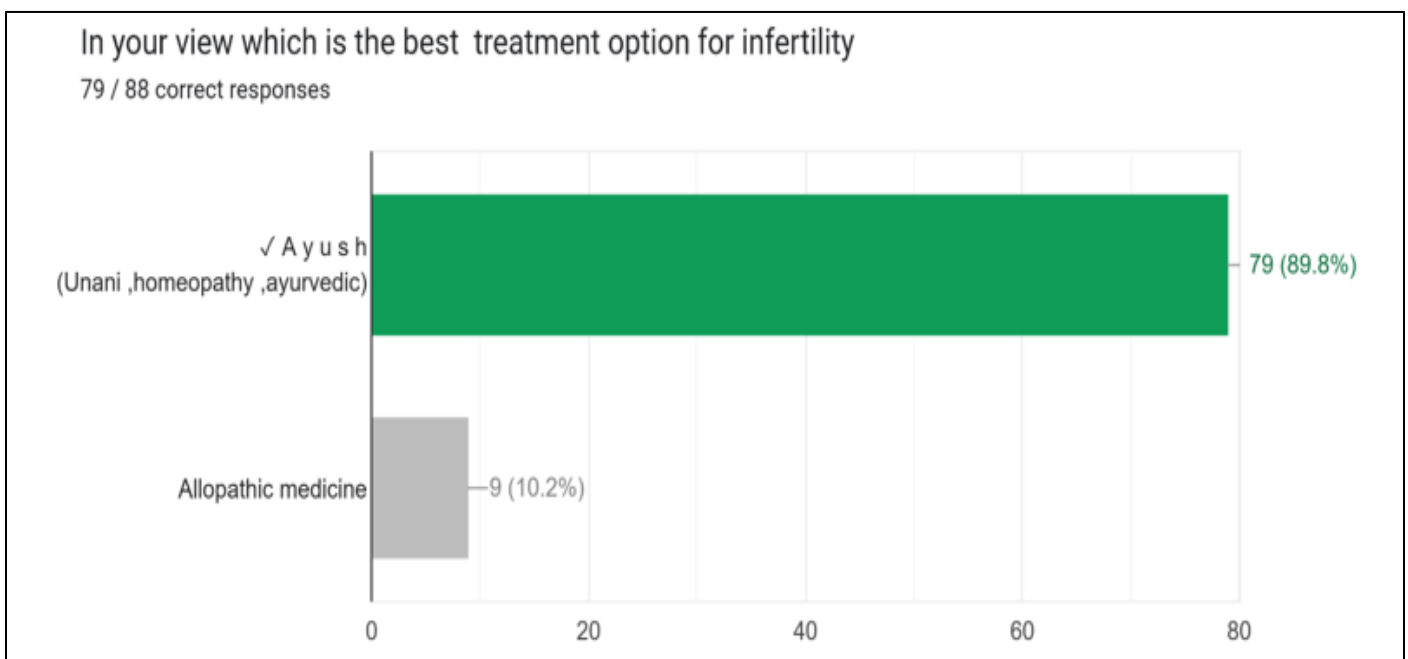


Fig 30 In your view which is the Best Treatment Option for Infertility

Thus 49% participants have adequate knowledge about infertility and 41% participants have inadequate knowledge about infertility. 85% participants have good attitude regarding infertility and 15% have poor attitude regarding infertility. 23% participants have good practice on infertility and 77% participants have poor practice on infertility. [fig28] 47.05% participants have adequate knowledge belongs to the age group 15-24; 50% have adequate knowledge belongs to the age group 25-34; 38% have adequate knowledge belongs to the age group 35-45. 52.9% have inadequate knowledge of infertility belongs to age group 15-24; 38% have inadequate knowledge belongs to age group 24-35; 46% have inadequate knowledge belongs to age group 35-45. 22.7% [fig29] participants have adequate knowledge are male. 54.5% have

inadequate knowledge. 55.5% have adequate knowledge are females. 37.5% have inadequate knowledge [fig 30]. 47.6% have adequate knowledge are married and 41.8% have inadequate knowledge [fig31]. 35.7% participants are 10th/inter passed have adequate knowledge, and 68.96% are undergraduates and 50 percent are postgraduates. 48.2% participants have inadequate knowledge is 10th/inter passed. 27.5% participants are undergraduate who have inadequate knowledge. 50% participants are post graduate have inadequate knowledge [fig 32].

82.3% participants have good practice belongs to age group 15 to 24. 84.6% participants have good practice belongs to age group 25 to 34. 50% participant have good

practice belongs to age group 35 to 44. 17.6% participants have poor practice belongs to age 15 to 24, 15.3% participants have poor practice belongs to age group 25 to 34. 50% participants have f good practice belongs to age group 35 to 45[fig 33]. 86.3% participants have good practice are male, 88.8% participants have good practice are females. 13.3% participants with poor practice are male, 11.1% participants with poor practice a female[fig34]. 57.1% participants with the good practice are unmarried and 90.6% participants at good practice is married, 42.8% participants poor practice are unmarried and 9.3% participants with poor practice are married [fig 35]. 89.2% participants with good practice at 10th or inter pass 93.1% participants with good practice are graduate 975% participants with good practice are post

graduate. 10.7% participants with poor practice are tender inter pass, 6.8% with poor practice are graduate, 25% participants with poor practice are post graduate[fig36].

35.2% participants have positive attitude belongs to age group 15 to 24 and 29.2% belongs to age group 25 to 34 and 23.6% belongs to each group 35 to 45.18.8% [fig 37] with good attitude are males and 34. 17% good attitude are female [fig 38]. 32.85% having good attitude that unmarried and 29.6% having good attitude are married [fig 39]. 35.7% participants having good attitude that enter pass, 13.7 participants having good attitude or graduate and 62.5% participants having good attitude post graduate [fig 40].

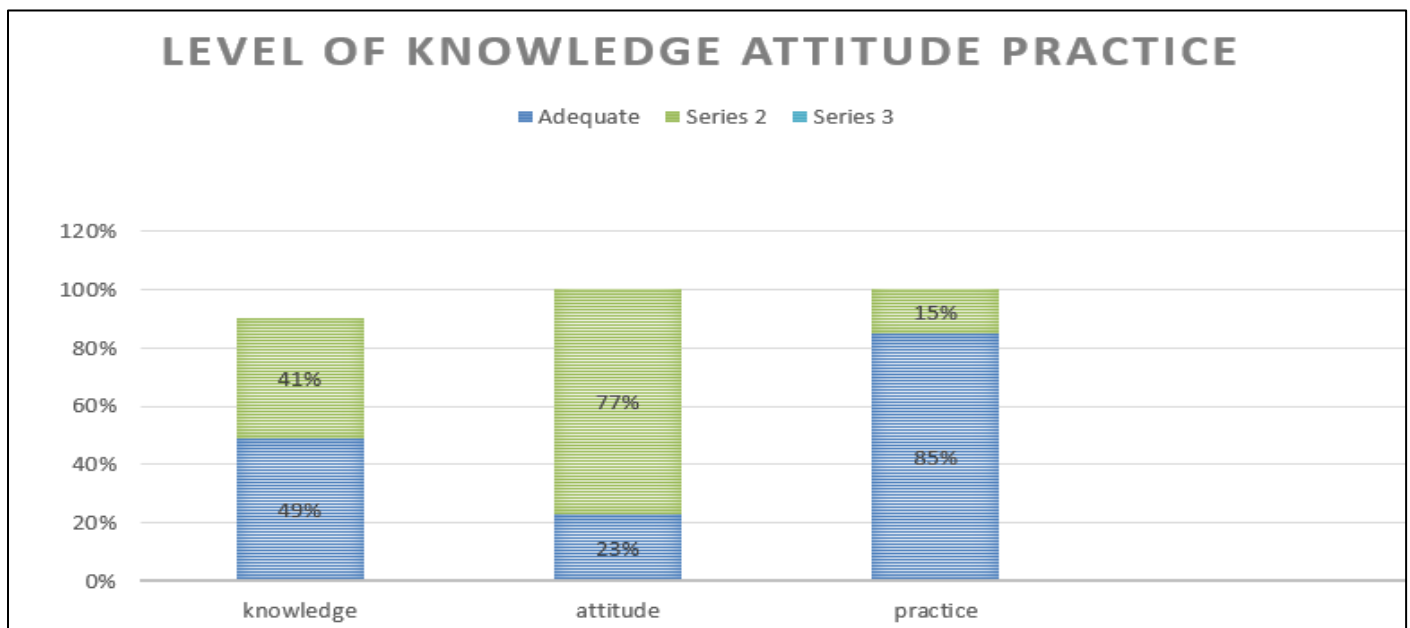


Fig 31 Level of Knowledge Attitude Practice

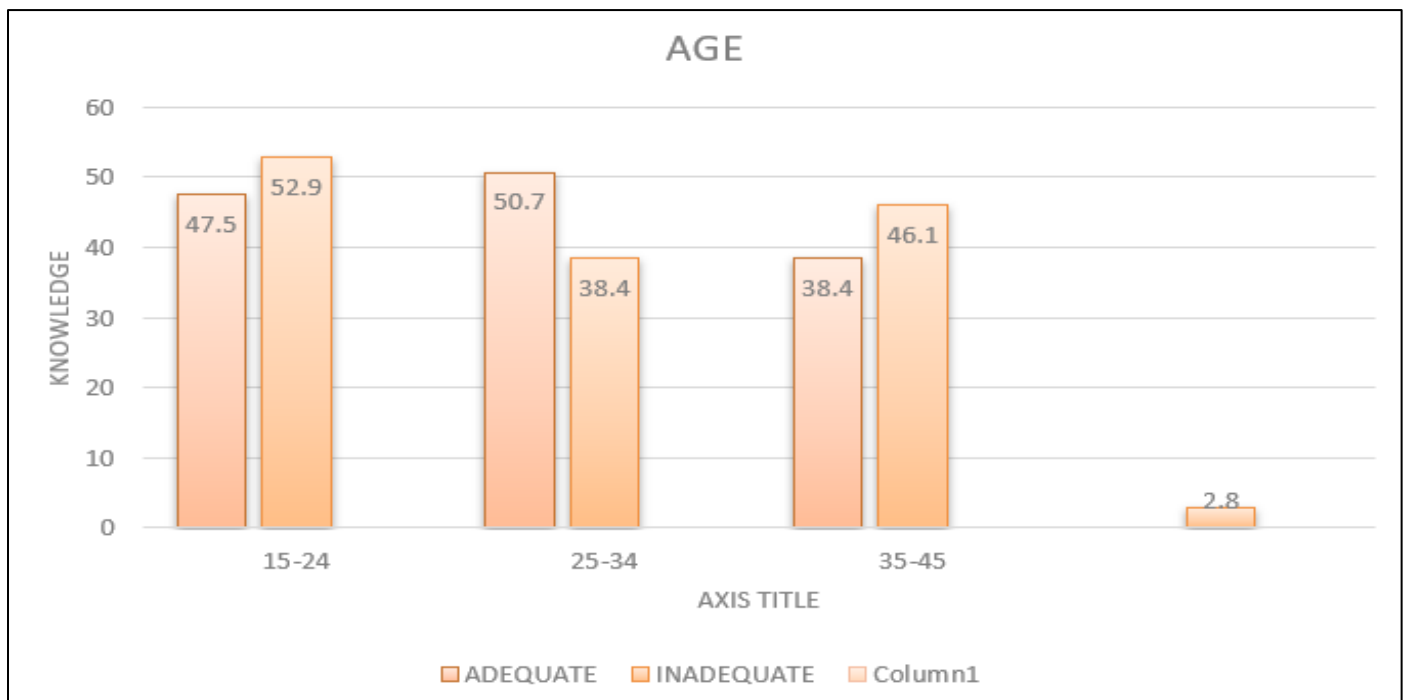


Fig 32 Age

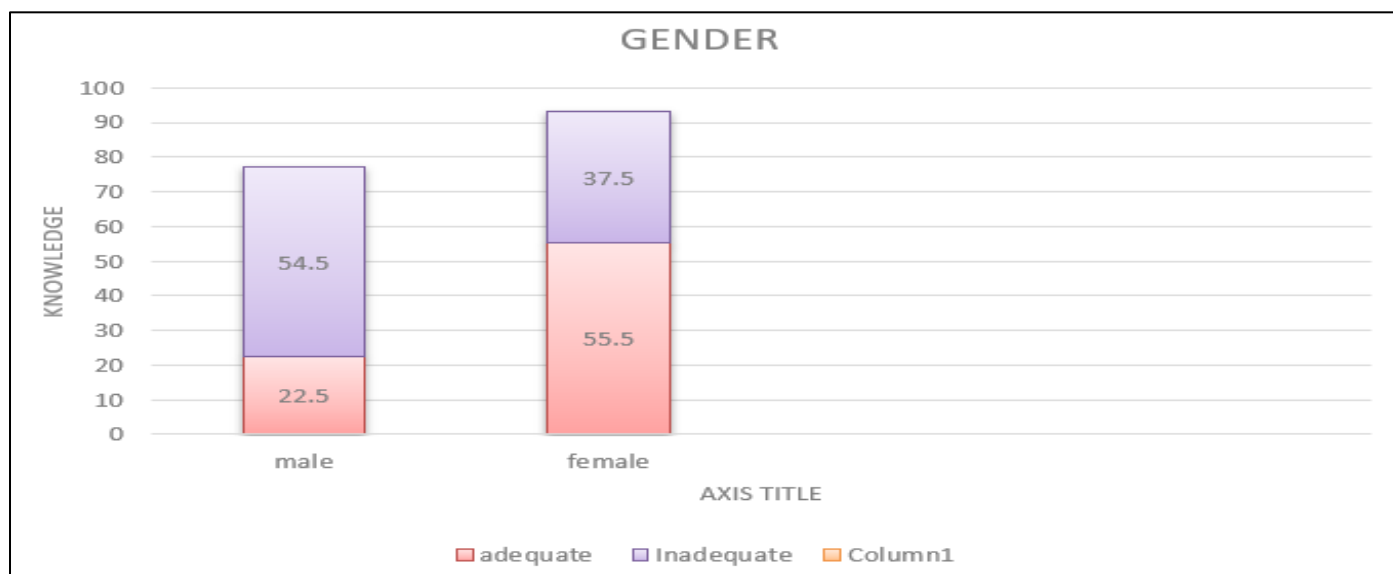


Fig 33 Gender

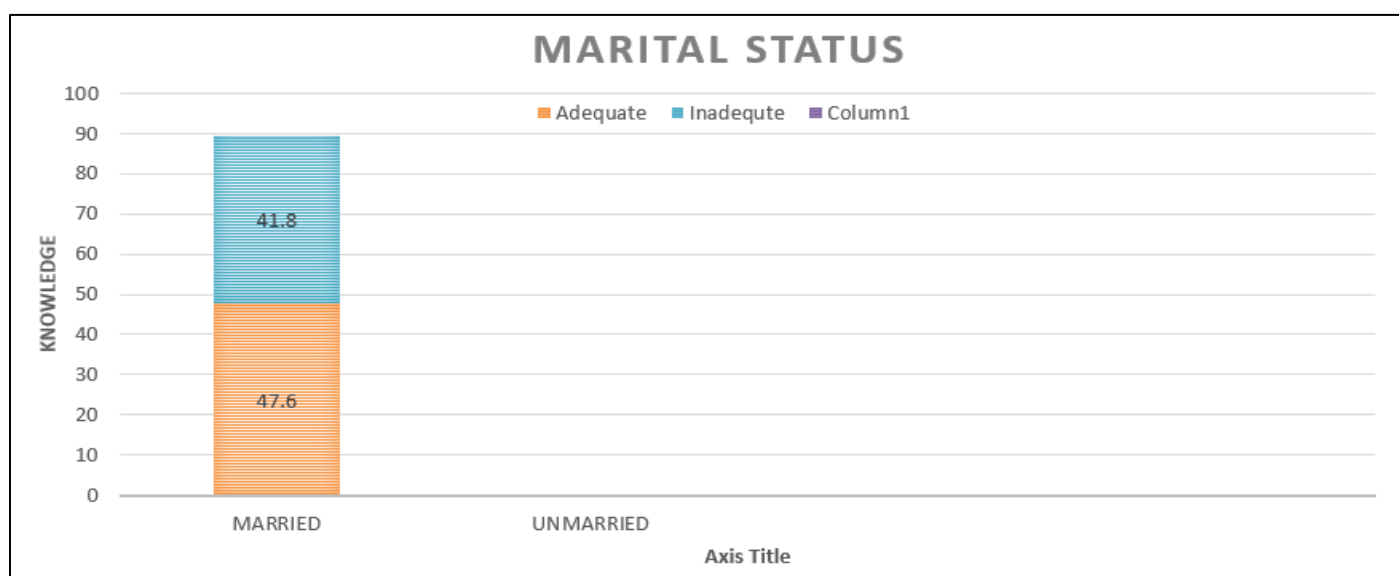


Fig 34 Marital Status

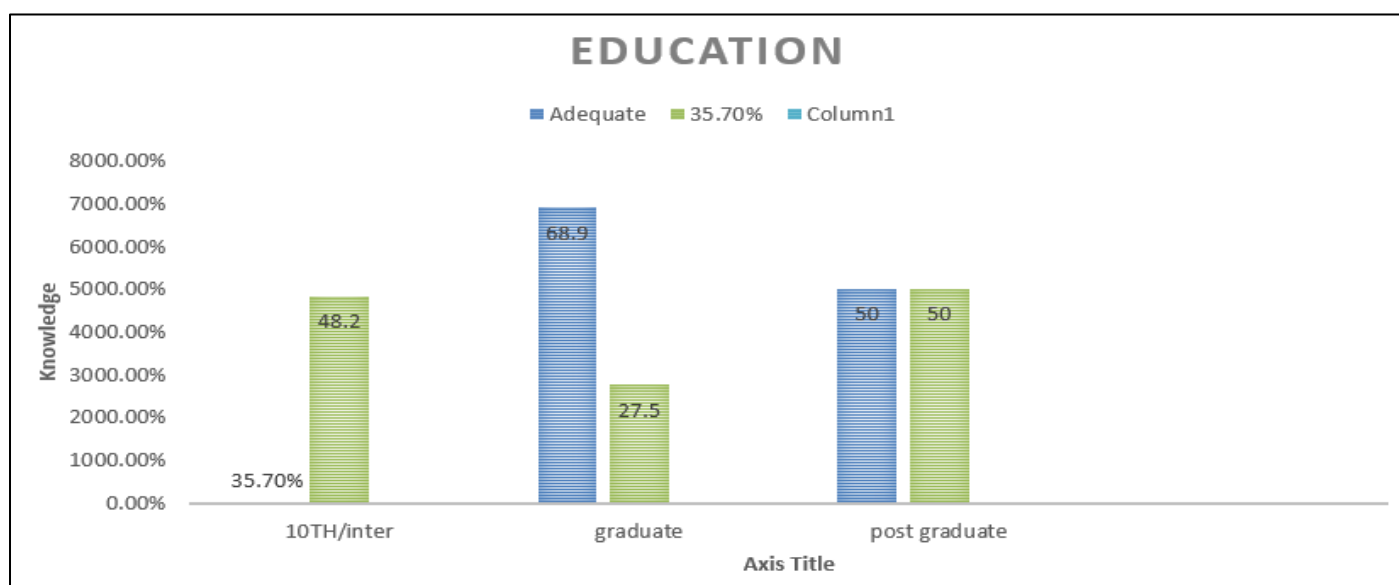


Fig 35 Education

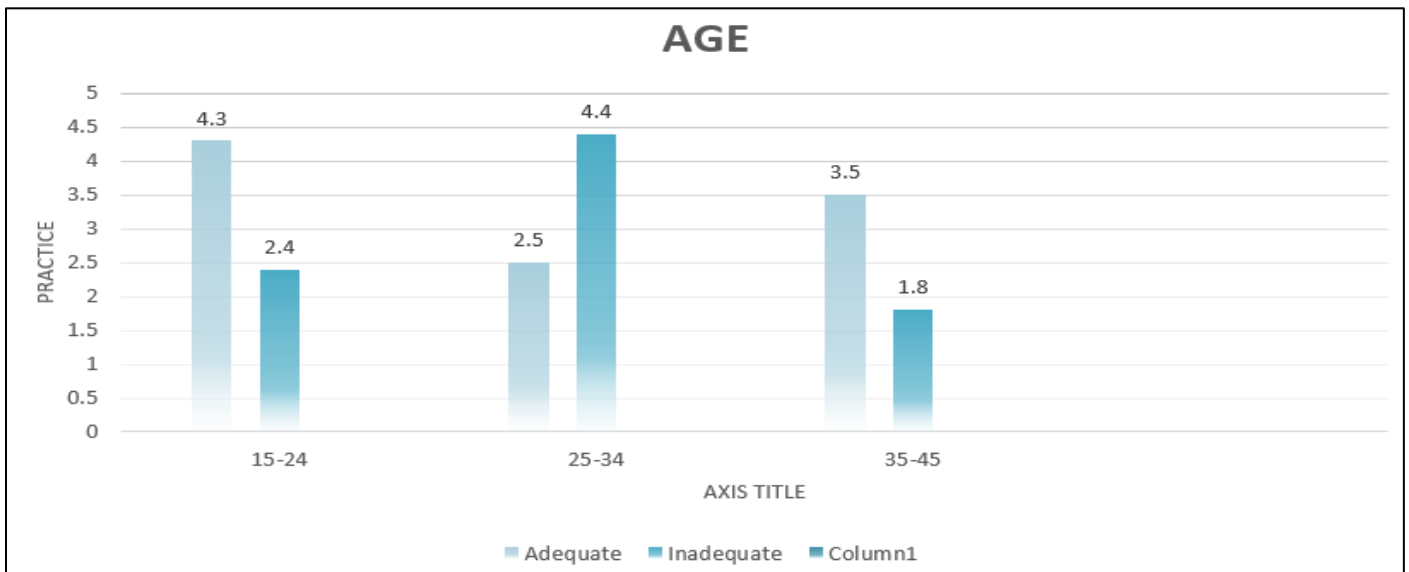


Fig 36 Age

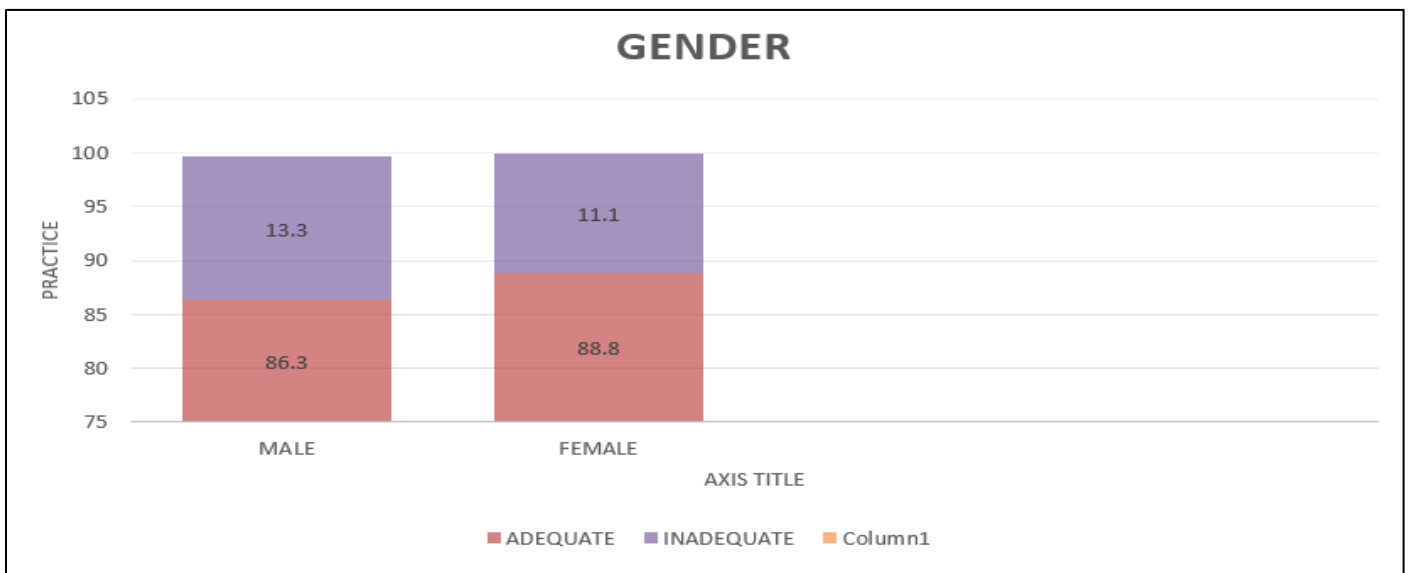


Fig 37 Gender

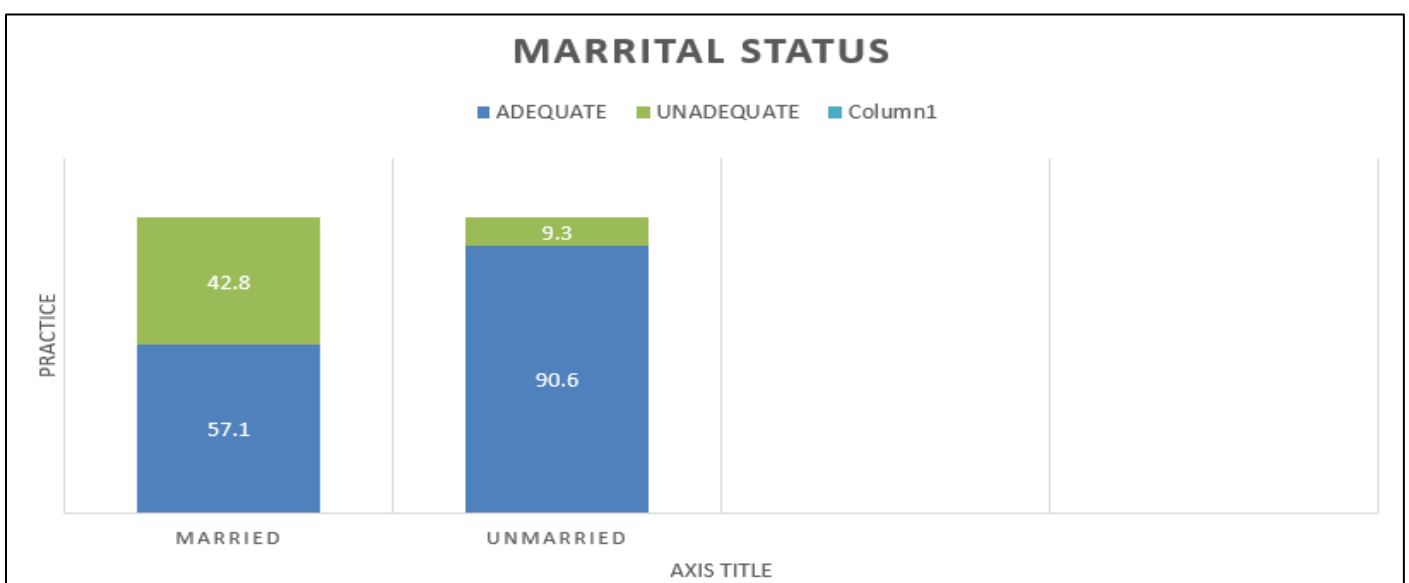


Fig 38 Marital Status

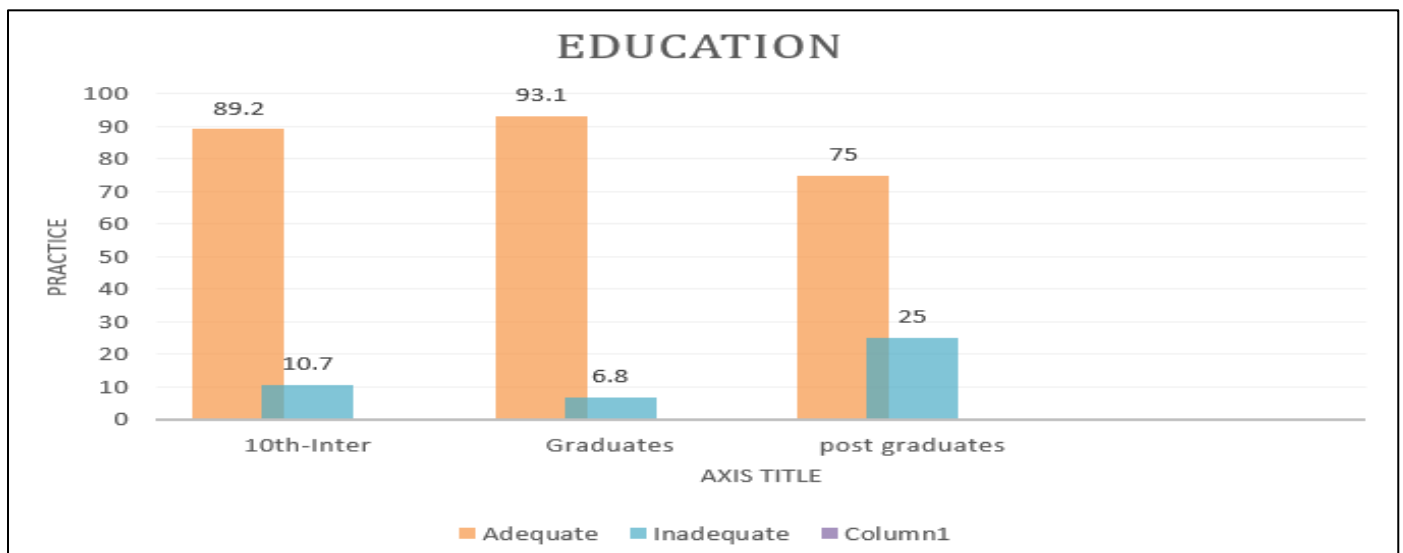


Fig 39 Education

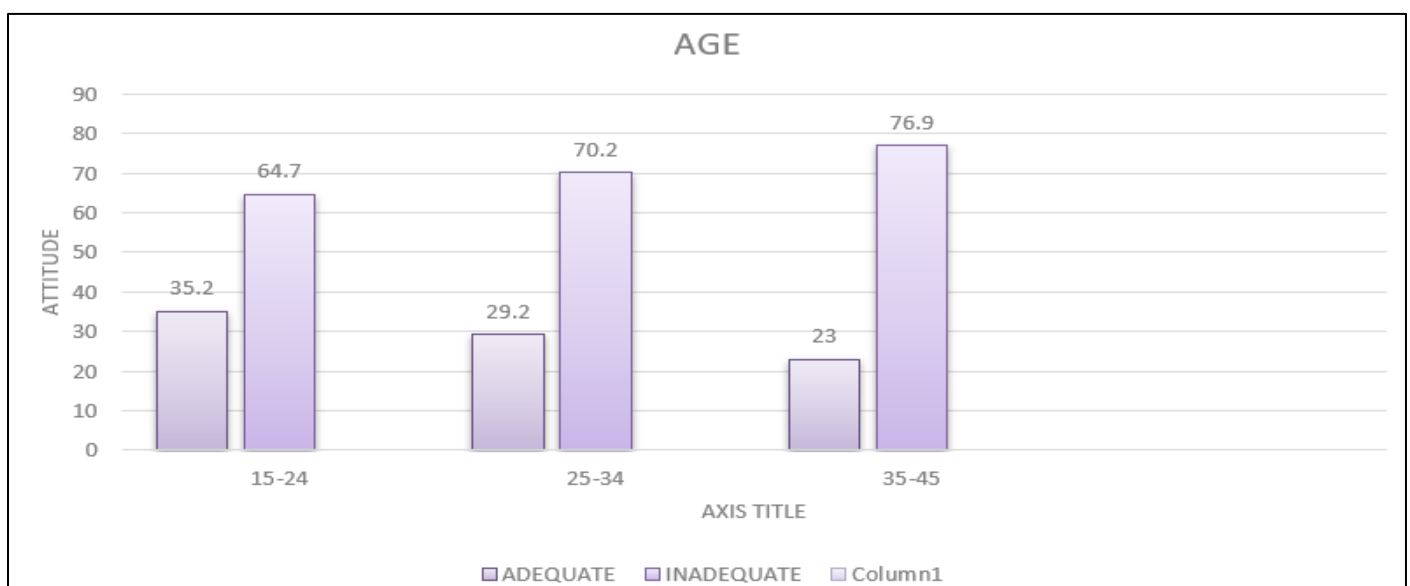


Fig 40 Age

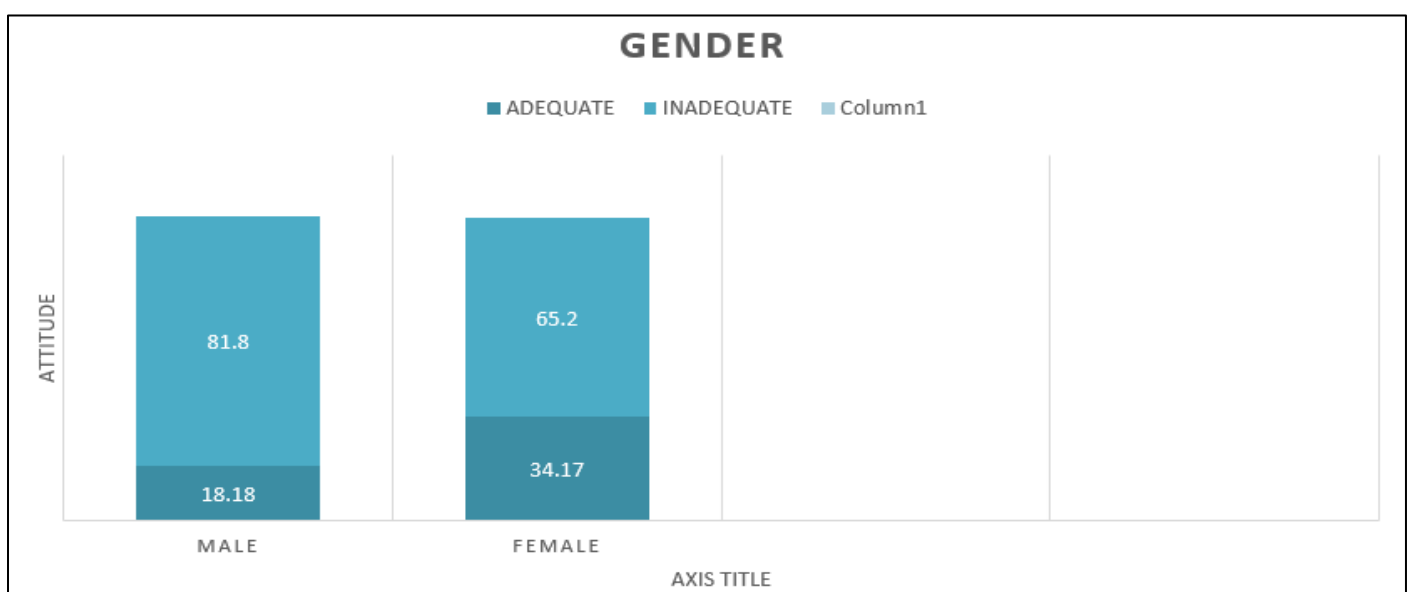


Fig 41 Gender

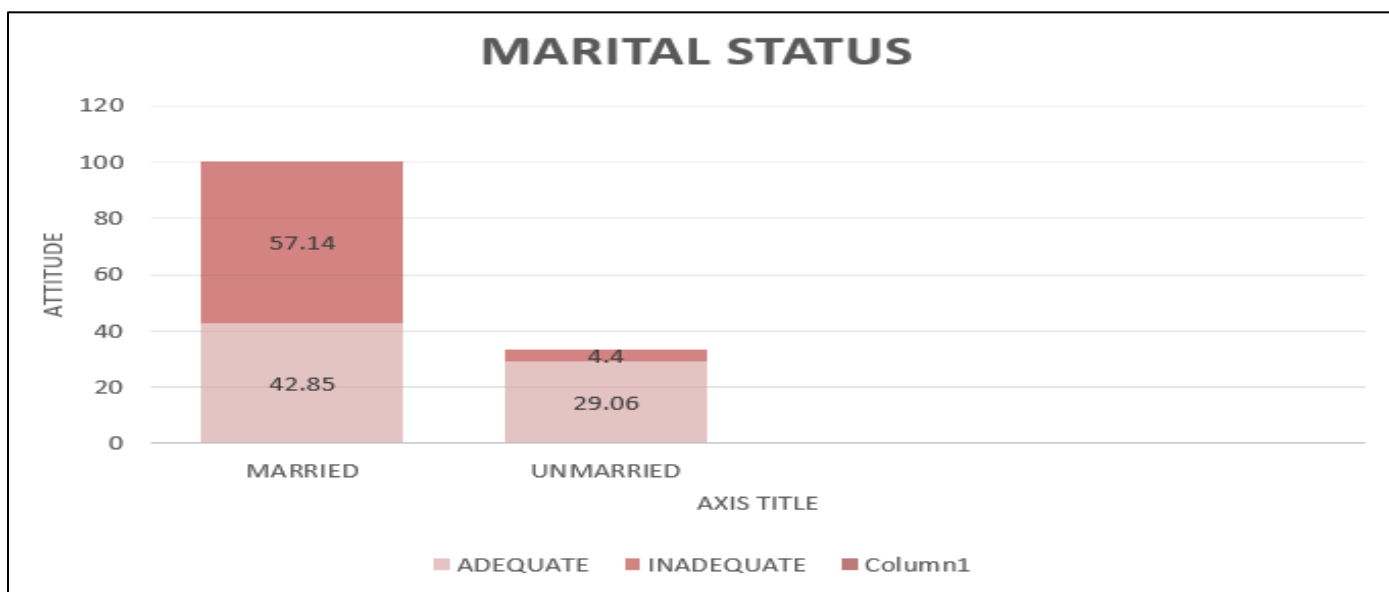


Fig 42 Marital Status

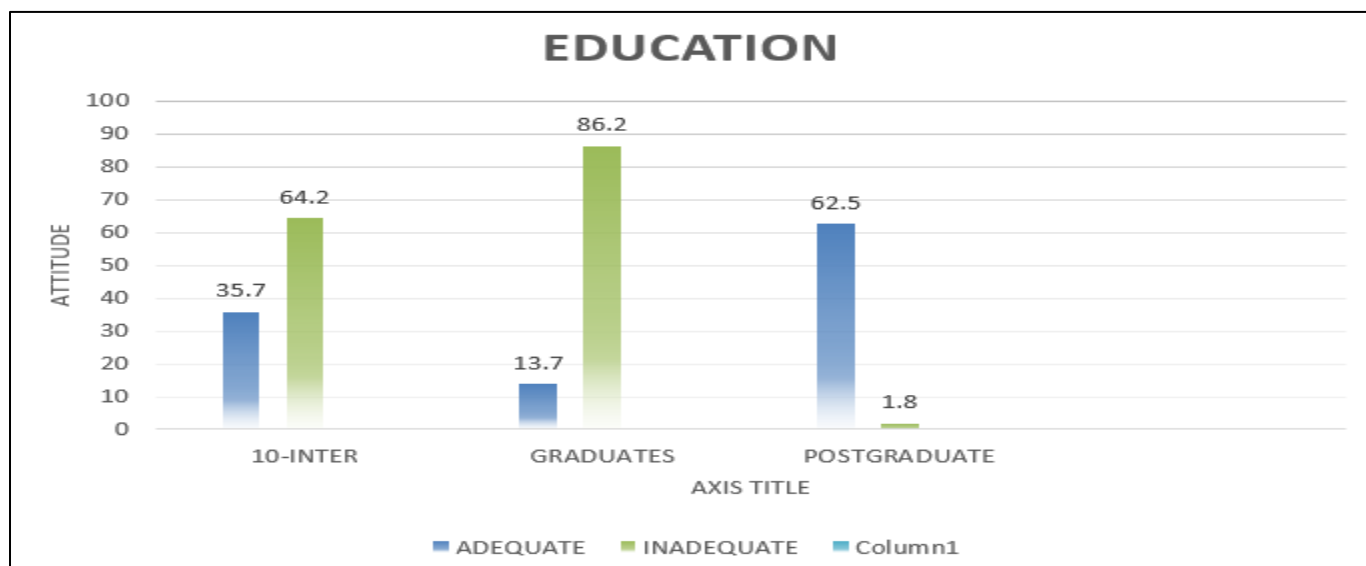


Fig 43 Education

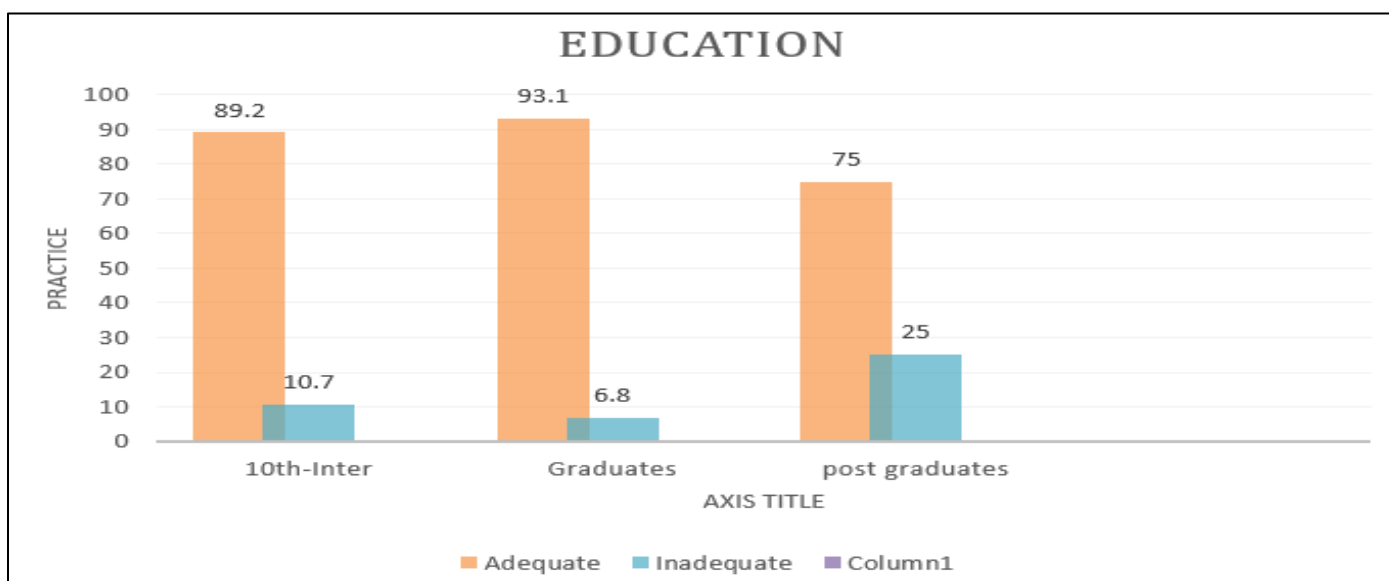


Fig 44 Education

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menstrual cycle, leading them to seek medical intervention without fully understanding their reproductive health.

- [13]. "P4 Reproductive Medicine: Prediction, Prevention, Personalization, and Participation in Infertility Care"*** - This article discusses the importance of a multidisciplinary approach to infertility care, emphasizing the need for proper evaluation and personalized treatment Plans.