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A STUDY TO ASSESS KNOWLEDGE AND ATTITUDE REGARDING OOCYTE CRYOPRESERVATION AMONG FEMALE UNDERGRADUATE STUDENTS IN SELECTED NURSING COLLEGE, MANGALORE

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ABSTRACT Oocyte cryopreservation is an emerging fertility preservation technique that enables women to store their oocytes for future use in reproduction. With increasing trends of delayed marriage and career prioritisation, awareness regarding fertility preservation has become essential among young women. The present study aimed to assess the knowledge and attitude regarding oocyte cryopreservation among female undergraduate students in selected degree colleges in Mangalore. A descriptive cross-sectional design was adopted, and 240 participants were selected using stratified random sampling. Data were collected using a structured knowledge questionnaire and a Likert attitude scale. The findings revealed that 51.2% of participants had good knowledge, 32.9% had moderate knowledge, and 15.8% had poor knowledge regarding oocyte cryopreservation. Despite this, 85% of participants exhibited a negative attitude, while 15% had a neutral attitude. No participant demonstrated a positive attitude. The correlation between knowledge and attitude was very weak and not statistically significant ($r = -0.039$, $p = 0.547$). A significant association was found between knowledge and stream of study ($p = 0.033$), whereas no significant association was observed between attitude and demographic variables. The study concludes that although awareness exists, misconceptions and negative attitudes persist. Structured educational interventions and counselling are essential to improve understanding and promote informed reproductive decision-making among young women.

KEYWORDS : Oocyte Cryopreservation, Knowledge, Attitude and Undergraduate Students.

INTRODUCTION

Oocyte cryopreservation, commonly known as egg freezing, is an advanced assisted reproductive technology that enables women to preserve fertility for future use. In recent years, women have increasingly delayed childbearing due to educational, professional, and personal factors, leading to a growing interest in fertility preservation.

Female fertility declines with age, particularly after 35 years, primarily due to reduced oocyte quality and quantity. Although assisted reproductive technologies, such as in vitro fertilisation, have improved fertility outcomes, they cannot fully compensate for age-related decline. Oocyte cryopreservation offers an opportunity to preserve reproductive potential and enhance reproductive autonomy.

Initially developed for medical indications such as cancer treatment, oocyte cryopreservation is now widely used for social reasons, including career advancement, lack of a suitable partner, and personal choice. Despite its advantages, awareness regarding fertility declines and the effectiveness of this technology remains limited. Misconceptions and lack of information may influence attitudes and decision-making.

METHODS

A quantitative, descriptive cross-sectional survey design was adopted to assess the knowledge and attitudes of undergraduate female students regarding oocyte cryopreservation. The study was conducted at a selected degree college in Mangalore. The target population comprised all female undergraduate students, and the accessible population included those available during the data collection period. A total of 240 participants were selected using stratified random sampling.

Inclusion criteria included female undergraduate students who could read and understand English and were willing to participate. Students who were married with children, not present during data collection, or who had recently been sensitised to the topic were excluded.

Data were collected using a structured self-administered questionnaire comprising three sections: a demographic proforma, a 25-item knowledge questionnaire, and a five-point Likert scale to assess attitude.

Content validity was established by seven experts. Reliability testing showed good internal consistency (knowledge: Spearman-Brown = 0.85; attitude: Cronbach's alpha = 0.80).

A pilot study was conducted among 20 students to assess feasibility, and no major modifications were required. Data were collected over 10 days following institutional approval and informed consent.

Descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics (Chi-square test and Pearson's correlation) were used for data analysis. Ethical principles, including confidentiality and voluntary participation, were strictly maintained.

RESULTS

A total of 240 female undergraduate students participated in the study. The findings are presented under demographic characteristics, knowledge and attitude levels, correlation analysis, and association with selected variables.

The majority of participants were 18 years old (85.4%), with a mean age of 18.19 ± 0.48 years. Most participants were Muslims (47.1%), followed by Hindus (40.4%) and Christians (12.5%). Nearly all were unmarried (98.3%), belonged to nuclear families (97.9%), and resided in urban areas (97.9%).

In terms of education, 43.8% were from BA, 20.8% from BCA, 18.8% from BSc, and 16.7% from BCom streams. The majority (81.7%) were first-year students. Most participants (97.1%) had prior knowledge of oocyte cryopreservation, primarily obtained through mass media (96.3%).

Knowledge Level Regarding Oocyte Cryopreservation Among Undergraduate Students

Knowledge scores	Frequency (f)	Percentage (%)
Good knowledge (19 - 24)	123	51.2
Moderate knowledge (14 - 18)	79	32.9
Poor knowledge (9 - 13)	38	15.8

Table 1 shows that more than half of the participants (51.2%) had good knowledge, 32.9% moderate, and 15.8% poor. The mean knowledge score was 18.09 ± 3.60 (range: 9–24), with a mean percentage score of 75.37%, indicating a moderate-to-good level of knowledge among participants.

Attitude Level of Undergraduate Students Regarding Oocyte Cryopreservation

Fig 1 shows that the majority of participants (85%) demonstrated an unfavourable attitude, while 15% had a neutral attitude. No participant reported a favourable attitude. The mean attitude score was 34.66 ± 5.73 (range: 22–52), with a mean percentage of 66.65%, indicating generally negative perceptions despite adequate knowledge.

Correlation Between Knowledge and Attitude

Pearson's correlation analysis revealed a very weak negative correlation between knowledge and attitude scores ($r = -0.039$), which was not statistically significant ($p = 0.547$).

Association Between Knowledge and Demographic Variables

A statistically significant association was observed between knowledge level and stream of study ($\chi^2 = 13.712$, $p = 0.033$). Students from BA, BCA, and BSc streams showed relatively higher levels of knowledge.

No significant association was found between knowledge and other variables, such as age, religion, marital status, year of study, family type, area of residence, prior awareness, or source of information ($p > 0.05$).

Association Between Attitude and Demographic Variables

No statistically significant association was found between attitude and any demographic variable, including age, religion, marital status, stream of study, year of study, type of family, area of residence, prior awareness, or source of information ($p > 0.05$).

DISCUSSION

The study findings indicate that although more than half of the participants had good knowledge of oocyte cryopreservation, the majority held negative attitudes toward it. This suggests that knowledge alone is insufficient to influence perception.

Similar studies have reported that young women often have misconceptions about fertility and overestimate their reproductive knowledge. Cultural beliefs, ethical concerns, and financial barriers play a significant role in shaping attitudes. The absence of a significant correlation between knowledge and attitude highlights the need for comprehensive interventions that include counselling, value clarification, and myth-busting strategies.

CONCLUSION

The study concludes that female undergraduate students have moderate knowledge but predominantly negative attitudes toward oocyte cryopreservation.

There is a need for:

- Structured reproductive health education
- Awareness programmes
- Counselling interventions

These measures will help improve the understanding, address misconceptions, and promote informed reproductive choices among young women.

REFERENCES

1. Tandoğan Ö, Küğcümen G, Satılmış İG. Acceptance rates and reasons for social oocyte cryopreservation among women: systematic review and meta-analysis. Journal of Assisted Reproduction and Genetics. 2025 Mar 1:1-4.
2. Simopoulou M, Sfakianoudis K, Bakas P, Giannelou P, Papapetrou C, Kalampokas T, Rapani A, Chatzaki E, Lambropoulou M, Lourida C, Deligeoroglou E. Postponing pregnancy through oocyte cryopreservation for social reasons: considerations regarding clinical practice and the socio-psychological and bioethical issues involved. Medicina. 2018 Oct 25;54(5):76.
3. Eltelt R. Empowering Perspectives: Assessing the Effect of an Instructional Program on Female Students' Knowledge, Attitudes, and Challenges Towards Egg Freezing. Egyptian Journal of Health Care. 2021;12(3):2179-203.
4. Polit DF, Hungler BP. Nursing Research Principals and methods.6thed. Philadelphia: J.B Lippincott company; 1999.p.111.
5. Tozzo P, Fassina A, Nespeca P, Spigarolo G, Caenazzo L. Understanding social oocyte freezing in Italy: a scoping survey on university female students' awareness and attitudes. Life sciences, society and policy. 2019 Dec; 15:1-4.