

**REPRODUCTION-RELATED AWARENESS AMONG NEVER-MARRIED STUDENTS
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ABSTRACT

This cross-sectional comparative descriptive study was conducted among never-married students (aged 18 years and above, of either gender) pursuing undergraduate studies in Humanities in a metropolitan city in Western India to determine their reproduction-related awareness. After permissions, the study was explained and written informed consent was obtained from 93 students (56 females, 60.21%, and 37 males, 39.79%). A direct face-to-face interview was conducted at a time convenient to the participants, using a semi-structured pre-validated proforma and their responses were noted. The gender differences in age distribution, religion-wise distribution, medium of instruction at school, paternal and maternal occupation were not significant. A significantly higher number of female students were urban-born ($Z=2.333$; $p=0.198$), had studied in urban-based schools at primary ($Z=2.870$; $p=0.004$), secondary ($Z=2.624$; $p=0.008$), and higher secondary levels ($Z=3.434$; $p=0.006$) had higher levels of paternal ($Z=2.556$; $p=0.010$) and maternal ($Z=1.991$; $p=0.046$) education. The self-reported age of awareness of puberty changes was significantly ($Z=3.777$; $p=0.0001$) earlier in female students. Female students obtained significantly higher mean scores on questions related to contraceptive for nulliparous couple ($Z=2.328$; $p=0.019$), family planning method for couple who has completed family ($Z=2.064$; $p=0.038$) and fertile period during menstrual cycle ($Z=2.644$; $p=0.008$). The media, which was a source of reproduction-related information for many participants, can be utilized for conducting health awareness campaigns on pubertal changes, reproduction and contraception.

KEY WORDS: Awareness, Contraceptives, Family Planning, Puberty, Reproduction, Students.**INTRODUCTION**

Adolescents endure emotional, psychological, social and mental changes and are vulnerable to high-risk behaviour. Future population trends will rely on the fertility-related choices of today's adolescents and on their capacity and autonomy to act on those choices.^[1] Owing to the young age-structure of India's population, the reproduction-related attitude and behaviour of adolescents are likely to influence the overall reproductive health, demographic and social outcome. Studies have reported a high level of adolescent exposure to sex and risk of pregnancies in India,^[2,3] China,^[4] Latin America,^[5,6] Uganda,^[7] Nigeria,^[8] South Africa,^[9] and developed countries.^[10,11]

Awareness of reproduction-related issues exhibits inter- and intra-societal variations^[12,13] and is determined by several socio-cultural and demographic factors that operate at individual, family and societal levels.^[14,15] Religion plays an important role in determining the

attitude of the people to contraception.^[16] Education is the most influential tool for inducing a positive attitude to reproductive health issues in the community.^[14]

Measurement of awareness levels provides a handy measure of the success of information, education and communication activities and help to pinpoint the areas that need strengthening.^[17]

The objective of the present study was to determine the reproduction-related awareness among students pursuing undergraduate studies in Humanities. This target group was chosen since reproduction-related topics are not included in their curriculum and their awareness are more likely to be from non-curricular sources.

MATERIALS AND METHODS

This cross-sectional comparative descriptive study was conducted among never-married students (aged 18 years and above, of either gender) pursuing undergraduate

studies in Humanities in a metropolitan city in Western India. After obtaining permissions from stakeholders in the community, the study was explained to prospective participants. Written informed consent was obtained from all participants. They were interviewed at a time convenient to them. A direct face-to-face interview was conducted using a semi-structured pre-validated proforma and their responses were noted.

The data were entered in Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) and were statistically analyzed using EpiInfo Version 7.0 (public domain software package from the Centers for Disease Control and Prevention, Atlanta, GA, USA). Data were presented as mean, standard deviation (SD), maximum value, third quartile, median, first quartile and minimum values. The 95% confidence interval (CI) was presented as: [Mean-(1.96)*Standard Error] to [Mean+(1.96)*Standard Error]. Statistical significance of difference (taken as p -value<0.05) was calculated using standard error of difference between two means and standard error of difference between two proportions.

RESULTS AND DISCUSSION

A total of 93 students (56 females, 60.21%; and 37 males, 39.79%) participated in the study.

Demographics

The mean age of female students was 18.55 ± 0.81 years (95% CI: 18.34 – 18.77 years) and that of male students was 18.59 ± 0.86 years (95% CI: 18.34 – 18.95 years). The difference in gender-wise age distribution was not significant ($Z=0.224$; $p=0.822$).

The differences in religion-wise distribution of female and male students ($Z=0.482$; $p=0.631$) and medium of instruction at school ($Z=0.293$; $p=0.771$) were not significant. Religion of an individual has been reported

to influence the awareness and use of contraception. [18] A significantly ($Z=2.333$; $p=0.198$) higher number of female students were born in an urban area, as compared to their male counterparts. In contrast to males, a significantly higher number of female students had studied in urban-based schools at primary ($Z=2.870$; $p=0.004$), secondary ($Z=2.624$; $p=0.008$), and higher secondary levels ($Z=3.434$; $p=0.006$). There was no significant difference in duration of residence at current address ($Z=1.493$; $p=0.135$). There was no significant gender difference ($Z=0.722$; $p=0.469$) in duration of stay in hostels among female ($n=32$) and male ($n=15$) students.

There were no significant differences in the ages of fathers ($Z=0.837$; $p=0.402$) and mothers ($Z=0.195$; $p=0.844$). Fathers of female students were significantly ($Z=2.556$; $p=0.010$) more educated than their counterparts of male students. Likewise, mothers of female students were significantly ($Z=1.991$; $p=0.046$) more educated than their counterparts of male students. The differences in occupation-wise distribution of fathers of female and male students ($Z=0.907$; $p=0.362$) and that of mothers of female and male students ($Z=0.716$; $p=0.471$) was not significant.

Self-reported age of awareness

The self-reported age of awareness of puberty changes was significantly ($Z=3.777$; $p=0.0001$) earlier (12.73 ± 1.30 years; 95% CI: 12.39 – 13.07 years) in female students when compared with that for males (13.89 ± 1.54 years; 95% CI: 13.39 – 14.39 years). However, there were no significant gender differences in the age of awareness for reproduction ($Z=0.691$; $p=0.488$) and age of awareness of contraception ($Z=0.144$; $p=0.844$). The minimum age of self-reported awareness of pubertal changes, reproduction and contraception but the median age of awareness was lower for female students. (Fig. 1)

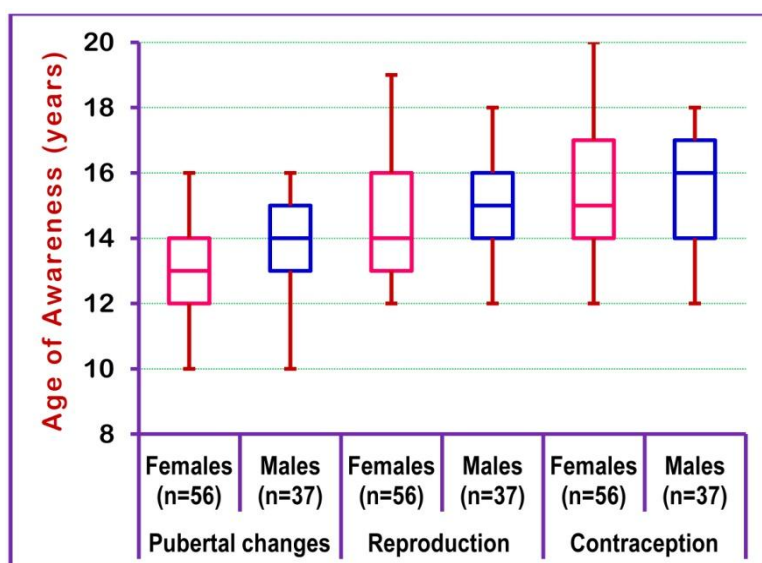


Fig-1: Box plot depicting age of awareness.

Table-1: Comparison of scores (mean \pm standard deviation) of female and male students.

Question	Females (n=56)	Males (n=37)	Z value	'p' value
1. Enumeration of contraceptives	1.80 \pm 0.48	1.68 \pm 0.63	0.985	0.324
2. Contraceptives protecting against sexually transmitted disease	1.98 \pm 0.37	1.89 \pm 0.39	1.111	0.266
3. Contraceptive for nulliparous couple	1.75 \pm 0.61	1.35 \pm 0.92	2.328	0.019 *
4. Contraceptive for couple desiring child in future	1.68 \pm 0.69	1.51 \pm 0.84	0.959	0.337
5. Contraceptive for lactating women	1.27 \pm 0.93	0.92 \pm 1.01	1.687	0.091
6. Family planning method for couple who has completed family	1.64 \pm 0.70	1.27 \pm 0.93	2.064	0.038 *
7. Contraceptive for less educated / motivated couple	1.39 \pm 0.92	1.30 \pm 0.88	0.474	0.635
8. Contraceptive method that puts the woman "in control"	1.50 \pm 0.83	1.41 \pm 0.93	0.476	0.633
9. Fertile period in menstrual cycle	1.02 \pm 0.91	0.70 \pm 0.94	2.644	0.008 *

Knowledge of contraception

Female students obtained significantly higher mean scores on questions related to contraceptive for nulliparous couple ($Z=2.328$; $p=0.019$), family planning method for couple who has completed family ($Z=2.064$; $p=0.038$) and fertile period during menstrual cycle ($Z=2.644$; $p=0.008$). (Table-1) A study conducted in a Nigerian institution showed that 97.7% of males and 98.4% females knew at least one method of contraception.^[19] In a Ludhiana-based study,^[20] 87% of students were aware of contraception. A survey of 2388 Nigerian students found the contraceptive knowledge level to be 87.5%.^[21] A Sikkim-based study^[22] reported that 98% of the students had knowledge about family planning and 86% of them were aware of contraception and 69% knew about the source of availability of contraceptives.

Source of information

The gender differences were not significant in relation to the source of information regarding puberty ($Z=0.482$; $p=0.631$) and reproduction ($Z=0.599$; $p=0.548$). However, the gender difference in source of information regarding contraception was significant ($Z=2.835$; $p=0.004$). In the present study, the media was the primary source of information about contraceptive methods, which is similar to that reported by a study from Sikkim.^[22] However, studies from Nigeria^[23] and Ethiopia^[24] have reported that the students had learned about contraception at school, while a study from Delhi^[25] found that friends were a source of information.

CONCLUSION

In the present study, female undergraduate students had higher levels of awareness about puberty, reproduction and contraception, when compared with their male counterparts. The media can be used for conducting health awareness campaigns on pubertal changes, reproduction and contraception.

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