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Original Research Article

A comparative study on knowledge, awareness and perception of contraception among rural and urban population in Punjab

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ABSTRACT

Background: In developing countries like India, a lack of awareness about contraceptive methods often leads to misconceptions, limited choices, and improper family planning. This knowledge gap not only disrupts maternal and child health complications but also disrupts the economy of society and the nation. Therefore, the purpose of this study was to investigate the knowledge, awareness and perception of contraception among the rural and urban population in Punjab.

Materials and Methods: This observational study conducted in the Department of Obstetrics and Gynecology at a tertiary health care centre, in Punjab, India. A total of 500 women were evaluated with the help of a pre-designed questionnaire to address knowledge, awareness, and perception of contraception among the rural and urban population in Punjab. The statistical analysis was performed by using SPSS Windows, version 28.

Results: In the present study, a total of 492 participants were included, of whom 387 were from rural areas and 105 were from urban areas. This study revealed, 100% of participants were aware of contraception. In terms of the source of information, social circles were identified as the primary channel (46.34%), followed by the media (33.94%), health workers (16.87%), and educational institutes (2.85%).

Conclusion: This study highlights contraceptive methods, including condoms, oral contraceptives, and intrauterine devices (IUDs), as primary choices. Therefore, it's important to bridge the gap between awareness and action. Hence, this study, advocate the awareness program on interventions to ensure everyone can access effective family planning resources without barriers.

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1. Introduction

According to the current estimated population, which is 1.37 billion, India stands as the second-most populous country worldwide. It is estimated that, in the middle of 2023, India's population will increase by up to 8%, which is more than that of China's population, and by the middle of 2050, this margin is expected to extend to 25%.¹ Even though India implemented its first population control program in 1952, the baby boom is still challenging to overcome.² This kind of uncontrolled population explosion

will create a burden on natural resources, which are already in endangered condition. Therefore, the implementation of contraception becomes more necessary.

In this modern health era, where women have reached space on one side, they are still fighting for their rights, especially for their health, because every woman has the right to protect her own health. Hence, India was the first country to launch a national program for family planning.² This program goes beyond simple birth control; it encompasses a comprehensive range of services, policies, information, attitudes, practices, and commodities.³ A variety of contraceptives are available to prevent unplanned pregnancies and provide an informed decision regarding

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whether and when to start a family for women, men, couples, and adolescents.^{4,5} The success of contraceptives will not only improve the economic condition of the nation as a whole, but it will also improve the health of women and children in the family.⁶

In India, there are numerous methods of contraception, such as oral contraceptives (pills), intrauterine devices (IUDs), and condoms.^{4,7} In addition to family planning, these contraceptives are also used to manage menstrual disorders, reduce the risk of ovarian and endometrial tumours, and treat the symptoms of polycystic ovarian syndrome (PCOS). Also, contraceptives help to reduce maternal, infant, and child mortality and morbidity around the globe and to prevent sexually transmitted diseases (STDs).^{4,8,9}

According to various studies conducted in different parts of developing countries, knowledge of contraceptives is present, but the percentage of actual women using contraception is very low, and the method of contraception use also varies in different parts of Punjab. Numerous challenges interfere with the progress of developing countries, such as limited access to accurate information, insufficient supply sources, high costs, and cultural beliefs affecting the knowledge of contraceptive methods. These barriers pose significant challenges for development in the urban and rural regions of Punjab. Thus, the present study aims to understand knowledge, awareness, and perceptions related to contraception within the rural and urban populations of Punjab, shedding light on the nuanced dynamics of contraceptive perception in both settings.

2. Materials and Methods

This observational study was performed in a single centre on a section of the rural and urban population in Punjab over a period of 1 year, from July 2021 to July 2022. In the present study, approximately 492 participants of reproductive age between 18 to >36 years were included, and females outside this age group were excluded. Also, the study participants who were unwilling to participate were excluded from this study. Informed consent was obtained from all participants and ethical approval was obtained from the Institutional Ethical Committee.

In this study, participants were asked a series of questions in a face-to-face interview using a pre-structured questionnaire in the local language. Considering the sensitivity of the topic and related social taboos, the investigating team provided specialized training to a local social worker. Through this training, the social worker was permitted to ask questions in an informal yet confidential setting, which encouraged study participants to open up comfortably and without any hesitation to share their responses.

The pre-design questionnaire was divided into two parts: the first part includes the demographic profile

of the study participants, and the second part includes awareness regarding the use of contraceptives. Information about contraceptives includes knowledge, details of administration, availability, and side effects. Then, various perceptions, like fear and myths related to contraceptive use, were noted. Knowledge related to contraceptive effects on sexual behaviour, fertility in general, and basic awareness of contraceptive use was studied. Furthermore, people were encouraged to ask any doubts or queries and to get further awareness from the investigating team.

2.1. Statistical analysis

The patients' data, compiled in a master chart, was organized using Microsoft Excel software, and statistical analysis was conducted utilizing SPSS Windows, version 28. Descriptive analysis was carried out by generating frequency tables for categorical variables. To examine associations or compare proportions among selected variables, the chi-square test was utilized. Specifically, comparisons between patient symptoms of stroke and age groups were assessed using chi-square tests. Statistical significance was determined at a p-value of less than 0.05, indicating a significant result, while p-values greater than or equal to 0.05 were considered non-significant.

3. Results

In the present cross-sectional study, a total of 492 participants were included. The demographic profile of the included study participants revealed that, in terms of age distribution, the majority of the participants were found to be within the (26-36) age group (39.63%), closely followed by (18-26) (36.59%) and >36 (23.78%). Occupationally, a significant proportion were homemakers (77.85%), with a smaller segment engaged in private jobs (22.15%). Educational backgrounds highlighted a prevalence of primary education (55.69%), followed by higher secondary (29.07%), graduate (14.84%), and postgraduate (0.41%) qualifications. Regarding marriage duration, a noteworthy percentage had been married for less than 5 years (55.28%). The majority of participants were currently married (99.19%), while a small fraction reported divorce (0.20%) or widowhood (0.20%), as represented in Table 1.

Table 1: Socio-demographic details of study participant

Age	Rural No of cases	Urban No of cases	Total	Percentage
(18-26)	144	36	180	36.59%
(26-36)	157	38	195	39.63%
>36	86	31	117	23.78%
Total	387	69	492	100.00%
Occupation				
Homemaker	311	72	383	77.85%
Private job	76	33	109	22.15%
Govt. job	0	0	0	0.00%
Total	387	105	492	100.00%
Education				
Primary	235	39	274	55.69%
H. Secondary	109	34	143	29.07%
Graduate	41	32	73	14.84%
Post Grad	2	0	2	0.41%
Total	387	105	492	100.00%
Marriage Duration				
<5 years	227	45	272	55.28%
>5 years	159	60	220	44.72%
Total	386	105	492	100.00%
Marital State				
Married	385	103	488	99.19%
Unmarried	0	0	0	0.00%
In a relation	0	0	0	0.00%
Divorce	1	1	1	0.20%
Widow	0	1	1	0.20%
Total	385	105	490	99.59%

Table 2: Representing the awareness about contraception

Aware about contraception	Rural	Urban	Total	Percentage
Yes	387	105	492	100%
Source of information				
Social circle	177	51	228	46.34%
Health Worker	72	11	83	16.87%
Media	126	41	167	33.94%
Educational institute	11	3	14	2.85%
Total	386	106	492	100.00%
Do you use contraception?				
Yes	387	105	492	100%
Which contraception do you use?				
Barrier	90	48	138	28.05%
OCP	92	18	110	22.36%
RHYTM	54	7	61	12.40%
IUCD	55	15	70	14.23%
Injection	12	1	13	2.64%
Withdrawal	88	16	104	21.14%
Implant	0	0	0	0.00%
Total	391	105	496	100.81%

Table 3: Comparative analysis of study participants in rural and urban area on the basis of their knowledge and awareness of contraception

Characteristics	Rural	Urban	Total	Percentage
Opt for TL				
Yes	200	34	234	47.56%
No	187	71	258	52.44%
Total	387	105	492	100.00%
Vasectomy (Want your husband to undergo vasectomy)				
Yes	77	33	110	22.36%
No	310	72	382	77.64%
Total	387	105	492	100.00%
HYSTERECTOMY (Do you think hysterectomy can be used as a method of contraception?)				
Unsafe	292	60	352	71.54%
Weakness	14	13	27	5.49%
Don't know	81	78	112	22.76%
Total	387	151	492	100.00%
Known contraception (which barrier contraception do you know of?)				
Male condom	387	105	492	100.00%
Female condom	1	0	1	0.20%
cervical cup	0	0	0	0.00%
What do you do if spillage of condom?				
Take pill	217	73	290	58.94%
Do Nothing	170	32	202	41.06%
Total	387	105	492	100.00%
Do you side effect know?				
Yes	130	59	189	38.41%
No	256	47	303	61.59%
Total	386	106	492	100.00%
Which side effect you know?				
Rupture	17	6	23	4.67%
Slippage	41	39	80	16.26%
Allergy	70	15	85	17.28%
Total	128	60	188	38.21%
Would you use condom?				
Yes	218	36	254	51.63%
No	167	69	236	47.97%
Total	385	105	490	99.59%
Characteristics	Rural	Urban	Total	Percentage
Name of OCP	Responses	Responses		
mala n	323	89	412	83.74%
mala d	64	16	80	16.26%
Total	387	105	492	100.00%
Which IUCD you know?				
CuT	387	105	492	100.00%
Multiload	3	0	3	0.61%
Would you go for this?				
Yes	120	23	143	29.07%
No	267	82	349	70.93%
Total	387	105	492	100.00%
Given free by govt.?				
yes	173	31	204	41.46%
No	214	74	288	58.54%
Total	387	105	492	100.00%

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Table 3 continued

Do you know side effects?				
Yes	134	45	179	36.38%
No	254	59	313	63.62%
Total	388	104	492	100.00%
Do you know about injectable?				
Yes	8	6	14	2.85%
No	379	99	478	97.15%
Total	387	105	492	100.00%
Which injectable you know?				
DMPA	8	6	14	2.85%
None	337	50	387	78.66%
NTEN	0	0	0	0.00%
Total	345	56	401	81.50%
Do you know about Implants?				
Yes	0	0	0	0.00%
No	387	105	492	100.00%
Do you know about I pill?				
Yes	259	55	314	63.82%
No	128	50	178	36.18%
Total	387	105	492	100.00%
Did you ever had unintended pregnancies?				
Yes	72	34	106	21.54%
No	313	68	381	77.44%
Total	385	102	487	98.98%
Any prior MTP?				
Yes	73	34	107	21.75%
No	316	69	385	78.25%
Total	389	103	492	100.00%
How did you deal with unintended pregnancies?				
Medical Method	72	34	106	21.54%
Surgical Method	0	0	0	0.00%

The Table 2 revealed information on awareness, usage, and types of contraception among the participants. A total of 492 participants were included, and 100% reported being aware of contraception. In terms of the source of information, social circles were identified as the primary channel (46.34%), followed by the media (33.94%), health workers (16.87%), and educational institutes (2.85%). All participants reported using contraception. Concerning the types of contraception used, barrier methods were the most prevalent (28.05%), followed by oral contraceptive pills (OCP) (22.36%), rhythm method (12.40%), intrauterine contraceptive devices (IUCD) (14.23%), injection (2.64%), and withdrawal method (21.14%). Notably, no participants reported using implants.

The present study, provided valuable insights into the knowledge and awareness of contraception in both rural and urban areas. Nearly half of the participants opted for tubal ligation (TL) as a method of contraception (47.56%), with a significant proportion indicating awareness and preference for male condoms (100.00%). Concerning vasectomy, a substantial majority were not inclined towards it (77.64%) rest of the participants are reported in Table 3.

The current findings of the study, provide data on the basis of knowledge and awareness of contraception in both rural and urban areas. Participants demonstrated familiarity with oral contraceptive pills, with a significant majority recognizing Mala N (83.74%), while fewer were aware of Mala D (16.26%). CuT emerged as the primary known intrauterine contraceptive device (IUCD) among respondents (100.00%), with minimal awareness of multiload (0.61%). A notable proportion indicated willingness to opt for IUCD (29.07%), although the majority were not inclined (70.93%). However, awareness of implants was negligible (0.00%). Emergency contraception (I pill) was well-known (63.82%). Some participants reported unintended pregnancies (21.54%), primarily managing them through medical methods (21.54%). No instances of the surgical method for unintended pregnancies were reported.

4. Discussion

In the present era, many women in the reproductive age group are aware of at least one contraception method, but their actual usage remains significantly low. Despite substantial efforts from both governmental and non-governmental organizations, we have not achieved any population control goals. The findings of the present study show that the total number of patients which was approximately, 492 from rural and urban areas, i.e., 387 and 105, respectively. The majority of the participants were in the 26–36 age group (39.63%), followed by the 18–26 age group (36.59%), and >36 (23.78%). These findings were in concordance with the study done by Upadhye JJ et al.¹⁰ They reported that, the maximum number of patients were

between 26 to 30 years of age i.e., (43.5%) followed by (26.5%) who were between 22–25 years of age. Also, a study revealed by Ghike S, et al.¹¹ reported that, most of the study participants (46.9%) were age between 22–25 years.

In the current investigation, 100% of the study participants demonstrated awareness of at least one form of contraception. However, the highest level of awareness was observed in rural areas, likely due to the larger number of study participants from this region compared to urban areas. In contrast, the National Family Health Survey conducted in 2015–2016 reported awareness of about 54.5% in Haryana.¹² Similarly, another study conducted in an urban area reported that, 92.5% of women were aware of one or another method of contraception, but only 42.5% were aware of practicing contraception.¹⁰

Our study demonstrated that, approximately 85% of rural participants opted for condom usage, amounting to around 218 individuals, while 15% of participants were from urban areas, totalling 36 individuals. Whereas, the use of OCP noted among rural and urban populations was represented as follows:

In the rural population, 323 individuals (78.39%) used OCPs, with 64 (80%) using Mala-N and an equivalent percentage using Mala-D. Conversely, in the urban population, Mala-N was used by 89 individuals (21.60%), while Mala-D was used by 16 individuals (20%). In a similar way, other contraceptives such as barrier, OCP, RHYTM, IUCD, injections, and withdrawal were noted at 65.21%, 83.63%, 88.52%, 78.57%, 92.30%, and 84.61%, respectively, in rural areas. Whereas, in the Urban area, the percentage of use of the same contraceptives were noted at 34.78%, 16.36%, 11.47%, 21.42%, 7.69% and 15.38% respectively. These results were consistent with George S, et al.¹³ according to them, the condom was the most commonly used contraceptive found among 73.9% of cases, followed by oral pills (39.2%), and copper-T (23.9%).

In addition, extra findings showed that implants were not proffered by both study participants. This represents that knowledge and awareness of contraceptives were good in both regions of the study participants. This result contrasts with the observations of Nayak et al.⁴ and Young et al.,¹⁴ who reported percentages of 11% and 8%, respectively, among women who had never used contraceptives in their studies. Moreover, another study done by Sherpa et al.,¹⁵ where 38.23% of participants had never used contraceptives, as well as Renjhen et al.,¹⁶ who found a percentage of 44.6%, and Srivastava et al.,¹⁷ where never using contraceptives was found in 55%.

5. Conclusion

The present research underscores a profound understanding and favourable attitude towards contraception among rural and urban participants. Despite this, the practical implementation of contraceptive methods remains sub-

optimal. Healthcare practitioners and social workers must emphasize key barriers, such as the prevalence of lacking contraceptive information among males compared to females, inadequate knowledge about contraception, and concerns regarding its side effects, which prevent widespread contraceptive usage. The present study reveals, contraceptive practices, condoms, oral pills, and intrauterine devices (IUDs) emerged as the cornerstone choices. However, their prevalence underscores the urgent need for comprehensive interventions to bridge the gap between knowledge and action, ensuring that individuals have uncontrolled access to effective family planning resources.

6. Limitations

1. This study was carried out at a single centre, and one of its limitations was the restricted sample size.
2. This study had limitations typical of cross-sectional studies. They can't track behaviours over time and the timing of data collection might not fully represent the community. Using interviews could introduce bias due to stigma, hesitation, or misunderstanding of questions. As a result, the reported knowledge, attitudes, and practices may not be accurate for the entire population.
3. The majority of participants included from rural areas, with a notable disparity in representation from urban settings. This demographic difference could potentially introduce variability into the study's findings.

7. Source of Funding

None.

8. Conflict of Interest

None.

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