Research Article

Comparison of Family Planning Knowledge and Practices in Rural and Urban Communities of Midnapore

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Abstract

Background & Aims: Family planning is crucial for a country's development as it enhances maternal and child health and helps control population growth. Eligible couples should possess adequate knowledge and practice of family planning methods. This study aimed to assess and compare the knowledge and practices of eligible couples regarding selected family planning methods in both rural and urban areas of Midnapore. The specific objectives were: 1. To assess knowledge regarding selected family planning methods; 2. To compare knowledge between rural and urban couples; 3. To assess family planning practices; 4. To examine the association between selected demographic variables and knowledge scores; 5. To develop an informational booklet related to family planning methods.

Methods: The study employed a comparative descriptive design. Samples were selected using a purposive sampling technique. Data were collected through a structured questionnaire comprising four sections: demographic variables, knowledge regarding temporary methods, knowledge regarding permanent methods, and family planning practices. Descriptive and inferential statistics, including mean, standard deviation, mean percentage, median, student's t-test, and chi-square test, were utilised to analyse the data.

Results: It was found that the majority of rural (94 per cent) and urban (84 per cent) wives were aged between 15 and 25 years. In rural areas, 84% of husbands had higher secondary education, while 48% of wives had secondary education. Additionally, 64% of participants in both rural and urban settings belonged to joint families. A significant proportion of rural respondents (54%) reported a monthly income of Rs. 1001–3000, whereas 62% of urban respondents earned between Rs. 3001 and 5000. Health personnel were the primary source of information for both rural (64%) and urban (86%) areas. The mean knowledge score was 23.8 (SD = 5.8) for rural couples and 40.0 (SD = 11.9) for urban couples. Only 4% of rural couples and 32% of urban couples reported using family planning methods. Demographic variables such as wife's age, education, and family income did not show a significant association with knowledge scores.

Conclusion: The study revealed that knowledge of family planning methods was average among rural couples and satisfactory among urban couples. However, the practice of family planning methods was notably low, particularly in rural areas, indicating a gap between knowledge and practice. This highlights the need for targeted educational interventions to enhance the uptake of family planning methods.

Keywords: Family Planning, Contraceptives, eligible couples, Tubectomy, Vasectomy, Knowledge, Attitude, Rural, Urban.

Introduction

Women hold a vital role in the development of both families and nations. Her involvement in the family as a wife, mother, cook, manager, teacher, safety officer, and advisor is valued in every household. She serves as the primary pillar or foundation upon which a stable, well-balanced, and robust family thrives. A family will be strong if she is strong, and vice versa. If she is educated, the future generation will be educated, and if she remains healthy, all her progeny will be in good health. Thriving women are the foundation of a thriving nation. Despite her successes, she remains oppressed and deprived of numerous virtues, particularly in policy-making and education. Her repression has led to poor health, the expansion of social issues, low socioeconomic status, inadequate family education, and unemployment.

This family structure is prevalent in India. The husband will make the decision. Male dominance persists significantly; however, there is a slight shift towards women's liberation. This is feasible solely if women receive an education. The insufficiency of information regarding men's roles and perspectives on reproductive health initiated the program in 1955. This marked the initiation of a social science research project to address the issue. Couples possess significant agency in determining the number of children they desire. Both individuals ought to be engaged in this matter. They ought to be aware of the advantages of having a small family. Every individual possesses the fundamental right to freely and responsibly determine the number of children they wish to have and the intervals between their births. They must possess the requisite knowledge, education, and resources to accomplish this. Family planning offers numerous advantages for women and their families. Women who can regulate the timing and frequency of their childbirths experience improved health, encounter fewer unintended pregnancies and births, and are less prone to undergo unsafe induced abortions. Intentional pregnancies

advantage both the mother and the child. Implementing family planning to prevent closely spaced deliveries can significantly decrease newborn and child mortality rates. Moreover, enhancing childbearing patterns necessitates access to effective resources.

Breastfeeding may help spacing births, but it does not offer good protection against pregnancy after four to six months. Contraception is a safe and effective way for women to avoid unwanted or high-risk pregnancies, which can lead to serious consequences such as illness, disability, and death. Unwanted pregnancies often lead to unsafe abortions, resulting in numerous deaths. Contraception is a crucial aspect of women's lives, with various demands based on their life stage. It should be considered with sexual and reproductive health as a whole. Research suggests that women's independence is heavily influenced by their ability to control their own fertility (Myles, 1999).

The decline in women's productivity imposes an economic strain on their families, communities, and societies. Elevating the social and economic standing of women is crucial, especially since it is intricately connected to inadequate reproductive health. Increasing a woman's educational attainment and her control over financial resources can greatly enhance her status within the household. This improvement can bolster her decision-making role and expand her awareness of health and available services, all of which lead to better health outcomes. A well-planned family offers the optimal setting for a child's comprehensive development. Children who receive effective parenting often develop a positive self-image and greater confidence in their abilities. They start school with enthusiasm for learning and are more likely to achieve their full academic potential, as well as contribute positively to community life. When a woman utilizes family planning methods, she gains more time to care for her first child. These thoughtfully planned children are more likely, as they mature, to become healthy, law-abiding citizens with successful careers and fulfilling family lives. Consequently, planned pregnancies benefit both mother and child. This strategy not only reflects the family's economic status but also aids in curbing population growth.

Family planning is acknowledged today as an essential human right. It encompasses the strategic planning of families, ensuring that family size is intentional, the spacing between children is optimal, and the timing aligns with pivotal life choices, such as marriage or career breaks. With reductions in stillbirth and infant mortality rates, alongside improved management of epidemics and famine, contraception has become a vital element of population policy. The challenge of overpopulation is increasingly urgent, as the global population expands by 30 individuals every ten seconds and is anticipated to double in the next 40 years (Myles 1999). As reported by the Directorate of Health and Family Welfare Services, Karnataka State (2003), 60.26% of the 8,650.085 eligible couples are effectively using contraception.

India is experiencing a health transition that is enhancing the nation's overall health and fertility indicators. However, the pace of improvement is not as swift as it could be, and the health of Indians is becoming increasingly polarized, leaving the poor behind. The national health scenario conceals a crucial aspect of the population's health status: significant disparities in mortality, fertility, and morbidity patterns exist within regions and states, between urban and rural areas, between men and women, and, most importantly, among sub-populations.

Access and availability of healthcare resources, including the allocation of finances and services, remain highly inequitable. Globally, 60–80% of healthcare expenditures are directed towards hospital care, with a significantly smaller proportion allocated to basic services. Furthermore, the emphasis on urban curative services excludes large segments of the population residing in rural areas, who lack access to urban hospital facilities. The more remote, sparsely populated, and resource-poor an area is, the greater the likelihood of neglect in terms of the availability and effectiveness of health services. Antenatal clinic visits provide an excellent opportunity for nurses to educate pregnant women intensively about family planning methods and to assist them in adopting birth spacing strategies in response to changing circumstances. Therefore, this study aims to identify the factors that hinder eligible couples from adopting family planning methods and to assess their knowledge and practices regarding selected family planning methods in designated rural and urban areas of Midnapore.

Objectives of the study

This study seeks to evaluate and compare the knowledge and practices of eligible couples concerning selected family planning methods within both rural and urban settings, to investigate the relationship between selected demographic variables and knowledge levels in these contexts, and to develop an informational booklet on family planning methods. Specifically, the objectives are to assess the knowledge of eligible couples regarding selected family planning methods in designated rural and urban areas; to evaluate their family planning practices in these settings; to compare the knowledge and practices of eligible couples across rural and urban areas; to

determine the association between selected demographic variables and knowledge scores in the specified rural and urban populations; and to create an informational booklet on family planning methods.

Methodology

The study adopted a quantitative, descriptive survey approach to systematically examine the knowledge and practices of eligible couples regarding selected family planning methods in rural and urban settings. A descriptive comparative design was used to characterise existing differences between the two groups without manipulating variables, allowing the researchers to document naturally occurring patterns in knowledge and practice. This design was considered appropriate to capture the prevailing situation across communities and to facilitate statistical comparison between rural and urban respondents.

The research was carried out in two primary health centre (PHC) areas in Paschim Medinipur district: Pathra PHC, covering Pathra and Ravindra Nagar villages (rural), and Patanda PHC, covering Haridaspur village (urban). The target population comprised all eligible couples registered in these PHCs. From this population, a sample of 100 eligible couples was selected, with 50 drawn from the rural area and 50 from the urban area. A purposive sampling technique was employed, whereby participants were consciously selected based on predefined criteria relevant to the study objectives.

Inclusion criteria specified that participants had to be eligible couples residing in the selected rural or urban areas, willing to participate, able to read and understand Kannada, and available at the time of data collection. Couples with primary or secondary sterility and those who were health professionals were excluded to avoid confounding influences on knowledge and practice levels. The primary study variables were knowledge and practice regarding selected family planning methods, while demographic and reproductive variables such as age, religion, education, occupation, family income, type of family, age at marriage, duration of married life, number of pregnancies, number of children, place of residence, sources of information, and exposure to mass media were treated as associated variables.

Data were collected using a structured questionnaire developed by the investigator to assess both knowledge and practice concerning selected family planning methods. Tool development was informed by an extensive review of relevant literature and consultation with subject experts to ensure content coverage and contextual relevance. A blueprint was prepared prior to item construction to guide the distribution of questions across content areas and cognitive domains. The final instrument comprised items spanning knowledge, comprehension, application, and practice domains, with approximately half of the items assessing knowledge, and the remainder distributed across comprehension, application, and practice components to provide a comprehensive appraisal of respondents' competencies and behaviours. Content validity of the tool was established through expert review to confirm that the items adequately represented the construct of interest.

For data analysis, demographic variables were summarised using frequency and percentage distributions. Knowledge scores of rural and urban couples were analysed using frequency, percentage, mean, standard deviation, and mean percentage scores. Practice scores were described using frequency and percentage. Comparative analysis of knowledge between rural and urban groups was conducted using the t-test, while associations between knowledge scores and selected demographic variables were examined using the chi-square test. This analytic plan enabled both descriptive profiling and inferential evaluation of group differences and associations relevant to the research questions.

Results

Table – I:

Demographic Variable	Category	Rural (n=50)	Urban (n=50)
Husband's Age	15–25 years	23 (46.0%)	6 (12.0%)
	26–35 years	25 (50.0%)	41 (82.0%)
	36–45 years	2 (4.0%)	3 (6.0%)
Wife's Age	15–25 years	47 (94.0%)	42 (84.0%)
	26–35 years	3 (6.0%)	8 (16.0%)
Husband's Education	Primary	1 (2.0%)	0 (0.0%)
	Secondary	3 (6.0%)	5 (10.0%)
	Higher Secondary	42 (84.0%)	21 (42.0%)
	P.U.C.	2 (4.0%)	19 (38.0%)
	Graduate & above	2 (4.0%)	3 (6.0%)

	Others	0 (0.0%)	2 (4.0%)
Wife's Education	Primary	4 (8.0%)	0 (0.0%)
	Secondary	24 (48.0%)	6 (12.0%)
	Higher Secondary	17 (34.0%)	31 (62.0%)
	P.U.C.	5 (10.0%)	11 (22.0%)
	Graduate & above	0 (0.0%)	2 (4.0%)
Age at Marriage - Husband	< 20 years	0 (0.0%)	0 (0.0%)
	20–30 years	45 (90.0%)	44 (88.0%)
	> 30 years	5 (10.0%)	6 (12.0%)
Age at Marriage - Wife	< 20 years	41 (82.0%)	34 (68.0%)
	20–30 years	9 (18.0%)	16 (32.0%)
Married Life	< 5 years	41 (82.0%)	37 (74.0%)
	5–10 years	8 (16.0%)	12 (24.0%)
	11–15 years	0 (0.0%)	1 (2.0%)
	> 15 years	1 (2.0%)	0 (0.0%)
Number of Children	None	9 (18.0%)	8 (16.0%)
	One	21 (42.0%)	34 (68.0%)
	Two	18 (36.0%)	8 (16.0%)
	> 3	2 (4.0%)	0 (0.0%)
Type of Family	Nuclear	16 (32.0%)	17 (34.0%)
	Joint	32 (64.0%)	32 (64.0%)
	Extended	2 (4.0%)	1 (2.0%)
Source of Information on Family Planning	Health Personnel	37 (74.0%)	43 (86.0%)
	Friends	7 (14.0%)	3 (6.0%)
	Relatives	6 (12.0%)	2 (4.0%)
	Mass Media	0 (0.0%)	2 (4.0%)

In both rural and urban areas, Table 1 shows how the ages of potential husbands and wives are spread out. Most of the husbands in both urban and rural areas are between the ages of 26 and 35. However, the percentage of urban husbands in this age range is much higher (82.0%) than the percentage of rural husbands (50.0%). This suggests that urban husbands are more likely to be in this mid-reproductive age range. In contrast, rural men are more evenly split between 15–25 years (46.0%) and 26–35 years (50.0%), which suggests that people who are married in rural areas tend to be younger.

For wives, the age group of 15–25 is clearly the most common in both rural (94.0%) and urban (84.0%) areas. This shows that most women in these areas join and stay in early reproductive age. There are almost no wives between the ages of 26 and 35, and none between the ages of 36 and 45. This shows that most marriages and births happen in younger age groups, especially in rural areas.

Table – II: Frequency And Percentage Distribution of The Eligible Couples, According To Their Knowledge Score (n = 100)

Level of Knowledge	Rural N	Rural %	Urban N	Urban %
Below average (≤35%)	8	16	5	10
Average (36 to 50%)	31	62	1	2
Satisfactory (51 to 75%)	11	22	23	46
Good (76 to 100%)	-	-	21	42

The above table reveals that the majority of eligible couples in the rural area (62%) possessed an average level of knowledge regarding selected family planning methods. In contrast, most eligible couples in the urban area (46%) demonstrated a satisfactory level of knowledge. Furthermore, 42% of urban couples had a good level of knowledge, whereas none of the rural couples fell under this category.

Table – III: Comparison Of Knowledge Mean Score Regarding Selected Temporary Family Planning Methods. (N = 100)

Method / Area	Place of Residence	Mean Score ± S.D.	't' value	P value
Overall Knowledge (Temporary + Permanent)	Rural	23.8 ± 0.588	8.661	0.00*1
	Urban	40.0 ± 11.9		
Temporary Methods (Overall)	Rural	7.62 ± 2.51	7.429	0.001*
	Urban	11.50 ± 2.71		
Oral Pills	Rural	2.46 ± 1.09	4.294	0.001*
	Urban	3.86 ± 2.03		
Copper-T	Rural	4.22 ± 1.30	7.037	0.001*
	Urban	6.74 ± 2.17		
Nirodh (Condom)	Rural	3.62 ± 1.50	5.95	0.001*
	Urban	5.88 ± 2.23		
Safe Period	Rural	0.18 ± 0.48	6.97	0.001*
	Urban	1.42 ± 1.16		
Breast Feeding	Rural	0.32 ± 0.47	7.216	0.001*
	Urban	1.40 ± 0.95		
Emergency / Post-Coital Contraception	Rural	0.20 ± 0.40	5.83	0.001*
	Urban	0.88 ± 0.72		

From Table – III: We could found that the analysis of mean knowledge scores concerning selected temporary family planning methods indicated a consistent and statistically significant disparity between rural and urban participants, with urban respondents exhibiting higher awareness levels across all categories.

In terms of overall knowledge, which encompasses both temporary and permanent methods, urban residents demonstrated significantly greater understanding (40.0 ± 11.9) compared to their rural counterparts (23.8 ± 0.588), with a highly significant difference (t = 8.661, p = 0.00).

When examining temporary methods specifically, urban participants again achieved higher scores (11.50 ± 2.71) than rural participants (7.62 ± 2.51), with the difference being significant (t = 7.429, p = 0.00).

Knowledge regarding individual methods reflected a similar trend: urban respondents scored better on oral pills (3.86 ± 2.03 vs. 2.46 ± 1.09, t = 4.294, p = 0.00), Copper-T (6.74 ± 2.17 vs. 4.22 ± 1.30, t = 7.037, p = 0.00), and Nirodh/condoms (5.88 ± 2.23 vs. 3.62 ± 1.50, t = 5.95, p = 0.00).

Awareness of natural methods, such as the safe period (1.42 ± 1.16 vs. 0.18 ± 0.48, t = 6.97, p = 0.00) and breastfeeding (1.40 ± 0.95 vs. 0.32 ± 0.47, t = 7.216, p = 0.00), was also significantly higher among urban participants.

Lastly, knowledge of emergency or post-coital contraception was more prevalent in urban areas (0.88 ± 0.72) compared to rural areas (0.20 ± 0.40), with a significant difference (t = 5.83, p = 0.00).

Overall, these results emphasize a significant urban-rural gap in knowledge regarding temporary family planning methods, highlighting the necessity for targeted educational initiatives in rural communities to address this disparity.

Table – IV: Comparison of Knowledge Mean Score Regarding Permanent Family Planning Method (N = 100)

Place of Residence	Mean Score ± S.D.	't' value	P value
Rural	5.04 ± 1.75	7.061	0.001*
Urban	8.34 ± 2.80		

The table illustrates the knowledge scores of participants from rural and urban areas concerning permanent family planning methods. Rural participants achieved a mean score of 5.04 ± 1.75, whereas urban participants had a higher mean score of 8.34 ± 2.80. The statistical analysis revealed a significant difference (t = 7.061, p = 0.001), suggesting that urban residents have a superior understanding of permanent family planning methods compared to their rural counterparts. This underscores a distinct urban-rural gap in awareness, with urban participants consistently exhibiting a better comprehension of permanent family planning practices.

Table – V: Distribution of Samples According to the Practices of Family Planning Methods

(N = 100)

Place of Residence	Practices of Family Planning Methods

	Yes	No
Rural	2 (4.0)	48 (96.0)
Urban	16 (32.0)	34 (68.0)

Table V shows the distribution of samples according to the practices of family planning methods among rural and urban residents. In the rural area, only 2 respondents (4.0%) practiced family planning methods, whereas the majority, 48 respondents (96.0%), did not practice any family planning methods. In contrast, among the urban population, 16 respondents (32.0%) practiced family planning methods, while 34 respondents (68.0%) did not. The findings indicate that the practice of family planning methods was comparatively higher among urban residents than rural residents.

Table – VI: Distribution of Samples According to the Specific Family Planning Methods Followed (n = 18)

Place of residence	Specific Family Planning Methods Followed	
	Copper–T	Condom
Rural	1 (50.0)	1 (50.0)
Urban	10 (62.5)	6 (37.5)

Table VI depicts the distribution of samples according to the specific family planning methods followed among rural and urban residents. Among the rural respondents, both Copper–T and condom methods were equally followed by 1 respondent each (50.0%). In the urban population, Copper–T was the most commonly followed method, used by 10 respondents (62.5%), whereas 6 respondents (37.5%) used condoms. The findings suggest that Copper–T was more commonly preferred than condoms, particularly among urban residents.

Table – VII: Distribution of Samples According to Reasons for practicing specific family planning methods (n = 18)

Place of Residence	Reasons for practicing specific family planning methods	
	It is easy n (%)	No side effects n (%)
Rural	2 (100.0)	-
Urban	15 (93.8)	1 (6.3)

Table VII shows the distribution of samples according to the reasons for practicing specific family planning methods among rural and urban residents. In the rural area, all respondents practicing family planning methods reported that the method was easy to use, accounting for 2 respondents (100.0%), while none reported “no side effects” as a reason. In the urban population, the majority of respondents, 15 (93.8%), practiced family planning methods because they were easy to use, whereas only 1 respondent (6.3%) reported “no side effects” as the reason. The findings indicate that ease of use was the major reason for adopting family planning methods in both rural and urban areas.

Table VIII: Distribution of Samples According to Reasons For Not Practicing Family Planning Methods (n = 82)

Place of Residence	Reasons For Not Practicing Family Planning Methods		
	Elders are not allowing n (%)	Do not like to use n (%)	To get child soon n (%)
Rural	23 (47.9)	10 (20.8)	15 (31.3)
Urban	6 (17.6)	3 (8.8)	25 (73.5)

The table highlights the reasons cited by rural and urban couples for not practicing family planning methods. In rural areas, the most common reason was elders not allowing (47.9%), followed by desire to get a child soon (31.3%) and dislike of using methods (20.8%). In contrast, urban couples predominantly reported wanting to get a child soon (73.5%), while fewer cited elders not allowing (17.6%) or dislike of using methods (8.8%). Overall, the findings suggest that cultural restrictions play a stronger role in rural areas, whereas personal choice and reproductive intentions dominate in urban settings.

Discussion

The current study aimed to evaluate eligible couples' knowledge and practices about selected family planning strategies in rural and urban settings. The results indicated a persistent and statistically significant difference between the two groups. Urban couples showed greater knowledge scores for both temporary and permanent treatments, whereas rural couples showed lesser awareness. Urban individuals had a higher mean knowledge score (40.0 ± 11.9) than rural participants (23.8 ± 0.588). Similarly, urban couples were much more knowledgeable about specific methods such as oral pills, Copper T, condoms, safe periods, breastfeeding, and emergency contraception. This gap was reflected in practice patterns, with urban couples using more temporary and permanent techniques. Rural couples typically cited cultural impediments, such as elder disapproval, as reasons for not practicing, whereas urban couples preferred to conceive early.

These conclusions are backed by national and regional research. The National Family Health Survey (NFHS 5, 2019-21) found that urban areas had a greater contraceptive prevalence (67.9%) than rural areas (65%), with education, affluence, and media exposure highlighted as major drivers (Kaur et al., 2023). Similarly, Choudhary et al. (2020) in Central India discovered that, while 97.5% of rural women were aware of contraception, only 53.25% used it, citing eagerness to conceive and husband denial. This is consistent with the cultural obstacles reported in the current investigation. In Rajasthan, Yadav et al. (2023) found that 88.8% of rural women were aware of at least one contraceptive technique, but practice rates were low. Knowledge was substantially associated with education, corroborating the current conclusion that urban couples with higher educational attainment were more conscious. Rm et al.'s (2021) study in Coimbatore found that permanent procedures, particularly female sterilisation, were more popular in rural regions, but spacing methods were underutilised, which corresponds to the study's finding of limited awareness of temporary methods.

Contrary research, however, suggests that the rural-urban divide is diminishing in some cases. NFHS 5 statistics reveal that, while urban couples continue to use more contraception, rural adoption has improved dramatically, narrowing the discrepancy. In Bihar, Singh et al. (2025) found that 49.04% of rural couples used contraception, with permanent methods dominating. Surprisingly, practice was influenced more by parity and son preference than by residency, implying that sociocultural considerations may override rural-urban differences in some areas. Similarly, Raj (2021) discovered that among unmarried women, rural-urban knowledge gaps were less evident, with socioeconomic class and caste playing more important roles. In contrast, the current study found that residence was the most important predictor of knowledge and practice.

Taken together, the data show that, while urban couples consistently have more knowledge and practice with family planning methods, rural couples continue to be disadvantaged due to cultural limitations, inadequate education, and limited access to health information. Supportive research reinforce this discrepancy, although opposing evidence refers to incremental increases in rural awareness and adoption, as well as the impact of sociocultural elements other than domicile. The consequences are clear: focused measures are needed to close the gap. Educational initiatives, male involvement, and culturally relevant counselling can help rural couples improve their understanding and practice. Strengthening the role of health professionals and increasing mass media outreach are also critical methods for promoting equitable family planning practices in both rural and urban areas.

Conclusion

In this study, researchers found that eligible couples living in urban areas had more knowledge and better use of both temporary and permanent methods of family planning compared to those living in rural areas. This was especially true when it came to oral pills, copper-T, condoms, safe periods, breastfeeding as a form of contraception, and emergency contraception. Despite the availability of services at primary health centers in both urban and rural areas, these data highlight the persistence of differences in contraceptive awareness and utilisation. The results have important implications for nursing practice, particularly for rural and low-knowledge populations, where community health nurses play a crucial role in conducting systematic assessments of couples' informational needs, offering counselling that is sensitive to cultural norms, and promoting informed decision-making when it comes to method choice. For couples to be more informed about contraception and use it consistently, family planning education must be a part of regular nursing care, prenatal and postnatal clinics, and outreach activities. Nursing programs and administration should prioritise teaching students effective communication skills, creating instructional materials that are relevant to the real world, and finding ways to overcome resistance from family and older adults, who are identified as major obstacles to new methods being implemented. It is recommended that future studies use bigger and more diverse samples to confirm these

findings in different contexts, investigate men's autonomous viewpoints, and assess how well nurse-led educational interventions improve long-term contraceptive uptake and continuity.

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