Original Article

Factors Influencing Mothers' Perceptions of Long-Acting Reversible Contraceptive Methods in Bangladesh's Urban Communities

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Abstract

Background: Long-acting reversible contraceptive (LARC) methods are evidently more effective, more affordable, and better tolerated than short-acting methods. However, low adoption rates are more common globally, particularly in Bangladesh. **Objective:** To assess the factors influencing perceptions of LARC methods among mothers in urban communities. **Methods:** A community-based cross-sectional study was conducted among purposively selected 180 mothers of reproductive age (18-49 years) who had at least one living child under 2 years old, residing in urban communities within Dhaka North City Corporation, Bangladesh. **Results:** The mean age of the participants was 33.3±8.4 years, and their mean marital tenure was 13.6±8.1 years. Of the women, 42.2% had at least a secondary education, while 15.6% were illiterate. Nearly half (47.8%) of the husbands had completed higher secondary school, while 11.7% were illiterate. 80% of respondents knew about LARC, compared to 20% who did not, and a sizable percentage (44.4%) did not utilize any form of contraceptive. Healthcare professionals (31.1%), the media (13.9%), and educational institutions (7.8%) were insignificant sources of insight. Women's perceptions of LARC were significantly associated with their husbands' and their own educational attainment ($p<0.05$). **Conclusion:** Women's perceptions on LARC methods were found to be influenced by both their husbands' and their own educational levels. In this context, comprehensive counseling and improved education for women may potentially contribute to a higher adoption of LARC methods.

Keywords: LARC methods, women of reproductive age, urban community, Bangladesh.

Introduction

Bangladesh's government has pledged to end preventable infant and maternal deaths by 2030 in accordance with the Sustainable Development Goals (SDGs); however, despite numerous family planning initiatives, the unmet need for contraception is still significant, with unintended pregnancies making up about one-third of all pregnancies.[1] The contraceptive methods are broadly divided into two groups- spacing and terminal methods and they are again classified as short acting methods like condom, pills and long acting methods like Intrauterine Device (IUD), injectable, implants.[2] LARCs currently provide a number of benefits to women and couples who want to postpone, space out, or limit having children.[3] These benefits include being very effective, requiring little user intervention, being suitable for a wide range of women, being cost-effective in the long term, having low discontinuation and failure rates, being readily available, affordable, and having the potential to decrease the risk of unintended pregnancy, unsafe abortion, and maternal morbidity and mortality.[4]

Moreover, LARC methods are safe and recommended for use among the broad range of women who are seeking to control their fertility, including those with cardiovascular risk factors (such as diabetes and obesity), epilepsy, and physical or intellectual disabilities. Further, they are not contraindicated in nulliparous or nursing women, and may be used with no or minimal restriction in adolescents and peri-menopausal women.[5] Despite the benefits of LARC methods the users are found less in number in comparison to people using other methods in urban community due to lack of perception, source of supply, poor accessibility, myths and misinformation, fear of

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side effects etc.[6] Furthermore, prior perception of the method is necessary for the adoption of any contraceptive method. The success of counseling and sensitization of the risk population determines how well family planning methods are perceived, as well as any potential negative effects.[7] According to studies, 99% of Bangladeshis were aware of oral pills, followed by condoms (83%), and injectable (81%). Several other studies have also found that barrier methods are more effective in urban areas than in rural ones, but perceptions of LARC in Bangladesh's urban communities are limited.[8]

The rationale behind selecting mothers as responders is that they are more likely than women without children to be concerned about long-term family planning strategies. It would be easier to control the population and meet the SDG targets if we knew what factors influence LARC practices in urban settings.

Methods

Study design and settings

This community-based cross-sectional study was carried out to assess the factors influencing perceptions of long-acting reversible contraceptive methods among mothers in urban communities within Dhaka North City Corporation, Bangladesh.

Sample selection criteria

The study was conducted among 180 mothers of reproductive age (18-49 years) who had at least one living child under 2 years old prior to the interview. Women who had undergone bilateral tubal ligation were excluded from this study.

Data collection procedures

Both participating women and study places were selected purposively. From January to December 2022, a pretested face-to-face, semi-structured questionnaire was used to interview study participants at their convenience.

Data analysis plan

The data were checked, cleaned, categorized, and then analyzed using IBM SPSS Version 23 (New York, USA). Descriptive statistics were presented as frequency and percentage for categorical data, and as mean and standard deviation for continuous data. The chi-square test was used to assess the significance of associations between two nominal variables. A p-value of <0.05 at a 95% confidence interval (CI) was considered statistically significant for all tests.

Ethical statement

Participation was voluntary, and confidentiality was upheld. Informed written consent was obtained from each participant. The study was approved by the Institutional Review Board (IRB) of the National Institute of Preventive and Social Medicine (NIPSOM), Dhaka 1212, Bangladesh (Reference: NIPSOM/IRB/2017/09).

Results

Table 1 depicts that the mean age of respondents was 33.3±8.4 years, with over half (51.1%) in the 18-32 age group. The majority (96.7%) were Muslim, while 42.2% had an education level of secondary or higher, and 15.6% were illiterate. Among the husbands, nearly half (47.8%) had completed higher secondary education, while 11.7% were illiterate. (Figure I) Most respondents were homemakers (67.2%), followed by job holders (25.6%) and businesswomen (4.4%). The majority of husbands were employed (56.1%), with others working as businessmen (27.2%), and day laborers (15.6%). Family income for most respondents ranged between ≤50,000 taka (52.2%).

Table 2 shows that the mean duration of marriage was 13.6 ± 8.1 years, with 41.7% of respondents married for ≤10 years. A significant proportion of respondents (44.4%) did not use any type of contraceptive. Most respondents had never experienced an abortion (63.9%), while 36.1% had lost one or more children.

Table 3 shows that 80% of respondents were aware of LARC, while 20% were not. The majority (73.9%) knew about injectable contraceptives, followed by implants (57.8%) and IUDs (51.7%). The most commonly cited sources of information were relatives (56.1%) and neighbors (46.1%), while healthcare workers (31.1%), mass media (13.9%), and educational institutions (7.8%) played less significant roles. In terms of decision-making, the husband was primarily the decision-maker for choosing LARC (79.4%), while 18.3% of respondents made the decision themselves. (Figure II)

Table 4 outlines the association between women's perceptions of LARC and various influencing factors. Women's perceptions of LARC were significantly associated with both their own education and their husband's education ($p<0.05$).

Table 1: Socio-demographic profile of the women (n=180)

Attributes		Frequency (n)	Percent (%)
Age groups (in years)	18-32	92	51.1
	33-49	88	48.9
	Mean±SD	33.3±8.4	
Religion	Islam	174	96.7
	Others	6	3.3
Occupation	Homemaker	121	67.2
	Job holder	46	25.6
	Business	8	4.4
	Student	5	2.8
Husband's occupation	Job holder	101	56.1
	Business	49	27.2
	Day labour	28	15.6
	Jobless	2	1.1

Monthly family incomes (in Taka)	≤50,000	94	52.2
	50,001-100,000	51	28.3
	>100,000	35	19.4

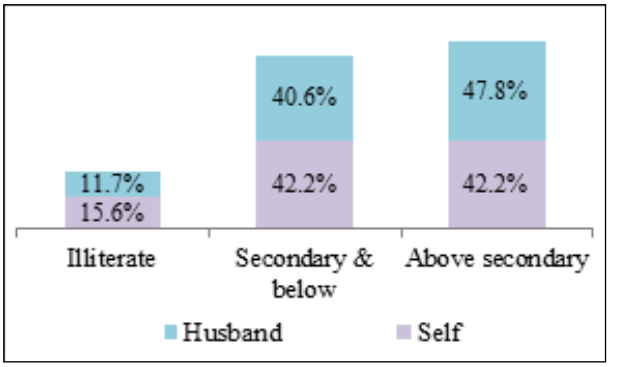

Figure-I: Educational state of both women and their husbands (n=180)

Table 2: Factors related to the reproductive health (n=180)

Factors		Frequency (n)	Percent (%)
Duration of marriage (in years)	≤10	75	41.7
	11-20	63	35.0
	>20	42	23.3
	Mean±SD	13.6±8.1	
Utilization status of contraceptive method	Not utilized	80	44.4
	Utilized	100	55.6
Duration of utilization CPM (in years) (n=100)	≤1	33	33.0
	>1	67	67.0
	Mean±SD	4.8±5.3	
History of abortion	0	115	63.9
	≥1	65	36.1

Table 3: Factors influencing the perception (n=180)

Factors		Frequency (n)	Percent (%)
LARC perception	Yes	144	80.0
	No	36	20.0
Perception about different types of LARC (n=144)	IUD	93	51.7
	Implant	104	57.8
	Injectable LARC	133	73.9
		*Multiple responses	
Sources of information (n=144)	Relatives	101	56.1
	Neighbors	83	46.1
	Healthcare workers	56	31.1
	Mass media	25	13.9
	Educational institutions	14	7.8
	Husband	8	4.4
		*Multiple responses	

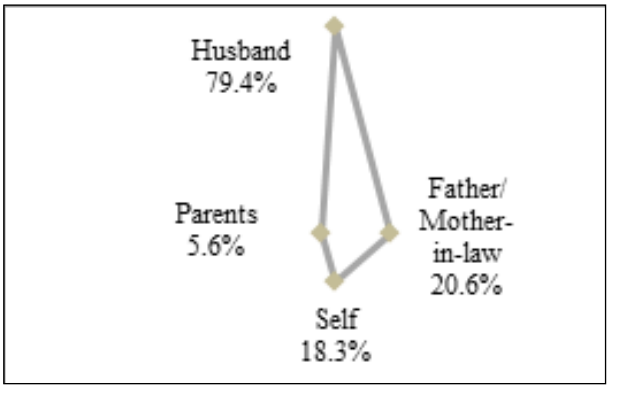

Figure-II: Decision-maker regarding the use of LARC (n=180)

Table 4: Association of LARC perception with different influencing factors (n=180)

Variables		Perception on LARC			χ2 value	p-value
		Yes	No	Total		
		n(%)	n(%)			
Age groups (in years)	18-32	79(54.9)	13(36.1)	92(51.1)	4.052	0.062
	33-49	65(45.1)	23(63.9)	88(48.9)		
Religion	Islam	139(96)	35(97.2)	174(96.7)	0.043	1.000
	Others	5(3.5)	1(2.8)	6(3.3)		
Education	Illiterate	21(14.6)	7(19.4)	28(15.6)	3.849	**0.049**
	Secondary & below	66(45.8)	10(27.8)	76(42.2)		
	Above secondary	57(39.6)	19(52.8)	76(42.2)		
Husband's education	Illiterate	17(11.8)	4(11.1)	21(11.7)	3.498	**0.043**
	Secondary & below	63(43.8)	10(27.8)	73(40.6)		
	Above secondary	64(44.4)	22(61.1)	86(47.8)		
Occupation	Homemaker	102(70.0)	19(52.8)	121(67.2)	6.057	0.076
	Job holder	32(22.2)	14(38.9)	46(25.6)		
	Business	7(4.9)	1(2.8)	8(4.4)		
	Student	3(2.1)	2(5.6)	5(2.8)		
Husband's occupation	Job holder	81(56.3)	20(55.6)	101(56.1)	1.883	0.595
	Business	38(26.4)	11(30.6)	49(27.2)		
	Day labour	24(16.7)	4(11.1)	28(15.6)		
	Jobless	1(0.7)	1(2.8)	2(1.1)		
Monthly family incomes (in Taka)	10,000-50,000	76(52.8)	18(50.0)	94(52.2)	0.121	0.970
	50,001-100,000	40(27.8)	11(30.6)	51(28.3)		
	>100,000	28(19.4)	7(19.4)	35(19.4)		
Duration of marriage (in years)	≤10	62(43.1)	13(36.1)	75(41.7)	2.516	0.292
	11-20	52(36.1)	11(30.6)	63(35.0)		
	>20	30(20.8)	12(33.3)	42(23.3)		
Number of abortion	0	89(61.8)	26(72.2)	115(63.9)	1.355	0.332
	≥1	55(38.2)	10(27.8)	65(36.1)		

Chi-square test done; $p<0.05$ considered as statistically significant value

Discussion

In this study mean age of the respondents was 33.3±8.4 years with 38.9% of them were in the age group of 36-49 years. In a study on LARC showed mean age of the surveyed women with at least one living child was 30.3 years.[9] There was no association found in this study between age of respondents and their LARC practice but in a study conducted in Ethiopia significant association was found between age of respondents with utilization of LARC[9]. Most of the respondents (96.7%) in this study were Muslims and there was no association found between religions of the respondents with their LARC practice. However, association with religion and other cultural factors are varies from community to community as no relationship found in these studies[10-15] but association found with religion in another study.[9]

As this study was conducted in an urban community a large number of highly educated couples are found such as 33.3% respondents were post graduate and 37.8% of their husbands were also postgraduate. Previous studies show that the higher educated women are more informed about various modern methods which influence them to use those. This study also found significant association ($p<0.05$) between education of the respondents as well as their husbands and their LARC practice.

Women's work status is also an important determinant of contraceptive use as well as method choice. The bargaining power and higher autonomy of economically active women results in higher likelihood of contraceptive use among them. Also as per previous studies women has high level of women's autonomy in urban areas than rural areas.[16]

This survey found that the majority of respondents in the urban community did not use any contraceptive method (44.4%), while 3.9% use withdrawal, a traditional method. These findings align closely with the BDHS

2017-18 data, which reported 34.6% non-users and 3.5% withdrawal users. Among modern methods, the top three used were condoms (20%), oral pills (18.3%), and injections (10.6%), closely resembling BDHS 2017-18 data, which showed injectable LARC at 10%, condoms at 12.4%, and oral pills at 24.9%.[17] Among the three types of LARC available, most respondents preferred injectable LARC due to its accessibility and ease of use. Remarkably, injectable LARC was more popular among women from lower socio-economic backgrounds, while women from higher socio-economic groups tended to prefer barrier methods.[18,19] Male partners of low-income respondents showed limited support for contraceptive use, citing concerns such as ignorance, fears of promiscuity, and decreased sexual pleasure with condoms. In contrast, most male partners from higher socio-economic urban backgrounds were supportive of family planning and willing to promote condom use.[20] NIPORT reports indicate that couples with longer marriages were more likely to use LARC methods compared to those with shorter marriages.[21] However, this study found no association between the duration of marriage and respondents' perceptions of LARC.

A study on LARC perception found that while over 84% of the population was aware of these methods, less than 5% were using them.[8] In contrast, this study showed that 80% of respondents were aware of LARC methods. Additionally, while another study reported that only 6.1% of urban women were highly satisfied with their contraceptive method, this study found that most LARC users (68%) were satisfied with their method.[22] Despite the expectation that most perceptions would be influenced by government and private health workers through home visits[9], the majority of perceptions came from relatives (56.1%) and neighbors (46.1%). Only 31.1% of perceptions were influenced by healthcare workers. A qualitative study in Pakistan found limited husband involvement in family planning decisions.[23] However, this study revealed active participation from husbands, with 79.4% being involved in the decision to use LARC. According to this study, the most frequent reason for not using LARC was fear of side effects.[24]

Conclusion

The study revealed that both the education of the women and their husbands influenced their perceptions. It is predicted that access to good information will positively impact future intentions to use contraception by shaping perceptions. Policymakers should emphasize the need for family planning providers and advocates to remain highly clear and explicit in their interventions.

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