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MYTHS AND MISCONCEPTIONS REGARDING THE USE OF LONG-ACTING REVERSIBLE CONTRACEPTION BY WOMEN IN AJK

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Abstract

Objectives: *To determine the frequency of myths and misconceptions regarding the use of long-acting reversible contraception among women in AJK, Pakistan.*

Study design: *Cross sectional study.*

Place and Duration of the study: *Abbas Institute of Medical Sciences (AIMS), Muzaffarabad from September 2024 to March 2025.*

Methodology: *A total of 343 women seeking maternal & child health services and family planning services were included. They were interviewed in detail to determine different myths and misconceptions regarding the use of long-acting reversible contraception. Data was analyzed using SPSS version 22.*

Results: *In this study, 343 patients were included. Median age was 29.00 (41.00 – 18.00) years. Median age at marriage was 21.00 (33.00 – 16.00) years. Median age at the birth of the first child 22.00 (33.00 – 17.00) years. Frequency of myths and misconceptions regarding the use of long-acting reversible contraception was 165 (48.10%). Amongst these patients (n = 165), most common myth & misconception regarding LARC use was that it is very difficult to get pregnant after stopping using contraceptives that was found in 39 (23.64%) patients followed by perception that their use causes infertility found in 34 (20.60%) women, displeasure of God found in 28 (16.97%) women and perception that their use adversely affect women's health found in 28 (16.97%) women.*

Conclusion: *Myths and misconceptions regarding the use of long-acting reversible contraception among women in AJK, Pakistan is too high reported at 48.10%.*

INTRODUCTION

Pakistan is the fifth largest country of the world due to overpopulation with such a high proportion of population being young people, which has presented an obstacles to the state's social, economic and political institutions. [1] Multiparity, specifically the grand multiparity, is one of the factors that contributes to an increasing population and is one of the causes of population growth. [2] This phenomenon is becoming less of a concern in many affluent countries, with a low incidence, however it remains a major public health concern in underdeveloped countries. [3] Multiparity as well as grand multiparity has been linked to an increased risk of maternal and neonatal morbidity and mortality [4, 5]

Long acting reversible contraception (LARC) is considered one of the most useful contraception method to counter the existent public health issue of multiparty and grand multi-parity to improve womens' health and control the growing population [6] There are several types of LARC that are generally

prescribed by gynecologists and obstetricians including intrauterine devices (copper and levonorgestril) and sub-dermal implants (explanon and implanon) [7] These are cheap and easily available products that are highly effective [7] However, it has been observed that many women abandon the use of LARC and remove it prematurely owing to various misconceptions and myths [8, 9] In fact, a study which was conducted in a developing country, it was reported that the frequency of patients who discontinued the use of LARC early due to the heard myths and self-perceived misconceptions regarding the use of LARC was 60.7% [10]

Myths and misconceptions that drive the patients away from the use of LARC or their early removal in cases of prior use vary with the changing demographics as countries and regions differ greatly in their culture and values. Present study focuses on determining the frequency of myths and misconceptions regarding the use of long-acting reversible contraception among women of local population of Azad Jammu & Kashmir, Pakistan that drive the removal of LARC. This may help in assessing the patient education regarding LARC and planning measures that can help solving the myths and misconceptions related to LARC causing either rejection to their use in the first place or early removal.

METHODOLOGY

This cross sectional study was conducted at Abbas Institute of Medical Sciences (AIMS), Muzaffarabad from September 2024 to March 2025 after getting synopsis approval (Ref No: CPSP/REU/OBG-2021-107-11354). Sample size calculation was performed using following formula:

For calculation a confidence level of 95% was taken along with absolute precision of 5% and anticipated frequency of myths and misconceptions regarding use of LARC at 33.6% [11]. This gave a sample size of 343 which was selected by using non-probability consecutive sampling technique.

Inclusion criteria:

Married women aged 18-49 years who visited the Department of Gynae & Obstetrics, AIMS, Muzaffarabad for seeking maternal & child health services along with family planning services were included.

$$n = \frac{z^2_{1-\alpha/2} P(1-P)}{d^2}$$

Exclusion criteria:

Unmarried females, pregnant women, women with a history of recent childbirth, Women with a history of recent LARC use (within the past six months) and women with a history of prior participation in family planning educational programs were excluded.

Before inclusion in the study, an informed written consent was obtained from every patient. Primary data was collected from the patients by the researchers, which included their personal information such as age, age at menarche, age at marriage, age at the birth of the first child, parity, number of children, number of desired children, education level of the patient and her husband, area of residence, decision-maker for contraceptive use, previous contraceptive usage, type of contraceptive used (if used previosuly) and awareness of intrauterine devices (IUDs) and contraceptive implants. After this a detailed interview was performed by the research team in the native language for better understanding of the patient's perception regarding the use of LARC. With the help of information gathered through the interview, different myths and misconceptions the patients had regarding long acting reversible contraception use were identified.

Data analysis was done through Statistical Package for Social Sciences (SPSS) software version 22.00. Normality of quantitative data was checked by Shapiro-Wilk test which showed that (patient's age, age at menarche, age at marriage, age at the birth of the first child, number of children and number of desired children) were not normally distributed and were thus represented as median with interquartile range (IQR). Qualitative variables (parity, education level of the patient and her husband, area of residence, decision-maker for contraceptive use, previous contraceptive usage, type of contraceptive used, awareness of intrauterine devices (IUDs) & contraceptive implants and myths & misconceptions regarding LARC use) were represented by using percentage and frequency. Frequency of presence of

myths and misconceptions regarding the use of LARC was be stratified according to patient education, area of residence, decision-maker for contraceptive use, patient's age, age at menarche, age at marriage, age at the birth of the first child, number of children and number of desired children. Post-stratification, Chi-square test was used with a p-value of ≤ 0.05 taken as statistically significant.

RESULTS

In this study, 343 patients were included. Median age was 29.00 (41.00 – 18.00) years. Median age at menarche was 13.00 (16.00 – 10.00) years. Median age at marriage was 21.00 (33.00 – 16.00) years. Median age at the birth of the first child 22.00 (33.00 – 17.00) years. Median number of children was 2.00 (8.00 – 1.00). Median number of desired children was 4.00 (8.00 – 2.00). Majority of the women were multiparous 193 (56.27%). A total of 224 (65.31%) women were resident of rural area making up the majority. Major decision maker for contraceptive use was husband with a frequency of 151 (44.02%). Previous use of contraceptives was found only in 63 (18.37%) of the patients with majority of them 35 (55.56%) using intrauterine device. Demographic features of women in present study are demonstrated in detail below in Table-I:

Table-I: Demographic features of women (n = 343)

Median age	29.00 (41.00 – 18.00) years
< 35 years	287 (83.67%)
≥ 35 years	56 (16.33%)
Median age at menarche	13.00 (16.00 – 10.00) years
< 14 years	197 (57.43%)
≥ 14 years	146 (42.57%)
Median age at marriage	21.00 (33.00 – 16.00) years
< 25 years	245 (71.43%)
≥ 25 years	98 (28.57%)
Median age at birth of first child	22.00 (33.00 – 17.00) years
< 25 years	224 (65.31%)
≥ 25 years	119 (34.69%)
Parity	
Primiparous	150 (43.73%)
Multiparous	193 (56.27%)
Median number of children	2.00 (8.00 – 1.00)
< 4	225 (65.60%)
≥ 4	118 (34.40%)
Median number of desired children	4.00 (8.00 – 2.00)
< 5	225 (65.60%)
≥ 5	118 (34.40%)
Education level of patient	
Illiterate	206 (60.06%)
Literate	137 (39.94%)
Education level of her husband	
Illiterate	179 (52.19%)
Literate	164 (47.81%)
Area of residence	
Urban	119 (34.69%)
Rural	224 (65.31%)

Major decision maker for contraceptive use	
Husband	151 (44.02%)
Women herself	97 (28.28%)
Joint decision	95 (27.70%)
Previous use of contraceptives	
Yes	63 (18.37%)
No	280 (81.63%)
Type of previously used contraceptive	**(n = 63)**
Intrauterine device (IUD)	35 (55.56%)
Oral contraception	14 (22.22%)
Implants	14 (22.22%)
Awareness regarding IUD	
Yes	174 (50.73%)
No	169 (49.27%)
Awareness regarding implants	
Yes	42 (12.24%)
No	301 (87.76%)

In present study, frequency of myths and misconceptions regarding the use of long-acting reversible contraception (LARC) among women in AJK, Pakistan was 165 (48.10%). This is shown in Figure-1 below:

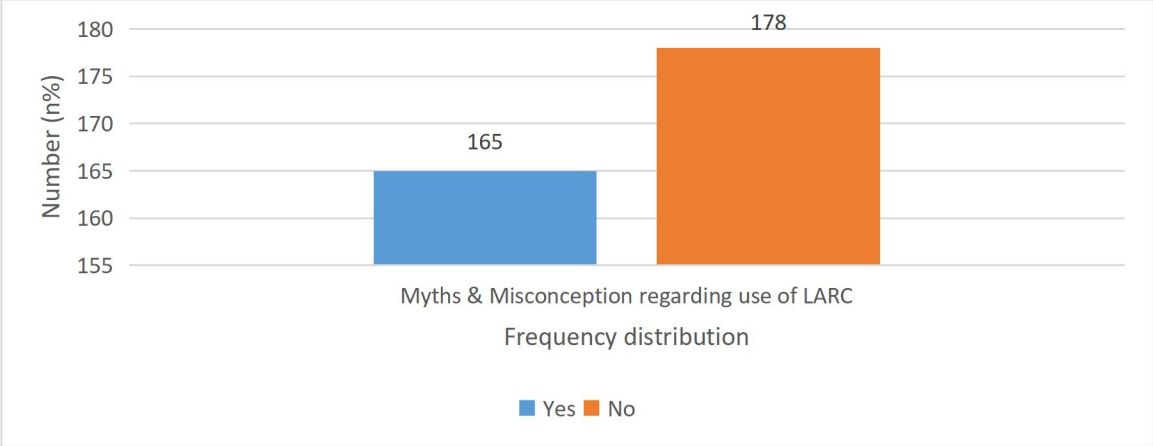

Figure-1: Frequency of presence of myths and misconceptions regarding the use of LARC (n = 343)

Amongst these patients (n = 165), most common myth & misconception regarding LARC use was that it is very difficult to get pregnant after stopping using contraceptives that was found in 39 (23.64%) patients followed by perception that their use causes infertility found in 34 (20.60%) women, displeasure of God found in 28 (16.97%) women and perception that their use adversely affect women's health found in 28 (16.97%) women. Spectrum of various myths and misconceptions regarding the use of LARC are given below in Table-II:

Table-II: Spectrum of various myths and misconceptions regarding the use of LARC (n = 165)

Myth & Misconception	n (%)
Contraceptives adversely affect women's health	28 (16.97%)
Contraceptives are for older women only	1 (0.61%)
Contraceptives cause displeasure of God	28 (16.97%)
Contraceptives cause weight gain	7 (4.24%)

Contraceptives reduce sexual pleasure	13 (7.88%)
Contraceptive use results in birth defects in babies	14 (8.48%)
Injectable contraceptives cause infertility	34 (20.61%)
It is very difficult to get pregnant after stopping using contraceptives	39 (23.64%)
IUD can travel up to the heart by penetrating the uterus	1 (0.61%)

Stratification of frequency of presence of myths and misconceptions regarding the use of LARC according to patient's age, age at menarche, age at marriage, age at the birth of the first child, number of children, number of desired children, patient education, area of residence and decision-maker for contraceptive use is given below in Table-III:

Table-III: Stratification of frequency of presence of myths and misconceptions regarding the use of LARC by various parameters (n = 343)

Stratification by patient's age			
Myths and misconceptions present	**< 35 years (n = 287)**	**≥ 35 years (n = 56)**	**p-value**
Yes	130 (45.30%)	35 (62.50%)	0.018
No	157 (54.70%)	21 (37.50%)	
Stratification by age at menarche			
Myths and misconceptions present	**< 14 years (n = 197)**	**≥ 14 years (n = 146)**	**p-value**
Yes	116 (58.88%)	49 (33.56%)	< 0.001
No	81 (41.12%)	97 (66.44%)	
Stratification by age at marriage			
Myths and misconceptions present	**< 25 years (n = 245)**	**≥ 25 years (n = 98)**	**p-value**
Yes	109 (44.49%)	56 (57.14%)	0.034
No	136 (55.51%)	42 (42.86%)	
Stratification by age at the birth of first child			
Myths and misconceptions present	**< 25 years (n = 224)**	**≥ 25 years (n = 119)**	**p-value**
Yes	95 (42.41%)	70 (58.82%)	0.004
No	129 (57.59%)	49 (41.18%)	
Stratification by number of children			
Myths and misconceptions present	**< 4 (n = 225)**	**≥ 4 (n = 118)**	**p-value**
Yes	95 (42.22%)	70 (59.32%)	0.003
No	130 (57.78%)	48 (40.68%)	
Stratification by number of desired children			
Myths and misconceptions present	**< 5 (n = 225)**	**≥ 5 (n = 118)**	**p-value**
Yes	103 (45.78%)	62 (52.54%)	0.234
No	122 (54.22%)	56 (47.46%)	
Stratification by patient education			
Myths and misconceptions present	**Illiterate (n = 206)**	**Literate (n = 137)**	**p-value**
Yes	119 (57.77%)	46 (33.58%)	< 0.001
No	87 (42.23%)	91 (66.42%)	

Stratification by area of residence			
Myths and misconceptions present	Rural (n = 224)	Urban (n = 119)	p-value
Yes	116 (51.79%)	49 (41.18%)	0.061
No	108 (48.21%)	70 (58.82%)	
Stratification by decision-maker for contraceptive use			
Myths and misconceptions present	Husband (n = 151)	Women herself (n = 97)	Joint decision (n = 95)	p-value
Yes	70 (46.36%)	42 (43.30%)	53 (55.79%)	0.189
No	81 (53.64%)	55 (56.70%)	42 (44.21%)	

DISCUSSION

Pakistan's contraceptive prevalence rate (CPR) has remained stagnant at 30-35% since 2007, despite committing to raising it to 55% by 2020. [12] This lack of progress is concerning, as it means many women in Pakistan are unable to use contraception to limit the size of their families which leads to unplanned pregnancies with negative consequences for both mothers and children [13]. This issue is compounded by limited access to healthcare in many parts of Pakistan. The low CPR in Pakistan can be attributed to several factors [14, 15]. Cultural norms and religious beliefs may discourage the use of contraception while myths and misconceptions about modern contraceptives are also prevalent in many communities. These inaccurate beliefs can impede contraceptive use, hindering effective family planning programs and negatively impacting women's health. [16, 17] Present study thus aimed to find the magnitude of such myths and misconceptions regarding LARC in women of AJK, Pakistan.

In present study, based on the median age values, it was evident that most of the women got married and had their first baby at a fairly younger age, and majority of these women were resident of the rural locality. This trend is in line with the social norms and practices of rural Pakistan where most girls are married at a very younger age. [18] In context of history, this is a good thing since childhood marriages rate have somewhat been replaced by these younger age but adult marriages due to several efforts to prevent childhood marriages by the government. [19] In terms of decision making regarding contraception, the main decision maker was found to be husband. This can be viewed by both the optimistic (in the form of a husband caring for the health and prosperity of his wife and family) and pessimistic (in the form of male domination over the decision making regarding the choice of women over her body and needs) angle.

Major concern which was the primary subject matter of this research was that still in this modern day and age, a large proportion of women, 48.10% to be precise, still have a variety of myths and misconceptions regarding the use of LARC. Compared to this, Siddiqui et al. [6] conducted a study in women of Karachi regarding the myths associated with contraception usage and found that 33.6% of respondents believed in such myths and misconceptions. Interestingly, when it comes to the specific myth related to LARC, present study found that most common misconception was not related to the religious beliefs, rather it was the chance of not being able to get pregnant after LARC discontinuation. This is an alarming finding since in Pakistan, hyper-fertility & multi-parity due to poor family planning practices should be the concern of women rather than concern of infertility despite of already having children. In another study conducted by Eshak et al. [20] in Upper Egypt, it was revealed that a significant 88.7% of women held one or more misconceptions about contraceptives. In another study conducted in India, this frequency of believing in myths surrounding LARC use was even higher and was reported in 59% of the women. [21]

A unique feature of present study was analysis of impact of various demographic features on believing in these myths and misconceptions related to LARC. Analysis revealed that the frequency of myths and misconceptions regarding the use of was significantly higher among women who were of older age, had menarche at a younger age, got married and had multiple children at a relatively older age while there was no impact of desired number of children, area of residence and decision maker regarding use of

contraception on the frequency of these myths and misconceptions surrounding LARC.

Present study sheds light on an important public health issue and shows the need of careful and robust conductance of educational programs regarding family planning and LARC use. This may help alleviating these myths and misconceptions and cope with the growing challenge of overpopulation in Pakistan. There were no limitations of present study.

CONCLUSION

In conclusion, 48.10% of the women resident of AJK, Pakistan had myths and misconceptions regarding the use of long-acting reversible contraception with the most common one being very difficult to get pregnant after stopping using contraceptives.

CONFLICT OF INTEREST

None.

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None

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