

# Concerns About Contraception and Future Fertility: Prevalence Among Young Individuals and Its Impact on Contraceptive Use and Reproductive Health

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## ABSTRACT

**Background:** Young individuals frequently worry about how birth control will affect their ability to have children in the future, which affects their contraceptive selection decisions. The spread of false information, combined with social traditions, creates barriers to birth control adoption, thus producing unwanted births along with unmet reproductive requirements. The study aimed to assess the prevalence of fear about contraceptive use and fertility changes among young individuals and their impact on their reproductive health.

**Methods:** A cross-sectional study was conducted in Jinnah Sindh Medical University, Karachi, between 1st March 2025 to 1st August 2025, among 400 participants aged 18-30 years in Peshawar, Pakistan, using a convenience sampling technique. A structured questionnaire was used to collect data on demographic factors, contraceptive knowledge, and fertility concerns. Statistical analysis was performed using SPSS version 26, with chi-square tests applied to assess associations between variables.

**Results:** The study found that 141 (52.02%) of married individuals had concerns about contraception affecting fertility, compared to 39 (30%) of unmarried individuals ( $p = 0.002$ ). Concerns were higher among those who never used contraception 101 (71.1%) versus past users 79 (30.6%) ( $p < 0.001$ ). Intrauterine device users 21 (52.5%) had the highest concerns, while condom users had the lowest 11 (31.4%) ( $p < 0.05$ ). Myths ( $p < 0.001$ ), cultural beliefs ( $p = 0.003$ ), fear of infertility ( $p < 0.001$ ), and past side effects ( $p = 0.007$ ) increased concerns, while healthcare provider counseling reduced them ( $p < 0.001$ ).

**Conclusion:** Misconceptions regarding contraception and fertility are widespread among young individuals in Peshawar, particularly among women and those with lower education levels. Addressing these concerns through targeted educational programs and awareness campaigns is essential to improving contraceptive acceptance and reducing unintended pregnancies.

**Keywords:** Contraception, Reproductive Health, Young Individuals, Family Planning.

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## INTRODUCTION

The ability to make decisions about when and how many children to have depends directly on contraception; thus, reproductive health remains closely bound to this practice<sup>1</sup>. WHO (2020) reports that contraceptive methods substantially decrease unexpected pregnancies and enhance maternal health, together with child health results<sup>2</sup>. Young adults widely hold misconceptions regarding contraception despite universal knowledge of its importance, since they believe birth control affects future fertility potential<sup>3</sup>. The fear regarding contraception leads individuals to avoid birth control methods, which produces high fertility numbers and more unplanned pregnancies, particularly in developing nations<sup>4</sup>.

The widespread misconceptions about birth control methods act as a major obstacle for Pakistani citizens who want to use contraception due to the rapid population expansion and elevated birth rates<sup>5</sup>. Individuals living in the urban area of Peshawar, along with others across Pakistan, hold the misconception that contraceptive methods, specifically hormonal contraceptives together with intrauterine devices (IUDs), might cause infertility or enduring reproductive health issues<sup>6,7</sup>. The CPR of 34% identified by the Pakistan Demographic and Health Survey (PDHS 2017-18) sits under international contraceptive use standards<sup>8</sup>. Female and male youth worry about becoming infertile in the future, which serves as the main reason why they avoid birth control use<sup>9</sup>.

Multiple socio-economic conditions combined with educational level and cultural values, as well as healthcare accessibility, determine the fear individuals have about birth control affecting their ability to conceive children<sup>10</sup>. According to research, individuals who have limited education tend to think birth control methods cause permanent infertility<sup>11</sup>. The absence of proper counseling by healthcare providers regarding infertility during contraceptive consultations allows misinformation to worsen.

Religious and cultural beliefs deeply influence what concerns individuals have about contraception methods<sup>10</sup>. Young individuals view contraception as contrary to nature while believing the Divine will oppose these methods<sup>12</sup>. Patriarchal communities esteem big families, so individuals may stay without

birth control because their family members or spouses enforce this choice<sup>13</sup>. Research shows that Pakistani individuals avoid contraception because of wrong religious views, which fuel worries about childlessness<sup>14-15</sup>.

Healthcare professionals need to target their interventions toward informing patients accurately about the fertility-related effects of birth control methods. The reduction of misconceptions will be achieved by implementing extensive reproductive health education while improving counselling sessions and running community-based engagement approaches. The study determined how common concerns about contraception's fertility effects are among younger individuals and investigates the relationship of these fears to contraceptive distribution and reproductive decisions.

Family planning research has achieved extensive growth but has overlooked specific matters about contraception affecting future fertility for Pakistan's youth. The combination of false information with cultural beliefs causes an acceptance of low contraception use rates, which results in high birth rates alongside unfulfilled contraceptive needs. The present research investigates both the prevalence and influence of fertility concerns when individuals make decisions about birth control methods. Knowledge of these elements enables policymakers to develop programs aimed at boosting contraceptive adoption and reproductive wellness achievements. The study aimed to assess the prevalence of concerns regarding contraception's impact on future fertility among young individuals and its influence on contraceptive use and reproductive health decisions.

## METHODS

A cross-sectional study was conducted in Jinnah Sindh Medical University (JSMU), Karachi, Pakistan, between 1st March 2025 to 1st August 2025. Ethical approval was obtained from the Ethical Research Committee (ERC) of the Jinnah Sindh Medical University (Approval No: CM/ERC/2024/48; Dated: 11-02-2025). Written permissions were secured from hospital authorities and District Health Officers for conducting the study. Participants were assured confidentiality and anonymity, and their responses were kept strictly confidential. Participants had the right to withdraw at any stage without any conse-

quences. The sample size was calculated using OpenEpi software, with a 95% confidence level and a 5% margin of error. Based on previous literature, an anticipated prevalence of 69% of individuals expressing concerns about contraception affecting fertility was used for the calculation<sup>16</sup>. The final estimated sample size was 400 participants.

A convenience sampling technique was used to recruit participants. The study included both married and unmarried individuals aged 18-35 years, representing young individuals in reproductive age groups. Participants were recruited from outpatient departments, family planning clinics, and reproductive health units of selected hospitals. The inclusion criteria comprised young men and women aged 18-35 years or those who have heard of or used contraception at least once, and individuals willing to provide informed consent. Women who are currently pregnant or with a known history of infertility and those unwilling to participate in the study were excluded.

Data was collected using a structured questionnaire developed after a thorough literature review and validated by public health and reproductive health experts<sup>17</sup>. The questionnaire was initially pre-tested on 30 individuals for clarity and reliability before final data collection. It included socio-demographic information i.e. Age, gender, marital status, education level, employment status, socioeconomic background, awareness and use of Contraception i.e. knowledge about different contraceptive methods, personal experience with contraception, and

reasons for choosing/not choosing a method, concerns about contraception and fertility i.e. participants were asked if they believed contraception could affect their future fertility, whether these concerns influenced their contraceptive choices, and the sources of their information (family, health-care providers, media) and healthcare and social influences i.e. access to family planning services, quality of counselling received, and the role of cultural or religious beliefs in shaping contraceptive concerns.

Trained male and female data collectors conducted face-to-face interviews to ensure participant comfort. Each participant was informed about the study's purpose, and verbal and written informed consent was obtained before participation. Interviews were conducted in Urdu or regional languages, depending on participant preference. Completed questionnaires were reviewed daily to ensure data completeness and accuracy.

Data was entered and analyzed using SPSS version 26. Descriptive statistics were used to summarize socio-demographic characteristics, contraceptive knowledge, and the prevalence of fertility concerns. Chi-square tests were conducted to assess the association between concerns about contraception and contraceptive use, with statistical significance set at  $p < 0.05$ . Multivariate logistic regression was performed to identify key predictors of contraceptive concerns among young individuals.

## RESULTS

Table 1: Socio-Demographic Characteristics of Participants (n = 400)

Variable	Frequency (n)	Percentage (%)
<b>Marital Status</b>		
Married	271	67.7%
Unmarried	129	32.2%
<b>Education Level</b>		
No Formal Education	49	12.2%
Primary Education	51	12.7%
High School	139	34.7%
University Degree	161	40.25%
<b>Employment Status</b>		
Employed	225	56.2%
Unemployed	175	43.75%

Among the 400 participants, the majority were married, 271 (67.7%), while 129 (32.2%) were unmarried. Regarding educational background, 161(40.25%) had a university degree, and 139 (34.7%) had completed high school, whereas 49 (12.2%) had no formal education. More than half of the participants, 225(56.2%), were employed, while 175 (43.75%) were unemployed **Table 1**.

**Table 2: Prevalence of Concerns About Contraception and Future Fertility among Study Participants (n = 400)**

Variable	Total (n=400)	Concerned About Fertility		p-value
		Yes	No	
<b>Marital Status</b>				
Married	270	141 (52.2%)	129 (47.7%)	0.002**
Unmarried	130	39 (30.0%)	91 (70.0%)	
<b>Ever Used Contraception</b>				
Yes	258	79 (30.6%)	179 (69.3%)	<0.001**
No	142	101 (71.1%)	41 (28.8%)	
<b>Type of Contraception Used</b>				
Oral Contraceptive Pills	100	39 (39.0%)	61 (60.0%)	0.002**
Injectable Contraceptives	60	29 (48.3%)	31 (51.6%)	0.001**
Intrauterine Device (IUD)	40	21 (52.5%)	19 (47.5%)	0.004**
Condoms	35	11 (31.4%)	24 (68.5%)	0.008**
Withdrawal Method	23	10 (43.4%)	13 (56.5%)	0.015**

\*Chi-square test, \*p < 0.05 is statistically significant.

Concerns about the impact of contraception on future fertility were reported by 131 (52.2%) of married participants, which was significantly higher than 39 (30%) of unmarried participants (p = 0.002). Prior use of contraception showed a significant association with concerns; 101 (71.1%) of those who had never used contraception expressed concerns, compared to 79 (30.6%) of those with a history of contraceptive use (p < 0.001). The type of contraception used also influenced concerns. Among users, the highest proportion of concerns was observed in participants using intrauterine devices 21 (52.5%), followed by injectable contraceptives 29(48.3%), and oral contraceptive pills 39(39.0%). Participants using condoms 11 (31.4%) and the withdrawal method 10 (43.4%) reported relatively lower concerns. These associations were statistically significant (p < 0.05 for all methods) **Table 2**.

**Table 3: Factors Associated with Concerns About Contraception Affecting Future Fertility (n=400)**

Factor	Concerned About Fertility		aOR (95% CI)	p-value
	Concerned	Not Concerned		
Heard myths about contraception	141 (35.2%)	79 (19.7%)	3.22 (2.04–5.03)	<0.001**
Received counseling from a healthcare provider	39 (9.75%)	161 (40.2%)	0.30 (0.20–0.53)	<0.001**
Influenced by cultural/religious beliefs	111 (27.7%)	89 (22.25%)	2.09 (1.35–3.21)	0.003**

Ever discussed contraception with a doctor	81 (11.0%)	169 (42.25%)	0.43 (0.27–0.69)	<0.001**
Perceived contraception as harmful to health	96 (24.0%)	54 (13.5%)	2.88 (1.77–4.69)	0.003**
Partner's disapproval of contraception	76 (19.0%)	41 (10.2%)	2.13 (1.31–3.48)	0.002**
Fear of infertility due to contraception	121 (30.2%)	39 (9.75%)	4.66 (2.79–7.78)	<0.001**
Ever experienced the side effects of contraception	61 (15.2%)	29 (7.2%)	2.55 (1.43–4.54)	0.007**

(\*Multivariate logistic regression analysis; \*p < 0.05 is statistically significant)

Multivariate logistic regression analysis identified several factors significantly associated with concerns regarding contraception and fertility. Participants who had heard myths about contraception were more than three times as likely to express concerns (aOR: 3.22, 95% CI: 2.04–5.03, p < 0.001). Conversely, receiving counseling from a healthcare provider significantly reduced concerns (aOR: 0.30, 95% CI: 0.20–0.53, p < 0.001). Cultural and religious beliefs also played a notable role, with those influenced by such beliefs being twice as likely to have concerns (aOR: 2.09, 95% CI: 1.35–3.21, p = 0.003). Similarly, perceiving contraception as harmful to health (aOR: 2.88, p = 0.003) and partner disapproval of contraception (aOR: 2.13, p = 0.002) significantly increased concerns. The most influential factor was fear of infertility due to contraception, which had the highest odds ratio (aOR: 4.66, 95% CI: 2.79–7.78, p < 0.001). Additionally, experiencing side effects from contraception was also associated with a 2.55-fold increase in concerns (p = 0.007), **Table 3**.

## DISCUSSION

This research evaluated the anxieties faced by young individuals regarding the effects of birth control on their future childbearing potential while evaluating behavioral and sociodemographic elements that connect to their concerns. The study findings showed that the majority of the participants maintain incorrect ideas about contraception that subsequently affect their contraceptive decisions. The study discovered that married women, together with persons uninformed about contraception and those susceptible to cultural beliefs, showed the highest level of fear. Previous studies show that the identified gaps in reproductive health education require specific interventions focused on addressing these gaps.

Married women showed a higher rate of 52.2% who feared contraception would affect their ability to have children than their unmarried counterparts at 30.0%. A study discovered that married women shared higher concerns about long-term contraceptive practices that might reduce their ability to have children<sup>18</sup>. Marital relationships contribute to this phenomenon because married women usually plan for pregnancy, so they tend to receive misinformation from healthcare providers, together with peers and family members, about birth control methods.

Our research confirms previous studies, which show that inexperienced contraceptive users showed

higher fertility concerns at 71.1%, yet women who used birth control previously expressed fewer concerns at 30.6%. A study conducted in New Zealand revealed that women without contraceptive experience demonstrate greater skepticism and fear about fertility effects because of their unfamiliarity with contraception, making such education crucial for society<sup>19</sup>.

The choice of contraception among women contributed actively to their level of concern. The individuals who used injectable contraceptives along with intrauterine devices reported the most worrying attitudes towards fertility impairment in our research. The results from a research supported our findings by showing that injectable contraceptives and long-acting reversible contraceptives (LARCs) led women to misconceive delayed fertility<sup>20</sup>. The concern levels for condom users (31.4%) and withdrawal method users (43.4%) were lower since these methods do not modify reproductive ability.

Our statistical analysis established that hearing myths related to contraception function (p < 0.001) demonstrated the most powerful relationship with fertility concerns. Similar research findings emerged from Denmark, which discovered that misinformation spread by social connections or media platforms strongly affected individuals who fear contraception diminishing their future fertility ability<sup>21</sup>. No evidence-based public health initiatives should address these persistent myths because they

continue to spread misinformation.

Women who received counselling from healthcare providers demonstrated significantly fewer fertility concerns based on the results ( $p < 0.001$ ). The research conducted in Switzerland demonstrated that broader contraceptive teaching methods both reduced misunderstandings and boosted user confidence in contraception<sup>22</sup>. In various low-resource areas, contraceptive counselling at a basic quality level persists, yet it leads women to maintain ongoing concerns and fears.

Women from cultures or religions influenced by belief systems showed double the rate of contraception concerns in comparison to other women ( $p = 0.003$ ). Literature supports this finding and shows that cultural norms lead to negative views about birth control, which prevents its use because of concerns about infertility and divine displeasure. Health professionals need to develop reproductive health education programs based on the cultural backgrounds and religious beliefs of different communities to provide proper guidance.

The investigation revealed that females who encountered contraceptive side effects demonstrated higher levels of fertility worries than those without these side effects ( $p = 0.007$ ). The research findings support this observation because negative experiences with contraception among individuals or their friends lead to abandonment and reluctance toward effective birth control methods in the future<sup>23-24</sup>. The resolution of side effects develops through individual contraceptive education, and follow-up assistance enables women to combat their concerns about fertility.

Women whose partners disapproved of contraception methods faced a double risk ( $p = 0.002$ ) of expressing fertility concerns. According to research, male partner negativity toward birth control directly affects both female birth control decision-making processes and the successful continuation of contraceptive use<sup>25</sup>. Men must get involved with reproductive health discussions as this step enhances contraceptive uptake and erases misperceptions about fertility.

The study demonstrated an immediate requirement for complete contraceptive education initiatives, which must instruct both male and female students. Misunderstandings about how contraception affects fertility spread extensively throughout society, yet properly aimed interventions, starting with community-focused awareness efforts, digital education initiatives, and face-to-face counseling, will promote more contraceptive use. The successful implementation of reproductive health programs requires programs to integrate approaches that feel

relevant to the values of traditional cultures and religious belief systems. Religiously trained leaders and community elders, together with male partners, should have open discussions about contraception safety and advantages to boost its acceptance and eliminate negative responses.

## CONCLUSION

The research showed that women express fertility concerns due to their misconceptions along with cultural and previous contraception experiences. The research results support previous studies by demonstrating that infertility fears function as the primary inhibition for contraceptive adoption among women who lack contraceptive exposure and those who follow society's misconceptions. Evidence-based health education, along with contraceptive counselling and community involvement, stands as an important element for getting better reproductive outcomes and helping young individuals to be informed regarding contraception.

## LIST OF ABBREVIATIONS

**IUD:** Intrauterine Device

**WHO:** World Health Organization

**LARCs:** Long-Acting Reversible Contraceptives

**PDHS:** Pakistan Demographic and Health Survey

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## CONFLICT OF INTEREST

None

## ETHICAL APPROVAL

Ethical approval was obtained from the Ethical Research Committee (ERC) of the Jinnah Sindh Medical University (Approval No: CM/ERC/2024/48; Dated: 11-02-2025).

## AUTHORS' CONTRIBUTION

All Authors Contributed equally as per ICMJE.

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