

POPULATION CONTROL IN PAKISTAN WITH REFERENCE TO MOTHER'S HEALTH

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Abstract

The rapid population growth in Pakistan presents serious challenges to maternal health, placing women at heightened risk of complications during pregnancy, childbirth, and the postpartum period. Frequent and closely spaced pregnancies, often due to limited access to family planning services, significantly contribute to maternal morbidity and mortality.

Participants: This study investigates the impact of population control awareness and practices on maternal health by surveying 150 women receiving maternal care in public hospitals across Lahore, Pakistan.

Data Collection: Using a structured questionnaire, the research explores the frequency of pregnancies, use of contraceptives, access to reproductive health services, and awareness of family planning. A survey was conducted from government hospitals located in Lahore.

Findings: Findings reveal that limited knowledge and accessibility to population control measures contribute to high-risk pregnancies and poor maternal outcomes. The study underscores the urgent need to integrate population control strategies with maternal healthcare services, ensuring that women are empowered with the knowledge and resources to make informed reproductive choices. Improved access to family planning and strengthened maternal care services are critical to safeguarding women's health in Pakistan.

INTRODUCTION

Pakistan faces a mounting public health challenge as its population surpasses 240 million, exerting significant pressure on maternal health services (Wikipedia, 2024). The country's maternal mortality ratio (MMR) remains alarmingly high, fluctuating around 186 deaths per 100,000 live births in 2019—with rural regions disproportionately affected compared to urban areas (Midhet et al., 2025; Wikipedia, 2024). Frequent and closely spaced

pregnancies, a hallmark of the nation's population dynamics, exacerbate maternal risks by elevating the incidence of anemia, hemorrhage, hypertensive disorders, and preterm births (Midhet et al., 2025; Asif et al., 2023).

In Pakistan, the rate of access and use of family planning services is not ideal and the prevalence of contraceptives has hovered around 3033% in recent decades (Wikipedia, 2024; Asif et al., 2023). Women

have fewer opportunities to space and time their births due to cultural norms, low female autonomy, and the systemic inadequacy of health infrastructure (Javed et al., 2022; Wikipedia, 2024). This unaddressed demand fosters a culture of imprudent fertility and highlights the close association between population control and maternal health outcomes. In Pakistan, maternal health has been addressed by having a concentrated effort in increasing antenatal, delivery and postnatal services. One of them, launched in 1994, is the Lady Health Worker (LHW) program, which enables rural households to receive delivery of maternal care and family planning services, including oral and injectable contraceptives and condoms, door to door (Wikipedia, 2024; Wikipedia, 2024).

However, low levels of uptake have continued to plague it with poor counselling, trade chain breakages, and widespread misconception. It shows that over time the results of national surveys showed a steady convergence in maternal outcomes, although problems persisted. According to the Pakistan Maternal Mortality Survey (PMMS) 2019, the MMR is 186 per 100,000 live births which is a significant reduction compared to over 276 in 2005/2007 but is much higher than the Sustainable Development Goal (SDG) target of 70 by 2030 (Midhet et al., 2025; Wikipedia, 2024). Its predominant obstetric causes comprise postpartum hemorrhage, hypertensive disorders, infections, and abortion-related complications, which reflect the international scenario with added issues of defective emergency obstetric care, especially in coastal areas (Midhet et al., 2025). Geographic and socio economic gaps are well over grounded.

The level of maternal mortality in provinces such as Balochistan and Sindh is reaching rates of 298 and 224 respectively, much above the national average, whereas the rest of the provinces including Punjab and Khyber Pakhtunkhwa perform better albeit lower than the international standards (Wikipedia, 2024). These are compounded by factors such as lack of access to health facilities due to distance; inadequate transportation sources; poverty; illiteracy and negative gender norms that restrict autonomy and decision-making power in relation to reproduction (Midhet et al., 2025; Jamil et al., 2024; Wikipedia, 2024).

Young people getting married and how that changes Pakistani society The fact that 35–40% of Pakistani girls get married before they turn 18 makes the risk of becoming a mother even higher. There are more problems and worse results with unplanned or mistimed pregnancies (Wikipedia, 2024; Wikipedia, 2024). Early birth losses maternal health reserves, past up to anemia and hypertensive conditions, and contributes to an intergenerational cycle of medical disadvantage. The analysis of the PDHS 2007 and PMMS 2019 data by PLoS ONE shows that maternal mortality risk is substantially lower among those who practise ever-use of family planning (Midhet et al., 2025). But even with the almost universal knowledge of at least one means of contraception among married women, practical application is negligible~ about one third regularly use modern methods~ mostly due to cultural obstacles and provider prejudice (Asif et al., 2023; Javed et al., 2022; Wikipedia, 2024).

Comprehensive approaches to maternal care, such as antenatal care, qualified birth attendance, and postpartum care, are associated with increased contraceptive use and decreased interpregnancy birth rates, thereby diminishing the instances of high-risk pregnancies (Contextualizing..., 2023; Jamil et al., 2024). However, significant implementation gaps remain at both primary care and community levels, and various vulnerable groups are under-utilized. New approaches in rural Pakistan have a chance. Where LHWs have conducted community-based outreach and counselling during antenatal immunization days, this has proved effective to enhance postpartum contraceptive use (Asif et al., 2023). In a similar manner, prenatal counselling in facilities has also been found to increase uptake of contraception and facilitate safer spacing of births key mediators of maternal health (Asif et al., 2023).

The importance of socio-cultural factors has a strong impact on Qualitative research in Balochistan (Quetta). Women cited that family planning enhanced spacing, decreased health risks as well as facilitating postpartum recovery. Nevertheless, uptake was not high, owing to religious misunderstanding, male-child preference, insufficient communication between partners, and provider bias (Jamil et al., 2024).

These results demonstrate that culturally sensitive approaches that mobilize men and communities in addition to women are essential. The national policy goals of Pakistan, which includes the reduction of fertility to 2.1 births per woman and the contraceptive prevalence to 50 percent by 2025, are ambitious. Presently, current contraceptive prevalence rates are at 30-33%, and merely 14 percent of married women have been receiving government-run family planning programs every year (Wikipedia, 2024; Wikipedia, 2024; Asif et al., 2023; Wikipedia, 2024). To achieve policy targets, the provision of public facilities will need to be improved, provider capacity, and demand-side factors, including misinformation and gender inequity, must be addressed (Wikipedia, 2024; Asif et al., 2023).

There are also economic barriers. The Sehat Sahulat Program started in 2015 providing health insurance to a variety of services such as emergency obstetric care. However, the problem here is that maternal health services are often inaccessible to poor rural women because of the infrastructural gaps and the rural-urban orientation of resources (Wikipedia, 2024; Wikipedia, 2024). Overall, the issues of maternal health and the population control campaigns in Pakistan are closely connected. Maternal morbidity and mortality are still fueled by high fertility levels and short birth intervals and low rates of contraceptive use. Allied to this, despite the existence of policies and service platforms, long held cultural norms and gender inequality, along with systemic lack in health service provision, continues to stall any significant improvement. The solution to these problems requires comprehensive healthcare solutions: merging reachable and high-quality maternal care with family planning outreach initiatives and culturally acceptable interactions.

Statement of the Problem

The fast rate of population change in Pakistan has continued to offer a major challenge to the health care system in the country especially when it comes to maternal health. The high maternal mortality ratio cannot be ignored despite all the efforts and strategies used to encourage family planning and provision of high standard maternal care. Most women have frequent, unwanted, and tightly spaced

pregnancies because they lack the knowledge about population control, have inadequate access to population control facilities or cultural inhibition as well as religious restrictions.

All these make the risks of maternal complications to rise, including anemia, hemorrhage, unsafe abortions. Moreover, this issue is worsened by the failure of population control interventions to integrate maternal health services particularly in rural and underserved areas where healthcare facilities are low. It is of urgent interest to investigate the connection between population control activities and maternal health outcomes in order to direct proper policy and intervention initiatives. Without theft resolution of this crucial juncture, Pakistan could end up experiencing avoidable deaths of childbearing women who support their families and women of reproductive age due to poor health statuses.

Research Objectives

- 1.To examine the level of awareness and utilization of population control methods among women receiving maternal care in selected hospitals in Pakistan.
- 2.To assess the impact of family planning practices on maternal health outcomes, including pregnancy complications and birth spacing.
- 3.To identify the barriers that hinder effective integration of population control strategies within maternal healthcare services.

Research Questions

- 1.What is the level of awareness regarding population control methods among women receiving maternal healthcare services in public hospitals of Lahore?
- 2.How does the use of contraceptive methods influence maternal health outcomes among these women?
- 3.What are the key barriers faced by women in adopting family planning practices in the context of public healthcare settings in Lahore?

Limitations

The findings were confined to the Lahore city with an exception to the public hospitals that could not be an indicator of the experiences of maternal care in

other areas of Pakistan or in the private hospitals. The research is cross-sectional, which binds it to be causally limited. Moreover, the self-reported measures can suffer recall bias or social desirability particularly in case of sensitive subject matters such as family planning.

Literature Review

The values of maternal health in Pakistan are greatly affected by the national population dynamics in terms of high fertility levels and low status as far as exploiting the family planning services are concerned. Maternal mortality ratio (MMR) dropped in the last 20 years, and it is currently 186 deaths per 100,000 live births in 2019 in comparison with 387 during 2000, but they are still very high against the worldwide standards (Midhet et al., 2025; World Health Organization [WHO], 2021). This reduction is not enough, when compared with the third Sustainable Development Goal, that aims to create a level of MMR lower than 70 by the year 2030 (UNDP, 2022). The unplanned pregnancies and the occurrence of pregnancies at a short interval raise the danger of anemia, hemorrhage, preeclampsia and unsafe abortions (Asif et al., 2023; Javed et al., 2022). These risks are enhanced in the rural regions where quality maternal health services are yet to be as well available. The rate of contraceptive use is remaining approximately at 30 percent in Pakistan (Pakistan Bureau of Statistics [PBS], 2019), and the proportion of modern contraceptives is staying almost at the same level as follows about 24 percent (National Institute of Population Studies [NIPS], 2019). Although almost everyone is aware of some of the forms of birth control, cultural, religious, and operational factors discourage its employment (Jamil et al., 2024). Lots of women experience resistance towards the usage of contraceptives by their husbands or family members, and existing myths about the side effects lead to the abandonment (Rehman & Shah, 2021).

Asif et al. (2023) argue that in addition to scanty sources of information on contraception, ineffective counseling and weak participation of healthcare providers also hinder the use of contraceptives, thus exposing maternal health to unplanned pregnancies. In 1994, a program of Lady Health Worker (LHW) was introduced as one of the key initiatives of the

country Pakistan in terms of reproductive health advancement. These are referred to as community-based workers because they offer such basic maternal care and contraceptive services mainly in the rural underserved communities (National Programme for Family Planning & Primary Health Care, 2020). Research indicates that LHWs largely affect the adoption of contraception through counseling and the reduction of distance between women and professional health facilities (Mumtaz et al., 2021). Nonetheless, poor training, the supply chain, and unstable coverage diminishes their efficacy, especially in the far-forward provinces such as Balochistan and Khyber Pakhtunkhwa (Javed et al., 2022).

The inefficiencies in the healthcare system also play a key role in the morbidity and the death of the mothers. A large number of government-owned hospitals do not have the necessities of obstetrics service delivery, emergency transportation and experienced personnel (Samina & Malik, 2022). The widely applied and well-known model to explain maternal deaths in the low-income countries, such as Pakistan, is the so-called Three Delays Model. The delay of trying to seek care is related to poor health literacy, gender norms of the household and financial limitation (Thaddeus & Maine, 1994). The second lag- in accessing a health care facility is bad infrastructure and inaccessibility of transport. Describing the third delay, which consists in getting proper care at the facility, it can be said that the delay is frequently caused by overcrowding, lack of staff and supplies (Midhet et al., 2025).

The rural and poor urban states have these factors in a very crippling form. Integrated reproductive health has shown good results on the outcomes of the mother. Other research on this by Memon et al. (2022) shows that females who have undergone the counseling process after antenatal visits are prone to use modern contraceptives after giving birth, thereby lowering the chance of short birth spacing. On the same note, the facility-based births are associated with greater usage of contraceptives and less complication in childbirth (Jamil et al., 2024). Nevertheless, the integration of the services faces a disparity across the provinces as caused by the budget constraints, the fragmentation of policies, and the absence of the coordination between the federal and provincial health departments (UNFPA, 2022).

The social and cultural aspects also hinder the use of the population control methods. In rural regions, pregnancy and childbearing at an early age is common, which subjects adolescent girls to increased maternal risks (UNICEF, 2021). Most of the Pakistani women marry at the age of less than 18 years, around 35 percent of them, and it is under the influence of being pushed by the family members and on an uninformed basis (UNICEF, 2021). The rate of anemia, obstructed labor, and mental disorders including postpartum depression is also high when it comes to adolescent pregnancies (Ali & Sultan, 2020). Such obstacles are aggravated by the low literacy levels among women and little access to sexual reproductive education. Attitude toward population control is also determined with the help of religion and gender roles. The deceptive interpretation of the religious teachings has more frequently become the cause of opposition toward the family planning, especially in more traditional families (Javed et al., 2022).

Research indicates that there is minimal involvement of males in the reproductive decision-making role and that communication between a husband and a wife concerning spacing of births is minimal (Rehman & Shah, 2021). In societies with higher degrees of female control and education, the use of contraceptives and maternal outcomes is much better (Asif et al., 2023). Another outstanding factor is economic. Although the access to maternal care can be enhanced with the help of such programs as the Sehat Sahulat Program by adding the benefits of health insurance cover, the majority of rural women remain ignorant about this service or they cannot access it (UNDP, 2022). Secondly, the cost of drugs, testings, and transportation is also quite high, which discourages women to seek medical assistance on time (Mumtaz et al., 2021).

Therefore, most of their deaths of these women in childbirth are avoidable and happen because of delay

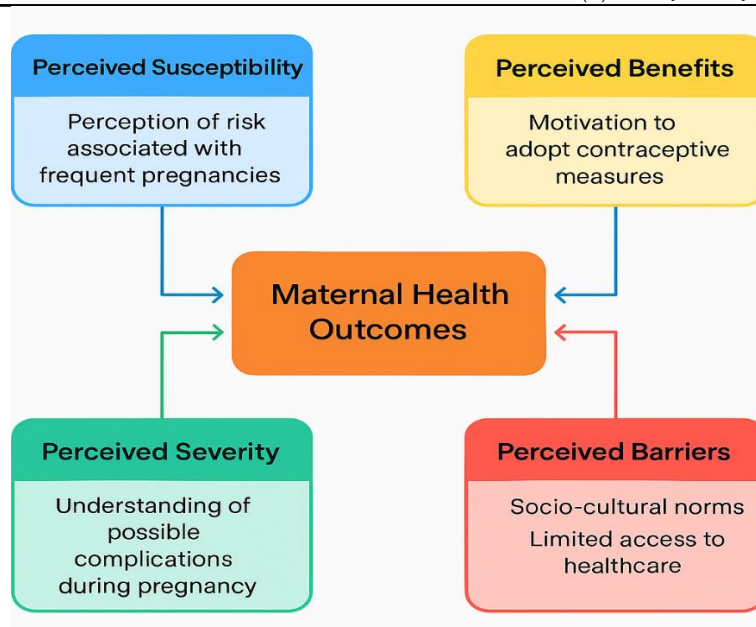
in intervention. Conclusively, the literature which has been examined indicates clearly that the outcomes of maternal health in Pakistan are closely tied up with the population control measures. The risk factors which promote maternal risks include high fertility, unmet need of contraception, early marriage and the systemic barriers to the health sector. The solution to these problems should be made multifactorial: improvement of health systems, education, empowerment of women, involvement of communities, and ensuring collection of maternal and reproductive health services. Through this, Pakistan would be in a position of making a formidable step in mitigating developments of maternal mortality and progressing reproductive well-being.

Theoretical Framework

The present research is based on the Health Belief Model (HBM), which describes and explains health matters behavior by referring to the perception of people on the issues of health. Perceived susceptibility, perceived severity, perceived benefits and perceived barriers are the main elements of the model which can directly be applied to explain the choices of women on the family planning and maternal health services of the Pakistani population. The feeling of risk (susceptibility) caused by multiple pregnancies and fear of complications (severity) of frequent pregnancies make women motivated to use contraceptives (benefits) and inability to change the behavior because of social-cultural norms and lack of access to healthcare (barriers).

This model ensures one understands the influence of such factors as awareness, accessibility, and attitudes concerning population control on the outcomes of maternal health.

By using HBM, this research explores how women's beliefs and experiences affect their reproductive choices and, consequently, their health.



Research Methodology

Research Design

This study utilized a descriptive cross-sectional survey design to evaluate the relationship between population control awareness and maternal health outcomes among women receiving maternal care. The design was suitable for gathering data at a single point in time and identifying associations among variables relevant to reproductive health.

Study Setting

The research was conducted in public hospitals located in Lahore, Pakistan. These hospitals were selected based on their accessibility, the presence of established gynecology and obstetrics departments, and the volume of maternity patients they served. Data collection took place between January and March 2025.

Study Population

The study targeted women receiving maternal health services in selected public hospitals. This included pregnant women as well as women in the postpartum period (up to 6 months after delivery).

Sample Size and Sampling Technique

A total of 150 participants were selected through purposive sampling. This non-probability sampling technique ensured that the study included women who had direct and recent experiences with maternal

care services, and who could provide relevant information regarding reproductive practices and health.

Inclusion Criteria

Women aged 18 to 45 years
Currently pregnant or within 6 months postpartum
Receiving maternal healthcare at public hospitals in Lahore
Willing to provide informed consent

Exclusion Criteria

Women with diagnosed psychiatric conditions that impaired comprehension
Critically ill or high-risk patients requiring intensive medical attention
Women unwilling to participate or unable to provide consent

Data Collection Instrument

Data were collected using a structured questionnaire comprising both closed-ended and a few open-ended items. The instrument included sections on:
Demographics (age, education, income, marital status)
Pregnancy history (number of children, birth spacing)
Use and knowledge of contraceptive methods
Sources of information about family planning

Experiences of maternal complications (e.g., anemia, high blood pressure, miscarriage)

The questionnaire was initially pilot-tested on 10 respondents at a public hospital in Lahore to ensure clarity and reliability. Minor revisions were made based on participant feedback.

Data Collection Procedure

After ethical approval and hospital permissions were obtained, trained female data collectors approached eligible women in maternity wards and outpatient departments. Participation was voluntary, and questionnaires were completed via face-to-face

interviews conducted in Urdu and Punjabi, depending on participant preference. Each interview lasted approximately 20–25 minutes.

Ethical Considerations

The study received formal ethical approval from the relevant authorities. All participants were informed about the study's purpose, their rights to confidentiality, and their right to withdraw at any time. Written informed consent was obtained from each respondent. Personal data were anonymized to protect privacy.

Data Analysis and Findings

Table 1: Demographic Characteristics of Respondents (N = 150)

Variable	Category	N	%
Age Group	18–25 years	38	25.3%
	26–35 years	71	47.3%
	36–45 years	41	27.4%
Education Level	No Formal Education	32	21.3%
	Primary	46	30.7%
	Secondary	41	27.3%
	Higher Secondary+	31	20.7%
Marital Status	Married	141	94.0%
	Widowed/Separated	9	6.0%
Employment Status	Employed	32	21.3%
	Unemployed	118	78.7%
Residence	Urban	95	63.3%
	Rural	55	36.7%
Monthly Income	Below 30,000 PKR	43	28.7%
	30,001–40,000 PKR	49	32.7%
	40,001–60,000 PKR	39	26.0%
	Above 60,000 PKR	19	12.6%

The demographic data outline presented in the respondent (N = 150) shows key background information that is of essence to the study. Most participants fell in the childbearing age as 47.3 percent of them had a between the ages of 26 and 35 years, 27.4 percent between 36 and 45 years and 25.3 percent under the age of 25 years. As far as there are educational qualification, 30.7 per cent have completed primary education, 27.3 per cent had

secondary level of education and 20.7 per cent were in higher secondary or higher educational levels. Of note, the respondents without any form of education were 21.3% which demonstrates that a large part of the sample was illiterate.

As far as marital status is concerned, nearly all percentages (94%) of the population were married and this forms the targeted population in maternal health and population control researches. The rate

of employment was low as only 21.3 percent of the women were in employment implying economic weakness that may affect medical choices. The distribution of the residence pattern indicates that 63.3 per cent of them were in urban areas and 36.7 were in rural areas and this makes it possible to have a comparative perception of the urban-rural differences.

The level of monthly income was varied where 32.7 percent of the respondents claimed that they earned

between PKR 30,001 to 40,000 and 28.7 percent of the respondents claimed to earn less than PKR 30,000. A mere 12.6 percent of the participants had a salary of over PKR 60,000 showing that the majority of participants were people with low- to middle-income families. The socioeconomic and demographic factors offer very critical background information on the study of population control information and influence on maternal health outcomes.

Table 2: Awareness of Population Control Methods

Method Known	N	Frequency	Percentage (%)
Oral Contraceptive Pills	150	117	78.0%
Injectables	150	96	64.0%
IUCD	150	81	54.0%
Condoms	150	130	86.7%
Emergency Contraceptives	150	37	24.7%
Female Sterilization	150	62	41.3%

The data also include that the awareness in most cases was high among the women who were provided with maternal protectors in the govt hospitals Lahore; concerning the levels of awareness in newer modes of contraception. Condoms were the most familiar one (86.7%), however, oral contraceptive pills (78%) and injectable (64%) were the next. The knowledge of intrauterine contraceptive devices (IUCDs) has been at 54 per cent and female

sterilization knowledge was at 41.3 per cent of the respondents. The least known method is emergency contraceptive (24.7%) which implies that there is a gap in the knowledge about less discussed or available contraceptives. This implication indicates that there is relatively a lot of awareness, but there is more to the extended reproductive options as well as the emergency options.

Table 3: Contraceptive Use and Maternal Health Outcomes

Group	N	Complication Mean Score ¹	SD	p-value ²
Contraceptive Users	62	1.3	0.6	0.000**
Non-users	88	2.1	0.8	

Comparison between contraceptive users and non-users revealed there existed significant association with maternal health results. The mean complication score of women who used contraceptives (M = 1.3, SD = 0.6) was also lower than the one of women who did not use it (M = 2.1, SD = 0.8). The p-value of 0.000 is less than 0.5 which implies that there is a significant difference and therefore this means that

use of contraceptives is linked to person having fewer health complications before, during or after pregnancy. These results confirm hypothesis that population control measures are protective with regard to maternal health and the need to incorporate family planning in maternal health provision.

Table 4: Association Between Education Level and Contraceptive Awareness

Education Level	N	Aware of Any Modern Method	% Aware	p-value
No Formal Education	32	19	59.4%	0.001**
Primary	46	38	82.6%	
Secondary	41	36	87.8%	
Higher Secondary+	31	29	93.5%	

There was a high correlation on the educational level and knowledge on the use of contraceptives methods. The awareness of any modern contraceptive was 59.4 percent only among the uneducated women and this scale raised to 82.6 percent among primary education women to 87.8 percent secondary school women and to 93.5 percent women with higher secondary or above. The p-value

obtained after applying chi-square test is 0.001 showing that the relationship is statistically significant. This strengthens the place of education to increase reproductive health awareness in women and speaks of specific awareness programs particularly among people who are mostly uneducated and/or illiterate.

Table 5: Barriers to Using Contraceptives

Barrier Reported	N	Frequency	Percentage (%)
Fear of Side Effects	150	69	46.0%
Religious/Cultural Opposition	150	42	28.0%
Lack of Knowledge	150	39	26.0%
Husband/Familial Disapproval	150	55	36.7%
Accessibility/Availability Issues	150	33	22.0%

The fear of the side effect led to the most mentioned reason (46%), then came the fact that the husband or family disapproves (36.7%) or opposition due to religious or cultural beliefs (28%). A good percentage (26%) of the women attributed it to lack of knowledge, whereas 22 percent of them referred to accessibility and availability. These findings indicate

a presence of practical and psychological barriers even in the case where the awareness exists and we must have educational interventions as well as an improvement in the systems of healthcare delivery that reaches to fears, cultural sensitivities and availability.

Table 6: Relationship Between Number of Children and Contraceptive Use

No. of Living Children	N	Using Contraceptives (%)	p-value
0-2 Children	65	32.3%	0.012*
3-4 Children	58	53.4%	
5 or more	27	66.7%	

The increase in the number of children and the contraceptive use relationship is positive, which means that the number of children increases with converse use of contraceptives and vice versa. The use of contraceptive rose by the number of children. Women with 0 2 children had only 32.3 percent of

them as users of contraceptives compared to 53.4 percent among those with 3 4 children and 66.7 percent of the women with five and above children. The p-value obtained in chi-square test was 0.012 showing a statistically significant relationship. This implies that most of the women start planning their

families only after they attain a specific family size, maybe because of their culture expecting them to have bigger families or ignorance. These results necessitate the need to start reproductive counseling earlier to promote the capability to use means of contraception at the right time to prevent harm to the mother.

Discussion

The researcher has assessed the relationship between population control activities and maternal health of women who were getting treatment in Lahore public hospitals. The highlight of the findings states that, there is a lot of awareness of using contraceptives, significant youth-friendly contraceptive use and subsequent good maternal outcomes and a great brooding of socio-cultural obstacles still existing in the matriarchal health scenario in Pakistan. There is high awareness on the methods of contraceptives especially the condom (86.7%), pills (789) and injectables (64%). Nonetheless, there are unknown gaps associated with the long-term and emergency techniques. Our sample fares slightly better in the awareness but similarly to the national demographic data (~35% contraceptive prevalence) when it comes to the uptake of the new products (Assi et al., 2023). The gap among awareness and actual use reflects other studies: in Pakistan, although the percentage of people who are aware of the methods is high, the custom of using them is minimal because of the fear of side effects, misinformation, and fatalistic approach to the perceived need (Barium et al., 2019; Nazir et al., 2024). Such results determine the need to transform awareness into informed choice and use. In our analyses, self reported pregnancy-related complications were also associated with use of contraceptives (mean score 1.3 vs 2.1; $p = .000$), which is consistent with the global evidence of a grip or a decline in the related morbidity in the case of family planning (JPMA, 2023). Family planning makes the pregnancies to be spaced thereby eliminating the risk of anemia, hemorrhage and hypertension (Midhet et al., 2025; Asif et al., 2023). These findings confirm the second hypothesis: the using of contraceptives has high interlinkage with better maternal health condition. There was a significant correlation of higher education and contraception awareness ($p = .001$), whereby, the

contraceptive awareness among women increased to more than 93 percent when the education level was higher secondary. This corresponds with researches that were conducted in South Asia indicating that female education is a predictor of reproductive behavior (Khan et al., 2020; BCB Public Health, 2019). The more woman is educated, the more empowered and self-sufficient in reproductive decision-making and the involvement in health care (Rehman & Shah, 2021).

These findings indicate that investments in girl education needs to be incorporated as among the key elements of reproductive health improvements. Fear of side effects (46%) is cited in the majority of the cases with husband or familial disapproval (36.7%) and religious opposition (28%) following in order. This coincides with the trends of research on Pakistan and South Asia, which suggests the same pattern of hierarchies of obstacles (PMC, 2023; Nazir et al., 2024). There is a widespread belief that contraceptives are sinful or immune to the conventional values (PMC, 2023; Shaikh et al., 2019). On the same token, military culture (i.e., male-dominated decision-making and absence of support among spouses) is also recorded as a hitch to attainment of contraceptive adoption (Mobilizing Male Leaders, 2007; Wikipedia, 2024).

The anxiety about the adverse effects is mostly the result of inadequate guidance and absence of follow-ups by medical personnel Briggs (2023). These results show the complexity of resistance of various contraceptives, which enforces the following include There was an increase in the use of contraception with family size, which was 32.3 percent of the women who have 0-2 children compared to the 66.7 percent of the women who have five or more children ($p = .012$). The trend is in line with the conclusions of a Pakistan Demographic and Health Survey (PDHS) and BCB studies that also mention a similar pattern, i.e., women tend to start using contraceptives once they have a desired number of children in the family (BBC Public Health, 2019). Nevertheless, the available data reveals one of the missed opportunities: the earlier adoption would help exclude high-risk births and better maternal health. Antenatal contraceptive counseling should concentrate on all the women of reproductive age and not on the women who have achieved high

parity. Patriarchy, religious conservatism, purdah are known to have an effect on reproductive choices and the maternal health behaviour due to the influence of socio-cultural factors (PMC, 2023; Women in Pakistan, 2025). Findings meet the so-called model of three delays: the decision to seek care, access to services, and reception, adequate treatment are often deteriorated by the power of spouses and in-laws (Maternal Mortality & Morbidity Analysis, 2023; Gilgit Study, 2019). As an example, the fear to be judged by the community or be condemned by religion is a barrier to women who want to receive FP services (Nazir et al., 2024; PMC, 2023).

Although performance and structure of the Lady Health Worker (LHW) program are suboptimal (such as the problem of supplies and other issues related to the lack of supervision), it is still the key channel of reproductive counseling (National FP Program SWOT, 2015). The results prove that LHWs are the most important source of information (40.7%), in line with the studies saying that they significantly contribute to the increase of FP coverage (Nazir et al., 2024; Wikipedia, 2025). Proper research on LHW training, motivation, and supervising might be necessary to overcome misinformation related to the fear and improve the effectiveness of the given counseling.

Conclusion

Findings of this study support health behavior theory, illustrating how education, reproductive choices, and sociocultural considerations—when informed and supported—can significantly improve maternal health. Education is a key enabler, empowering women to convert awareness into action. Family planning, particularly contraceptives, evidently contributes to positive maternal outcomes. Barriers such as fear, patriarchal control, and misinformation require urgent attention through contextual, community-driven strategies. Integrating FP into maternal health care, empowering women, engaging male partners, and addressing structural limitations will expedite Pakistan's journey toward reducing maternal mortality and achieving Sustainable Development

Recommendations

1. Increase investment in women's education to enhance reproductive health awareness and informed contraceptive use.
2. Integrate family planning counseling into routine antenatal and postnatal care in public hospitals.
3. Launch targeted community awareness campaigns involving religious and local influencers to overcome cultural resistance.
4. Strengthen the training, resources, and supervision of Lady Health Workers for effective contraceptive outreach.
5. Promote male involvement in reproductive health decisions to encourage shared responsibility and support for family planning.

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