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Barriers to Access and Utilization of Maternal Health Care Services in District Quetta, Baluchistan

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Abstract

High maternal mortality rates are a pressing issue in developing and underdeveloped regions, the main reason is illiteracy or lack of health knowledge which form barrier to women access and utilization of maternal health care services. Baluchistan is on the verge of not meeting the sustainable development goals of improving maternal health due to a high maternal mortality rate which is estimated to be 298 women per 100,000 live births and lack of utilization of maternal health care services is a major contributing factor. The present study aims to explore the women's knowledge about maternal health care and socio-cultural practices to being knowledge able among adolescent mothers in peri-urban areas of district Quetta Baluchistan (Pakistan). Employing a mixed-methods explanatory sequential approach, the study surveyed 400 married women aged 15-49, conducted key informant interviews with healthcare professionals, and held focus group discussions with health practitioners. Quantitative data was analyzed through SPSS and qualitative data analyzed through and thematic analysis. Both quantitative and qualitative results revealed a significant association between dependent and independent variables. The study revealed that 16.5% of women knew about the ANC service, whilst 83.5% of women had no idea what it was. Furthermore, just 8.3% of pregnant women had three or more prenatal visits, compared to 91.8% who had fewer than three. Furthermore, only 39.5% of women used medical experts during childbirth, compared to 60.5% who employed traditional birth attendants (Dai/TBA). Only 9.0% women had access to postnatal care. Additionally, women were less likely to be aware of maternal health care services (p=0.001). There is a need to start awareness campaigns as well as free education to all is necessary to improve maternal health.

Keywords: *Barrier, Accessibility, Awareness, Utilization, Maternal Health Care Services*

1. Introduction

The disparity in health care services between urban and rural areas greatly contributes to the poor prenatal and postnatal health of women, which results in higher rates of maternal mortality in rural

areas. A significant contributing reason to the elevated maternal mortality ratio in rural Pakistan is the high percentage of women who lack education. The percentage of uneducated women of reproductive age in rural areas is 62%, according to recent studies, which is significantly higher than the 34% figure for metropolitan areas. In comparison, only 14% of rural Pakistani women of reproductive age have acquired a secondary or higher education, compared to 39% of urban Pakistani women of the same age (PMMS,2019).

Two out of five women in urban Sindh have a secondary or higher education, compared to four out of five women nationwide, particularly in Sindh and Baluchistan. According to statistics provided by PMMS (2019), 63% of maternal deaths are thought to involve uneducated mothers.

Maternal mortality is more likely in women who have never attended school. In both rural and urban parts of the country, ever-married women aged 15 to 49 without a formal education underwent a comparative study for the Pakistan Maternal Mortality Survey 2019 (data is mentioned in table).

Level of education and maternal mortality in Pakistan

Attributes	**Women with no education**		**Provincial breakdown of women without education**
Residence	**Rural**	**Urban**	
Level of schooling	62.3%	33.6%	Total uneducated = 51.7%
Punjab	50.5%	27.2%	41.7%
Sindh	82.4%	36.5%	56.8%
Khyber Pakhtunkhwa	70.0%	48.5%	66.8%
Baluchistan	80.4%	66.5%	76.2%

Source: A comparison of ever-married women between the ages of 15 to 49 having no education in rural and urban areas of Pakistan according to Pakistan Maternal Mortality Survey 2019

Women with little to no education had higher rates of maternal death, malnutrition, and infant mortality, as well as children who grow more slowly. Women in rural areas are unable to reach their full potential in a variety of spheres of life due to the educational gaps that exist there. (Bashir,2019). Karlsen et al.'s (2011) study found that lower levels of maternal education were linked to greater rates of maternal mortality. Education for mothers is one way to improve maternal health worldwide. Maternal mortality appears to be positively correlated with women's educational attainment, according to several researches (Weitzman 2017; Falkingham 2003; Onah et al., 2006; Raghupathy 1996). Every

advancement in maternal education works in tandem with advancements in health-seeking behavior, and the net result is a reduction in maternal mortality. Researchers conducted a study and discovered that illiterate women have a nearly threefold increased risk of maternal death compared to educated women, while primary-level educated women have a twofold increased risk (Siraj & Zafar,2017). The lack of education in healthcare causes complications during pregnancy, which can sometimes result in stillbirth. (Shivappriya et al., 2019). One of the main elements that enable adolescent women to be aware of their health status and seek the proper medical care is health education. Adolescent moms' socioeconomic level and literacy were found to play a significant role in forming their knowledge and perception (Parvin, Rana & Akter, 2022).

Since the inaugural Safe Motherhood International Conference was held in 1987, there have been ongoing efforts on a global scale to lower mother mortality and improve maternal health. The United Nations established Millennium Development Goal, which sought to reduce maternal death and morbidity by 75% by 2015, as a result of subsequent initiatives like the International Conference on Population and Development (ICPD) in 1994 (UN Assembly, 2001).

In spite of these international efforts, maternal mortality only decreased 34% between 1990 and 2008 (Zureick-Brown, 2013), thus the MDG 5 target was not entirely met by 2015. Following the Millennium Development Goals (MDGs), the Sustainable Development Goals (SDGs) were established, with target 3.1 aiming to lower the global maternal death ratio to less than 70 per 100,000 live births by 2030 (WHO, 2019). Unfortunately, low utilization and limited access to expert maternity services have resulted in chronically high rates of maternal illness and mortality in underdeveloped nations (Kakar & Bashir,2023)

Asia has the highest rates of maternal mortality, especially South Asian nations like Pakistan. "Pakistan Maternal Mortality Survey 2019," which finds large demographic differences in maternal mortality rates between women living in rural and urban areas of Pakistan. In Pakistan, there are 186 maternal fatalities for every 100,000 live births.

According to An et al. (2015), a higher prevalence of maternal and infant mortality results from the majority of women, especially those who live in rural regions, delaying obtaining expert medical care until issues have escalated. According to the data, there is a roughly 26% difference in the maternal mortality rates between rural and urban areas. Rural Pakistan has a significantly higher rate of maternal fatalities. Accessing proper health services in peri-urban settlements is made more difficult by their informal nature and lack of government assistance. The inaccessibility of these sites makes it challenging for health personnel to reach them, and the growing population of these slums puts further burden on the delivery of healthcare services (Magadi et al., 2003). According to Fotso, Ezeh, and Oronje (2008) and women in these communities are subject to a number of challenges, including the necessity to work for a living, a lack of social support, and the high expense of healthcare in cities. (Bashir and Huma ,2017). The differences in maternal health outcomes between rural and urban settings are caused by a combination of several factors. How many mothers die in the South Asian region? 57,000 maternal deaths are attributed to South Asia, according to statistics by the World Health Organization on trends in maternal mortality from 2000 to 2017. There is a difference of 41 fatalities per 100,000 live births between Pakistan's urban and rural areas, with the MMR for urban areas being 158 and the rural MMR being 199, respectively.

There are many factors that contribute to the increased maternal death rate in rural areas, including

poverty, lack of education, gender-based discrimination, inadequate and poor quality healthcare services, distance from facilities, sociocultural values, malnutrition and violence against women, unfair resource distribution, and political climate (PMMS, 2019). Ramzan and Khan (2019) have suggested that stereotyped ideological constructions are enhanced by nawabs in Baluchistan. Further, Ramzan et al.(2021) have indicated that there is a manipulation and exploitation of the public in the hands of politicians and powerful people. Khan et al.(2017) have expressed that print media acts as a tool in the hands of capitalists. Bhutto and Ramzan (2021) have claimed that there is a collusive stance and pacifier agenda of media wrapped in the strategy of power. Nawaz et al.(2021) have said that power is striving for negative them and positive us.

Baluchistan in Pakistan has the highest rate of avoidable maternal deaths of any province in the country. The maternal mortality rate (MMR), which is 298 per 100,000 live births, is dangerously high than 96% of maternal fatalities are directly due to obstetric causes, according to the 358 pregnancy-related mortality ratio. Obesity-related bleeding, hypertension conditions, and infections associated with abortion are three main direct reasons. Infections and issues with the neurological, gastrointestinal, and respiratory systems are among the indirect causes of maternal death, which account for 4% of all fatalities. It is interesting that the majority of dead women in rural areas sought care at public sector hospitals. Furthermore, women with greater levels of education use public and private health facilities at higher rates. Sadly, many women unfortunately pass away in remote locations while either travelling to or from the hospital. These alarming statistics highlight the critical need for better maternal healthcare services and access to medical facilities in remote areas (PMMS, 2019).

2.1. Objectives of the Research

To analyze the awareness of women regarding utilization of maternal health care services

2.2. Research Questions

Does women have awareness about utilization of maternal health care services

2.3. Research Hypothesis

Women awareness about maternal health is likely to be related with access to and utilization of maternal health care services

3. Methodology

The study was conducted in peri-urban areas of the Quetta district by Employing an explanatory sequential mixed method approach, the study surveyed 400 married women aged 15-49, was selected through a multistage sampling process. For qualitative insight conducted key informant interviews with healthcare professionals, and held focus group discussions with health practitioners. Quantitative data was analyzed through SPSS and qualitative data analyzed through and thematic analysis. In Univariate analysis percentages and frequencies were performed. While, in bivariate analysis binary and multiple regression were conducted.

4. Results

SECTION-A: Univariate Analysis

Table No-1: Demographic data (n=400)

Age of women	**Frequency**	**Percent**
15-24	179	44.8
25-34	148	37.0
>35	73	18.3
Age of the women at the time of marriage		
15-19	373	93.3
20-24	27	6.8
Women 's educational status		
Illiterate	286	71.5
Literate	114	28.5
Women's husband's educational status		
Illiterate	256	64.0
Literate	144	36.0
Women's employment status		
No	353	88.3
Yes	47	11.8

Type of women's family		
Joint	293	73.3
Nuclear	92	23.0
Extended	15	3.8
Status of women miscarriages		
No	169	42.3
Yes	231	57.8
Status of women's abortions		
Yes	40	10.0
No	360	90.0
Women pregnancy status		
Yes	294	73.5
No	106	26.5

Table N0-2: Awareness about Maternal Health (ANC)

Women's status of awareness about Antenatal and Postnatal visits	**Frequency**	**Percent**

	No	334	83.5
	Yes	66	16.5
	Total	400	100.0
Women ever received checkups during pregnancy			
	Yes	59	14.8
	No	341	85.3
	Total	400	100.0
A place to seek maternal health during pregnancy			
	Dai / TBA	242	60.5
	Healthcare service provider	158	39.5
	Total	400	100.0
Number of women 's antenatal visits during pregnancy			
	Less than 3	367	91.8
	3 and above	33	8.3
	Total	400	100.0
As a part of antenatal visits were any of the following done at least once			

	Not at all	343	85.8
	BP- Measures-urine sample, Ultrasound	56	.14
	Nutrition Counseling	1	.03
Women's status regarding tetanus vaccination			
	No	374	93.5
	Yes	26	6.5
	Total	400	100.0
Women's status regarding taking supplements during pregnancy			
	No	355	88.8
	Yes	45	11.3
	Total	400	100.0
Women face complications during pregnancy			
	Yes, face complications	243	60.8
	No	157	39.3
	Total	400	100.0
In case of complications place of maternal health care			

	Health service provider	223	55.8
	Dai / TBA	177	44.3
	Total	400	100.0

Table N0-3: Place of delivery

Place of delivery		**Frequency**	**Percent**
	At home (Dai / TBA)	365	91.3
	Health service provider	35	8.8
	Total	400	100.0
Assistant with women in the last delivery			
	Dai / TBA	364	91.0
	Health service provider	36	9.0
	Total	400	100.0

Table No-4: Post-Natal Care

Women 's status about seeking postnatal service		**Frequency**	**Percent**
	No	364	91.0

	Yes	36	9.0
	Total	400	100.0
Place of post-natal for maternal health			
	Not visit anywhere	364	91.0
	Health service provider	36	9.0
	Total	400	100.0
After the delivery the first visit takes place			
	Do not avail of any visit	364	91.0
	Week	36	9.0
	Total	400	100.0
Service providers facilitate the women in the first visit after delivery			
	Open the stitches	36	9.0
	Not availed	364	91.0
	Total	400	100.0

Section-B: Binary Regression and Qualitative Analysis

Table 5: Association of sociodemographic characteristics with women's awareness regarding ANC services (n=400)

Socio-demographic features		**Women's status of awareness about Antenatal**		**OR**	**P. Value**	**C.I 95%**	
		No	Yes			**Lower**	**Upper**
Age of women	15-24	153	26	.041	.001	.721	1.506
	25-34	118	30				
	>35	63	10				
Total		334	66				
Women education	Illiterate	228	58	1.039	001	.158	.790
	Literate	106	8				
Total		334	66				
husband's education	Illiterate	199	57	1.069	.000	.153	.772
	Literate	135	9				
Total		334	66				

Women's Employment	No	293	60	.361	000	.269	1.805
	Yes	41	6				
Total		334	66				
profession of a woman's husband	Govt servant	35	0	1.263	.000	.898	13.930
	Business men	31	15				
	Labor	268	51				
Total		334	66				
Family monthly income	15000-24000	284	53	2.232	.003	1.591	54.564
	25000 & above	50	13				
Total		334	66				

Hosmer and Lemeshow Test			**Model Summary**	
Step	**Chi-square**	**Sig.**	**Method**	**Nagelkerke R Square**
1	8.208	.000	Enter	.239

Table 4 shows the findings of a binary regression analysis that assessed the link between sociodemographic traits and women's knowledge of antenatal care (ANC) services in a sample of 400 participants. The odds ratio (OR), p-values, and 95% confidence intervals (C.I.) are shown in the table to show how these characteristics and women's awareness of ANC services are related.

First, taking into account the "age of women", the study showed a substantial correlation between the age ranges (15–24, 25–34, and >35) and women's awareness of ANC services. In particular, women aged 15 to 24 were less likely to be aware of ANC services than those aged 35 and older (OR = 0.041, 95% C.I. = 0.721-1.506, p = 0.001). This shows that women of high age are more likely to be aware of ANC services (Bantabara et al., 2019).

Titaley et al. (2010) explored that education has a role in raising knowledge of ANC. As evidenced by the fact that illiterate women were less likely to be aware of ANC services than literate women (OR = 1.039, 95% C.I. = 0.158-0.790, p=0.001) The findings show a considerable disparity in "female education." Similar to this, "husband education" helps women become aware of ANC services. Contrary to their literate spouses, women with illiterate husbands are more likely to be unaware of ANC services (OR = 1.069, 95% C.I. = 0.153-0.772, p 0.000). According to Yirgu et al. (2020), this shows that women's access to information regarding ANC may be impacted by their husbands' educational standing. Employed women were more likely to know about ANC services than unemployed women in the category of "female employment status" (OR = 0.361, 95% C.I. = 0.269-1.805, p=0.000), which points out a potential awareness barrier. Women who do not participate in the workforce (Assefa et al., 2018).

A significant association is also seen in "Wife's Husband's Occupation." ANC services are known to women whose husbands work in the government than to women whose husbands work in other professions (OR = 1.263, 95% C.I. = 0.898-13.930, p=0.000). This implies that women's knowledge of ANC services may be impacted by their husband's profession (Haque et al., 2020). The analysis of "family monthly income" shows that women from families with a monthly income of "25000 and above" are more aware of ANC services than those with lower income (OR = 2.232, 95% C.I. = 1.591-54.564, p = 0.003), though the wide confidence interval indicates some uncertainty in this relationship.

Using the Hosmer and Lemeshow test, a Chi-square score of 8.208 (p 0.000) indicates an excellent model fit. According to the Nagelkerke R-squared value of 0.239, sociodemographic characteristics can account for around 23.9% of the variation in women's awareness of ANC services.

5. Qualitative Data Analysis

5.1. Lack of Awareness about ANC

First delay is to blame for 70 to 80 percent of maternal mortality. It has been noted that the first delay is the major impediment to seeking maternity healthcare, which may result in maternal death. Research from developing countries has highlighted that a significant portion, around 70 to 80 percent, of maternal deaths are attributed to a lack of awareness about ANC (Vapattanawong & Vong, 2015; Kauser & Ali, 2013). It is evident that this initial acts as the primary barrier preventing women from accessing essential maternal healthcare, potentially leading to maternal mortality. One critical factor contributing to the lack of awareness within rural communities regarding the importance of seeking skilled care during pregnancy and childbirth. Many individuals in these communities are not well-

informed about the significance of maternal health services during pregnancy. Furthermore, they do not consider antenatal care and postnatal care services essential, particularly when there are no apparent complaints or illnesses during pregnancy and after delivery. One of the IDI participants said that:

> *Pregnant women may choose not to avail of antenatal care (ANC check-ups) because they do not experience any complications during pregnancy. However, they only consider seeking medical attention when complications arise. The main contributing factor to this lack of awareness about the benefits of delivering at a health center plays a crucial role. If these women were more informed and knowledgeable about the advantages of skilled delivery, they might choose not to give birth at home.*

Another key informant shared that:

> *Due to a lack of knowledge about the importance of healthcare, some mothers do not seek medical treatment. These mothers are not convinced about the benefits of accessing healthcare services, and some are even unaware of the availability of Maternal Health Centers (MHCs). Consequently, they remain at home even when they are sick.*

5.2. Lack of Knowledge about Pregnancy Danger Signs

The lack of health education and poor awareness about pregnancy danger signs have significant adverse effects on rural pregnant women, as elucidated by maternal health experts. The majority of these women in rural areas are illiterate, which compounds the challenge as they struggle to comprehend the information provided to them. They lack understanding regarding the risks associated with home pregnancies and the advantages of seeking care and giving birth at healthcare facilities.

One participant, when describing the condition of rural women:

> *Poor women, who make up the majority of the district population, have a limited understanding of prenatal care. They only seek healthcare facilities when a visible and serious issue arises, such as bleeding, seizures, or loss of consciousness. For less severe ailments, they rely on home remedies (FGD-01).*

Furthermore, another participant answered:

> *These communities often keep pregnancies secret, shrouded in superstitions that regulate the lives of pregnant women. Consequently, they only seek medical attention when their condition becomes critical. (FGD-02)*

Participants shared how some women opt not to use maternal health services because they lack awareness of danger signs during pregnancy and childbirth, as well as the benefits of accessing maternal health services.

> *Only a few women were knowledgeable about danger signs and how to address them. Many pregnant women would present with symptoms like facial, hand, and leg swelling, along with lower abdominal pain and high blood pressure, but they often couldn't explain why these symptoms occurred (key informants).*

They often lack awareness of pregnancy complications and related risk factors, such as high blood pressure, swelling, night blindness, dizziness, and lower abdominal pain. They turn to midwives because they believe they are better informed about pregnancy difficulties than competent healthcare professionals when they have these problems.

> *Some women believe that childbirth is a natural process and that it relies on divine intervention. They prefer traditional birth attendants (TBAs) because they associate healthcare facilities with practices like vaccinations, which they view as potentially harmful medicines for both lactating mothers and their infants. They perceive home births as safer (FGD-01-02).*

Illiterate pregnant women sometimes struggle to remember the date of their previous menstrual cycle, which makes it harder to estimate their due date and increases the risk of preterm deliveries. Additionally, they become a target of dishonest private clinics that prey on their ignorance.

A participant emphasized the existence of fake maternal health clinics describing them as exploitative and harmful.

> *In some cases, traditional birth attendants (TBAs) act as intermediaries, referring families to these private clinics for medical consultations during pregnancy. In many rural areas, there are clinics operated by unqualified individuals, and some participants referred to them as unregulated establishments.*

The qualitative findings show that the prevalent issue among pregnant women in rural areas leads to limited awareness of reproductive health, family planning, and maternal healthcare practices. This lack of knowledge poses a significant risk of maternal morbidity and mortality in these regions. Moreover, rural women and their families generally have poor knowledge of obstetric danger signs during pregnancy. A study showed that leading causes of maternal mortality include hemorrhage, hypertensive disorders of pregnancy, abortion, and sepsis. These fatalities, however, can be averted through the timely recognition of danger signs associated with these complications and the provision of skilled institutional care (Abbas, 2017).

5.3. Deficient knowledge of diet

Maternal nutrition plays a pivotal role in influencing maternal well-being during pregnancy and beyond. A well-balanced and nutritious diet is crucial for providing the essential nutrients needed for fetal development and supporting the overall health of pregnant women. However, in rural areas, women often grapple with societal discrimination, particularly when it comes to their dietary needs during pregnancy. Sadly, they may not receive the proper nourishment required, and their nutritional requirements are frequently overlooked. The absence of adequate nutrition can have detrimental consequences on a mother's health, potentially leading to maternal complications (Martin, 2015).

One participant expressed deep concern about the poor nutritional status of women:

> *I am horrified to witness the pale, ghostly faces of women who arrive with maternal complications. Here, culturally, it is common to prioritize feeding the men and children within the household, while women's dietary needs take a back seat. (Key-informant)*

Healthcare practitioners, being closely acquainted with rural households, have their insights into the

primary impediments leading to delays in seeking healthcare, with poverty and a lack of agency within the family structure being major factors. Addressing these challenges related to balanced diets, appropriate weight gain, and nutritional requirements necessitates targeted educational efforts and support systems. Health agencies, community organizations, and healthcare providers all have essential roles to play in delivering accessible, culturally sensitive information about proper prenatal nutrition. This might involve conducting workshops, distributing informative pamphlets, and deploying community health workers to educate women on the importance of a balanced diet, the necessity of supplements when warranted, and the potential risks linked to inadequate nutrition during pregnancy. A senior nurse highlighted:

> *In poor families, pregnant women struggle to obtain even two decent meals, let alone timely and appropriate medical care (FGD-01).*

Participants disclosed that maternal nutrition practices, access to resources, and food distribution systems are influenced by socio-economic, cultural, family, and community factors. These determinants can significantly affect reproductive health, especially among vulnerable groups, making them more susceptible to conditions like anemia, malnutrition, malaria, and other pregnancy-related illnesses. Another middle-aged nurse underscored the issue of priority and preference over poverty:

> *The root problem is not just poverty but the priorities and preferences. Women hailing from impoverished backgrounds, whose families lack influence, often receive inadequate care in their in-laws' households. Their health concerns are frequently taken for granted.*

It's worth noting that the issue extends beyond poverty; it also encompasses a lack of awareness about the specific nutritional requirements during pregnancy. Pregnant women may not be informed about the dietary plan their bodies need during this critical period. Participants stressed that this lack of awareness leads pregnant women to consume whatever is available at home, often lacking essential energy foods, resulting in anemia and preeclampsia.

One of the key informants noted that:

> *Regarding dietary practices during pregnancy, it was noted that some women did not pay much attention to their diet, consuming whatever was readily available. They continued their household chores as usual and only rested when feeling unwell. In some cases, pregnant women developed unusual cravings for items like clay, coal, and raw rice, often stemming from mineral or iron deficiencies, but lacking awareness of the underlying causes.*

Among the most frequently encountered complications during pregnancy are pregnancy-induced hypertension, hemorrhage, and infections. Preterm labor and gestational diabetes also represent prevalent issues (Shen & Wai, 2008). Anemia can arise from factors such as the inability to afford adequate, high-quality food or poor dietary habits (Saleem et al., 2010). These complications associated with pregnancy affect a substantial number of women and infants, with a more pronounced impact on those who experience unfavorable health conditions and possess lower socioeconomic status (Bashir, Sadiq, Zafar, Murtaza, & Naseer, 2022).

Participants shared about the condition:

> *The healthcare response to these situations varied, with some women seeking quick remedies*

like multivitamin tablets and injections to address complications such as anemia and preeclampsia during the third trimester. Healthcare providers would prescribe multivitamins and folic acid tablets, along with instructions to increase their intake of fruits, vegetables, milk, and meat (key informants).

Several maternal behaviors and experiences occurring before, during, and after pregnancy have been linked to adverse health outcomes for both mothers and infants (U.S., 2001). Pregnancy represents a unique phase in a mother's life, offering a critical opportunity for targeted interventions aimed at reducing health disparities among mothers and their families. The nutritional status of expectant mothers plays a pivotal role in determining the short- and long-term health outcomes for both the mother and her developing fetus (Cetin & Laoreti, 2015). Malnutrition in women, in any form, not only jeopardizes their health but also poses a potential threat to the well-being of their infants (Meija & Rezeberga, 2017).

6. Discussion

The lack of knowledge about the importance of maternal health care services is a concerning issue with significant negative impacts on both maternal and infant health. Pregnant women and their families frequently remain unconvinced about the advantages of maternal health care services, which encompass routine ANC visits. Illiteracy plays a critical role in maternal health, as many uneducated women lack knowledge about various health aspects and self-care. The absence of health literacy further compounds the challenges associated with accessing maternal health information within healthcare facilities. In quantitative results, when the "age of women" was taken into consideration, the study revealed a strong association between women's awareness of ANC services and the age groups (15–24, 25–34, and >35). Particularly, women between the ages of 15 and 24 were less likely than those between the ages of 35 and older to be aware of ANC services (OR = 0.041, 95% C.I. = 0.721-1.506, p = 0.001). This demonstrates that older women are more likely to be familiar with ANC services. Moreover, owing to their low literacy levels, many of these women grapple with comprehending the healthcare information presented to them, underscoring the necessity for tailored, one-on-one counseling sessions. The quantitative findings showed that literate women were more likely to be aware of ANC services, whereas illiterate women were less likely to be aware of such services (OR = 1.039, 95% C.I. = 0.158-0.790, p= 0.001) The results reveal a significant discrepancy in "female education. Empirical studies, such as the one conducted by Combs Thorsen et al. in 2012, have unequivocally established a robust correlation between the absence of education and the maternal mortality ratio, particularly in regions like Lilongwe, Malawi. The dearth of education among females contributes to a failure to recognize signs, symptoms, and the gravity of their pregnancy-related conditions, thus posing a substantial threat to their lives during pregnancy. Furthermore, in societies characterized by early marriages, often steeped in conservatism, adolescent pregnancies emerge as a leading cause of maternal mortality, as observed in Patra's research in 2016. Girls from these conservative societies frequently lack comprehensive sexual and reproductive health education, either from their families, where such discussions are considered taboo, or from educational institutions, especially in cases where girls have limited access to schooling, as highlighted by Nath et al. in 2008. A similar situation prevails in Pakistan, where Selim's study in 2013 underscored the insufficient knowledge of adolescent females concerning contraception, pregnancy, and menstrual hygiene, as previously noted by Ali et al. in 2006. Within the Pakistani context, sexual and reproductive health education at the school level remains limited. Notably, research by Hennink et al. (2005) revealed that both married females (with less than two years of marital experience) and unmarried girls possess

inadequate knowledge about sexual and reproductive health, often relying on information from mothers, peers, or older sisters.

The current study findings showed that relatives and neighbors who have experience as healthcare providers in rural communities or have previously sought healthcare during their pregnancies often serve as primary sources of information about ANC, delivery locations, and postnatal care services. Consequently, many women perceive that maternal health services should only be sought in cases of pregnancy complications. Women who have experienced complications during previous pregnancies tend to use routine maternal health services, while those who have had safe home deliveries in the past are more likely to choose home births for subsequent pregnancies. From the participants' perspective, maternal health care encompasses a range of medical services that pregnant women should receive throughout their pregnancy, childbirth, and postpartum period. These services are crucial for the well-being of both the mother and the baby, and their importance cannot be overstated.

Pregnancy danger signs encompass indicators that women may encounter during pregnancy, childbirth, and the postpartum period. Globally, an alarming 289,000 women lose their lives annually due to complications related to pregnancy and childbirth (Gupta et al., 2015). A staggering 75% of maternal fatalities can be attributed to direct obstetric complications, such as hemorrhage, sepsis, pregnancy-induced hypertensive disorders, obstructed and prolonged labor, and unsafe abortion (Maternal, 2004). Tragically, many of these maternal deaths occur within the confines of women's homes due to inadequate awareness and understanding of pregnancy danger signs. Common danger signs during labor and childbirth encompass severe vaginal bleeding, prolonged labor, convulsions, retained placenta, premature rupture of membranes, and fetal malposition. Elevating awareness among pregnant women about these danger signs enhances the early detection of problems and minimizes delays in the decision-making process of seeking obstetric care (Sumankuuro, 2016). Regular prenatal care, risk assessment, education, and timely interventions all contribute to safer pregnancies, healthier babies, and overall better outcomes. It is imperative to recognize that every pregnant woman confronts the risk of sudden and unpredictable complications that could potentially lead to her demise or harm to her infant (Jhpiego, 2008). The burden of obstetric danger signs is profoundly critical, as many of these fatalities stem from preventable obstetric warning signs. Identifying pregnancy danger signs and comprehending their implications augments the ability of women, their partners, and their families to promptly access healthcare services. This, in turn, facilitates adherence to the requisite steps aimed at ensuring a safe childbirth experience and postpartum care (Augest et al., 2015).

Ensuring regular antenatal care (ANC) visits is also crucial, as such care often includes guidance on diet and nutrition, ultimately promoting the well-being of both mother and baby throughout the pregnancy and beyond. However, maternal nutrition is intricately intertwined with the societal context in which a woman resides. This context encompasses a myriad of factors, including social, cultural, economic, political, environmental, and behavioral systems, all of which exert an influence on the nutritional well-being of pregnant women. For instance, cultural beliefs, specific taboos, and the attitudes of women, their partners, and their families have been recognized as influential factors in shaping dietary choices during pregnancy (Higginbottom et al., 2015). Gender disparities concerning access to and control of resources have the potential to limit women's productivity and heighten their health vulnerabilities, prompting investigations into these issues in numerous countries (Bashir et al, 2021). Although antenatal checkups can be used to diagnose difficulties during pregnancy, cultural norms in the region are frequently more important. The responsibility of healthcare professionals in teaching expectant mothers about pregnancy danger signals is crucial. To raise awareness of these

symptoms and encourage pregnant women to attend antenatal care appointments, participants suggested community mobilization actions.

Table 6: Association of women education with the place of delivery (n=400)

Socio-demographic features		**seek maternal health care during pregnancy**		**OR**	**P. Value**	**C.I 95%**	
		Dai / TBA	**Healthcare service provider**			**L**	**U**
Women 's education	Illiterate	259	27	.512	.000	.347	1.887
	literate	106	8				

Table 15 displays the findings of a binary regression study that examined the relationship between 400 women's sociodemographic traits and place of delivery. Illiterate women had a lower likelihood than literate women of choosing healthcare providers for delivery; the odds ratio for illiterate women was 0.512 (p=0.000). This conclusion is in line with the body of research demonstrating the beneficial influence of education on healthcare decision-making (Bloom et al., 2001).

6.1. Lack of knowledge about place of delivery

> *Pregnant women in rural communities often prefer traditional birth attendants all of whom are experienced and trusted birth attendants. In cases of complications during pregnancy, these traditional birth attendants (TBAs) are their first choice.(IDI-01)*

One of the participants shared that:

> *In rural areas, many women are unaware of the possible dangers of giving birth at home. Home births may increase the risk of newborn death, and infrequently, significant bleeding might kill the mother. TBAs rely on conventional techniques, which might not always be successful. Some mothers choose to wait until the very last minute to seek medical attention, choosing instead to stay at home while in labor. There could be potentially fatal complications as a result of this ignorance of the risks associated with home deliveries.*

The findings emphasized the importance of raising awareness regarding the advantages of facility-based deliveries and the potential risks associated with home births. Education emerges as a powerful tool in empowering expectant mothers and their families to make informed decisions that prioritize the health and safety of both mother and child. As a healthcare professional, I am sharing my experience

that:

6.1.1. Discussion

The choice of the place of delivery in Pakistani society is predominantly influenced by the husband, with occasional involvement of the mother-in-law (Mumtaz, 2003). within the family play pivotal roles in the family's preference for home deliveries Furthermore, within families, the mother-in-law assumes a significant role as the decision-maker regarding the place of delivery. She often recommends the home as a safe delivery location. The odds ratio for illiterate women was 0.512 (p=0.000), which indicates that they were less likely to select healthcare providers for delivery than literate women.

Table 7: Association of women education with Place of post-natal for maternal health (n=400)

Socio-demographic features		**Place of post-natal for maternal health**		**OR**	**P. Value**	**C.I 95%**	
		No visit	**health care provider**			**L**	**U**
Women 's education	Illiterate	258	28	.239	.000	.338	1.831
	Literate	106	8				

The findings of a binary regression analysis explained the association between sociodemographic traits and location preference for postnatal maternal health care in a sample of 400 women.

Illiterate women had an OR of 0.239 (p=0.000), which showed that they were less likely than literate women to pick healthcare providers for postpartum care. 0.338 to 1.831 was the 95% C. I range. This result is in line with earlier studies showing that women's education has a good impact on their behavior when seeking medical care, including using postnatal care (Nagato et al., 2018).

6.2. Lack of awareness about Postnatal Care

The postnatal period, as defined by the World Health Organization (WHO), begins an hour after the delivery of the placenta and concludes forty-two days after the birth of the infant (WHO, 2013). It's

during this period that the health and survival of both the mother and newborn depend significantly on the care provided. One of the key informants shared:

> *Due to a lack of education among mothers and their family members, postnatal care (PNC) visits are not actively encouraged. These individuals often have limited exposure and knowledge about the importance and necessity of PNCs at healthcare facilities.*
>
> *Newly breast-feeding women are often discouraged from seeking PNC at healthcare facilities because their mothers or mothers-in-law take care of them at home. They provide meals and massages to aid the women's post-childbirth recovery, and traditional birth attendants (DAIs/TBAs) visit their homes weekly to check on the newborns and mothers. (FGD -01)*

Participants emphasized that women who have recently given birth should receive postnatal care within specific timeframes to assess the health of both the mother and the infant. Despite the benefits of postpartum care, many women are unable to get these treatments due to a variety of socioeconomic and cultural issues. Women may need to make long journeys to locations with few healthcare services, which can be difficult for them while they are still recovering from childbirth and during the postnatal period. As healthcare experts shared:

6.2.1. Discussion

Women are even less likely to use PNC services due to ignorance paired with strongly ingrained conventional attitudes and habits. Access to Postnatal Care (PNC) is influenced by various factors, broadly categorized as cultural beliefs, economic conditions, women's autonomy, socio-demographic factors, control over physical and financial resources, and issues related to healthcare services (Stephenson, 2004; Mumtaz, 2003; Navaneetham, 2002). The quantitative findings illiterate Women had an OR of 0.239 (p=0.000), indicating that they were less likely to choose healthcare providers for postpartum care. The 95% C. I range ranged between 0.338 and 1.831. This finding is consistent with past research demonstrating that women's educational status positively influences their decision-making when seeking medical care, particularly using postnatal care. A recent Pakistani study found that male family members frequently think PNC visits are "not necessary." Only in cases of alleged "complications" or circumstances deemed "life-threatening" do they typically advise PNC for women (Riaz, 2015). Mothers and other family members' lack of education sometimes gives rise to this viewpoint, which discourages PNC visits. Additionally, these people receive little information through print and electronic media on the value and necessity of PNCs in healthcare facilities (Agha, 2012). To address these barriers, participants stressed the importance of community-based interventions, mobile clinics, and telemedicine initiatives to improve postnatal care accessibility in remote areas. These approaches aim to bring healthcare services closer to women, reducing the barriers posed by distance and transportation.

7. Conclusion

The result of the study revealed that women experiencing "delay in seeking care" related to their reproductive health, access to prenatal and postpartum care, choice of delivery location, and informed healthcare decision-making, all significantly influenced by illiteracy . The study emphasizes the crucial role of awareness and education in addressing the barriers that hinder access to essential maternal health services, particularly for young women. The lack of information and education has a detrimental effect

on maternal health and the availability of services like ANC and PNC

8. Recommendation

1. Government should take initiatives for maternal health awareness for that purpose campaigns should be started about the benefits of antenatal and post natal care utilization and addressed them about the drawbacks of home deliveries
2. Government should planned a comprehensive training program for LHVs and TBAs to increase their knowledge because the rural community dependent on them for health care services
3. There is a need to increase the number of health care centers in the rural areas of the region not only this also improve their quality.

References

Abas, A. A., & Fakhredeen, E. (2017). Knowledge about danger signs and symptoms of pregnant women attending antenatal care centers in Baghdad City. *J Nurs Health Sci, 6*(4), 37-40

Agus, Y., & Horiuchi, S. (2012). Factors influencing the use of antenatal care in rural West Sumatra, Indonesia. *BMC pregnancy and childbirth*, *12*(1), 1-8.

Ali, T. S., Azam Ali, P., Waheed, H., & Memon, A. A. (2006). Understanding of puberty and related health problems among female adolescents in Karachi, Pakistan. *Journal of Pakistan Medical Association*, *56*(2), 68.

An, S. J., George, A. S., LeFevre, A., Mpembeni, R., Mosha, I., Mohan, D., ... & Kilewo, C. (2015). Program synergies and social relations: implications of integrating HIV testing and counselling into maternal health care on care seeking. *BMC Public Health*, *15*, 1-12

Asseffa, N. A., Bukola, F., & Ayodele, J. (2018). Determinants of utilization of antenatal care services in developing countries: Recent evidence from Nigeria. African *Journal of Economic Review, 6(*2), 29-48.

Bashir, s. Dr. Huma Zafar. (2017). Women empowerment through community Development 239programs in Balochistan. Balochistan Review, (XXXVII)2, 239-252.

Bashir, S., Sadiq, W., Zafar, H., Murtaza, A., & Naseer, P. (2022). The role and analysis of quality education on the perspective of socio-economic development of Balochistan Province of Pakistan. Journal of Positive School Psychology, 6(10)

Bashir, S., Shah, N. A., Karim, H., Farooq, K., & Ahmed, Z. N. (2021). The perceptions of students regarding the ways of community involvement in public secondary school at district kech Balochistan. Humanities & Social Sciences Reviews, 9(3), 1690-1698.

Bhutto, J., and Ramzan. M. (2021). "ENGLISH: Verses of Quran, Gender Issues, Feminine Injustice, and Media Transmission - CDA of Pakistani Press Reports. *Rahatulquloob* 5 (2), 111-26. https://doi.org/10.51411/rahat.5.2.2021/316

Bloom, S. S., Wypij, D., & Das Gupta, M. (2001). Dimensions of women's autonomy and the influence on maternal health care utilization in a north Indian city. *Demography, 38*(1), 67-78.

Bashir, S., Sadiq, W., Zafar, H., Murtaza, A., & Naseer, P. (2022). The Role And Analysis Of Quality Education On The Perspective Of Socio-Economic Development Of Balochistan Province Of Pakistan. Journal of Positive School Psychology, 6(10).

Bashir, S. (2019). Women participation in community development programs in urban area in Balochistan. Pakistan Journal of Gender Studies, 18(1), 193-210.

Cetin, I., & Laoreti, A. (2015). The importance of maternal nutrition for health. *Journal of Pediatric and Neonatal Individualized Medicine, 4*(2), 1-11.

Combs Thorsen, V., Sundby, J., & Malata, A. (2012). Piecing together the maternal death puzzle through narratives: the three delays model revisited. *PloS one, 7*(12), e52090.

Falkingham, J. (2003). *Inequality and changes in women's use of maternal Health-care services in Tajikistan.*

Fotso, J. C., Ezeh, A., & Oronje, R. (2008). Provision and use of maternal health services among urban poor women in Kenya: what do we know and what can we do?. *Journal of urban Health*, *85*, 428-442.

Gupta, R. K., Shora, T. N., Verma, A. K., & Jan, R. (2015). Knowledge regarding antenatal care services, its utilization, and delivery practices in mothers (aged 15-49 years) in a rural area of North India. *Trop J Med Res, 18*(2), 89-94.

Haque, S. E., Rahman, M., Mostofa, M. G., & Zahan, M. S. (2020). Reproductive health care utilization among young mothers in Bangladesh: Does autonomy matter? *Women's Health Reports, 1*(1), 39-47.

Hennink, M., Rana, I., & Iqbal, R. (2005). Knowledge of personal and sexual development amongst young people in Pakistan. *Culture, health & sexuality, 7*(4), 319-332.

Higginbottom, G. M., Vallianatos, H., Forgeron, J., Gibbons, D., Mamede, F., & Barolia, R. (2014). Food choices and practices during pregnancy of immigrant women with high-risk pregnancies in Canada: a pilot study. *BMC pregnancy and childbirth*, 14, 1-13.

Jhpiego /Maternal and neonatal health (MNH) (2008). Program. Birth preparedness and complication readiness: a Matrix of shared responsibilities. Baltimore, MD: Jhpiego.

Karlsen, S., Say, L., Souza, J. P., Hogue, C. J., Calles, D. L., Gülmezoglu, A. M., & Raine, R. (2011). The relationship between maternal education and mortality among women giving birth in health care institutions: analysis of the cross sectional WHO Global Survey on Maternal and Perinatal

Health. *BMC public health, 11,* 1-10.

Kakar, I. U., & Bashir, S. (2023). The Role Of Universities In Achieving Sustainable Development Goal 4 In Balochistan.Journal of Positive School Psychology, 7(2),275-289

Khan, M.A., Ramzan, M.M., Dar, S R.(2017) Deconstruction of Ideological Discursivity in Pakistani Print Media Advertisements from CDA Perspective Erevna: The Journal of Linguistics and Literature,1(1),56-79.

Lambo, J. A., & Nagulesapillai, T. (2012). Neonatal tetanus elimination in Pakistan: progress and challenges. *International Journal of Infectious Diseases, 16*(12), e833-e842.

Magadi, M. A., & Curtis, S. L. (2003). Trends and determinants of contraceptive method choice in Kenya. *Studies in family planning*, *34*(3), 149-159.

Maternal, J. H. (2004). Neonatal health: Monitoring birth preparedness and complication readiness, tools and indicators for maternal and newborn health. Johns Hopkins, Bloomberg school of Public Health. *Center for communication programs, Family Care International*.

Meija, L., & Rezeberga, D. (2017). Guidelines: Proper maternal nutrition during pregnancy planning and pregnancy: a healthy start in life Recommendations for health care specialists-WHO-OMS. *WHOOMS WHO*, 1-31.

Mumtaz, Z., Salway, S., Waseem, M., & Umer, N. (2003). Gender-based barriers to primary health care provision in Pakistan: the experience of female providers. *Health policy and planning, 18*(3), 261-269.

Mwangakala, H. A. (2016). *Pregnant women's access to maternal health information and its impact on healthcare utilization behaviour in rural Tanzania* (Doctoral dissertation, Loughborough University).

Nath, A., & Garg, S. (2008). Adolescent friendly health services in India: A need of the hour. *Indian Journal of Medical Sciences, 62*(11),444-453.

National Institute of Population Studies. (2019). Pakistan Demographic and Health Survey 2017-18: Islamabad, Pakistan, and Rockville; NIPS; ICF: Islamabad, Pakistan.

Nawaz, S., Aqeel, M., Ramzan,M., Rehman,M., Tanoli,Z.A.,(2021). Language Representation and Ideological Stance of Brahui in Comparison with Urdu and English Newspapers Headlines, Harf-O-Sukhan, *5(4) ,267-293.*

Onah, H. E., Ikeako, L. C., & Iloabachie, G. C. (2006). Factors associated with the use of maternity services in Enugu, southeastern Nigeria. *Social science & medicine, 63*(7), 1870-1878.

Parvin, R. A., Rana, M. M., & Akter, M. S. (2022). Health seeking behavior on maternal health care among adolescent mother of Northern Bangladesh. *Uluslararası Sosyal Bilimler ve Eğitim Dergisi, 4*(6), 97-118

Pasha, O., Saleem, S., Ali, S., Goudar, S. S., Garces, A., Esamai, F., ... & Goldenberg, R. L. (2015). Maternal and newborn outcomes in Pakistan compared to other low- and middle-income countries in the Global Network's Maternal Newborn Health Registry: an active, community-based, pregnancy surveillance mechanism. *Reproductive health*, 12, 1-10.

Raghupathy, S. (1996). Education and the use of maternal health care in Thailand. *Social science & medicine*, *43*(4), 459-471.

Riaz, A., Zaidi, S., & Khowaja, A. R. (2015). Perceived barriers to utilizing maternal and neonatal health services in contracted-out versus government-managed health facilities in the rural districts of Pakistan. (5 *International journal of health policy and management, 4*), 279.

Ramzan, M., Khan, M.A., (2019).CDA of Balochistan Newspapers Headlines- A Study of Nawabs' Stereotyped Ideological Constructions. Annual Research Journal 'Hankén', XI, 27-41.

Ramzan, M. Qureshi, A.B., Samad, A. Sultan, N. (2021) Politics as Rhetoric: A Discourse Analysis of Selected Pakistani Politicians Press Statements. Humanities & Social Sciences Reviews, 9(3) ,1063-1070

Saleem, S., McClure, E. M., Bux, R., Shaheed, A., Goldenberg, R. L., & Pappas, G. (2010). Pregnancy behavior of pakistani women over their reproductive life span. *Al Ameen J Med Sci*, 3, 228-36.

Siraj, B., & Zafar, H. (2017). Women empowerment through community Development programs in Balochistan. Balochistan Review, 37(2).

Saleem, S., Tikmani, S. S., McClure, E. M., Moore, J. L., Azam, S. I., Dhaded, S. M., ... & Goldenberg, R. L. (2018). Trends and determinants of stillbirth in developing countries: results from the Global Network's Population-Based Birth Registry. *Reproductive health*, *15*(1), 23-30.

Selim, M., Abdel-Tawab, N. G., El Sayed, K., Elbadawy, A., & El Kalaawy, H. (2013). The Ishraq Program for out-of-school girls: From pilot to scale-up.

Shen, J. J., & Wei, H. (2008). Adverse maternal outcomes for women with different health insurance statuses in Nevada. *Nevada Journal of Public Health, 5*(1), 5.

Shivappriya, S. N., Shanthi, M., KesavKrishna, G., Sathyanarayanan, R., & Marimuthu, R. (2019, October). Influence Of Illiteracy on Maternal and Child Health Among Women In India. In *2019 IEEE 10th International Conference on Awareness Science and Technology (iCAST)*, 1-6.

Stephenson, R., & Hennik, M. (2004). Barriers to family planning service use among the urban poor in Pakistan opportunities and choices working, *Journal of Advanced Nursing, 61*(3), 244- 260

Titaley, C. R., Hunter, C. L., Dibley, M. J., Heywood, P., & Whyte, C. (2010). Why do some women still prefer traditional birth attendants and home delivery?: A qualitative study on delivery care services in West Java Province, Indonesia. *BMC Pregnancy and Childbirth, 10*(1), 43.

World Health Organization. (2019). World health statistics overview. Monitoring health for the SDGs, sustainable development goals. Geneva, Switzerland

Yirgu, R., Molla, M., Sibley, L., & Gebreselassie, T. (2020). Maternal health care utilization in Southern Ethiopia: implications of cultural factors and women's autonomy. *PLOS ONE, 15*(6), e0234594.

Zureick-Brown, S., Newby, H., Chou, D., Mizoguchi, N., Say, L., Suzuki, E., & Wilmoth, J. (2013). Understanding global trends in maternal mortality. *International perspectives on sexual and reproductive health*, *39*(1), 55-65.