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Provision and Utilization of Routine Antenatal Care in Rural Balochistan Province, Pakistan: a Survey of Knowledge, Attitudes, and Practices of Pregnant Women

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Abstract

Maternal health services are provided in Pakistan through primary, secondary and tertiary care facilities and utilization for at least one visit is up to 61% in some areas. In most rural areas, however, antenatal coverage is closer to 10% and most of Balochistan Province is rural. This study assesses the provision and utilization of antenatal care (ANC) services and identifies barriers that limit utilization of the Government's routine ANC services in a tribal community in Jhal Magsi District of Balochistan Province, Pakistan.

The study was conducted in the Pattri Union Council of Jhal Magsi District with both qualitative and quantitative methodologies. Eight focus groups were

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conducted among married women and men separately in the villages of Pattri Union Council and a cross-sectional quantitative survey was conducted among 513 pregnant women aged 18 to 40 years.

Only 14.4% of the study respondents ever had received ANC services at a government health facility. Short distance from residence to health facility, high income, less number of parity, any education, any perceived pregnancy related problem and knowledge about ANC were positively associated with ANC ($p<0.001$) utilization. However attitude toward government health facility showed negative association with such ANC. A multivariable logistic model also showed significant positive association of family income, education, parity, and distance from residence to health facility with accessing ANC services. Attitude showed a negative association. (Knowledge could not be assessed with logistic regression.) Qualitative data also supported quantitative results as most of the male and female respondents revealed low knowledge and negative attitudes towards the ANC services provided at the government health facilities.

Comprehensive health promotion and access to health services in the tribal community for routine ANC should be increased and implementation should be more targeted to increase the uptake of routine ANC services. This study suggests that, at the policy level, participation of women and their husbands in maternal health promotion programs that increase awareness will have long-term positive effects on ANC utilization in the Baloch community.

Keywords: Antnatal care, service provision, utilization, rural, Balochistan

1 Introduction

Routine antenatal care includes medical interventions and advice that a woman receives during pregnancy and is a key entry point for pregnant women to

receive a broad range of health promotion and preventive health services [1], including knowledge about healthy practices during pregnancy, nutritional support, prevention and treatment of anemia, diagnosis and treatment of other diseases and tetanus toxoid immunization [2-4]. In addition, routine ANC can be provided at both the household and primary health care level and helps to assure a link to higher levels of care when needed[5, 6]. The World Health Organization recommends that a woman without complications should have at least four ANC visits starting from the first trimester to get sufficient prenatal care to minimize pregnancy-related complications [7, 8].

The availability and accessibility of modern health services in developing and low income countries have increased over the past decades[14]. While the effectiveness in curing diseases may lead to greater utilization of modern health services compared to traditional practices, their utilization is likely to be higher among urban dwellers and those with higher socioeconomic status than by rural residents and groups with a lower socioeconomic status in developing countries [9].

The predictors of the utilization of ANC services in most developing countries include socio-demographic factors, availability and access to the health facilities, the educational level of the women and their husbands, perceptions of women regarding ANC and their knowledge of the importance of ANC services [10, 11]. Demographic factors such as the number of previous pregnancies, the number of children, maternal age, and marital duration also are reported to have an influence on the utilization of antenatal care [12].

“Attitude” is a state of readiness or tendency to respond in a certain manner when confronted with certain stimuli, is mostly dormant and is expressed in speech or behavior only when the object or situation is encountered[13]. Studies have reported negative attitudes as a major barrier to ANC utilization [14]. Previous studies in rural areas of the developing world have shown an association of specific attitudes with utilization of and access to health services. In addition,

socioeconomic factors contribute to inequalities in health status. Consequently, poor women are disadvantaged in accessing ANC, like many other aspects of their lives [14, 16].

Pakistan is one of the 11 countries that accounted for 65% of global maternal mortality in 2008. These countries, which also included India and Bangladesh, had a major share in maternal deaths worldwide [17]. In Pakistan, the maternal mortality ratio (MMR) is highest in rural areas and in less developed provinces[18, 19]. The situation in Balochistan Province is especially severe. In Balochistan, the MMR stands at 750 maternal deaths per 100,000 live births [19], as compared with 227, 314, and 275 in the other provinces of Punjab, Sindh and Khayber Pakhtoon Khwa, respectively [19-22].

Utilization of routine antenatal care at government health facilities in Pakistan generally is low. According to World Health Statistics and the Pakistan Demographic Health Survey of 2007 (PDHS) only 61% of women had at least one visit and the proportion further drops to 26% for 4 visits[24]. ANC services utilization in rural areas is lower at about 10% [18]. The District Health Information System in Balochistan Province reported only 15% of pregnant women registered for ANC in 2010-11 [25].

The Government of Pakistan has been providing maternal health services during the last two decades through primary, secondary, and tertiary health facilities, augmented by the Lady Health Workers (LHW) Program [25]. About 100,000 LHWs are the backbone of the primary health care system. A number of maternal health projects have been launched with the cooperation of international donor agencies since the Alma-Ata Declaration in 1978 made a commitment to provide primary healthcare, including “safe motherhood”, women’s health projects, lady health worker projects, maternal and child health projects and maternal and neonatal child health projects [26]. A literature review by the authors indicates that government services are utilized less than private health facilities in Pakistan. The Government is providing health services to only 30% of the

population while the remaining 70% are receiving services through the private health sector[25].

Balochistan is the least developed province in Pakistan and its urbanization rate has been slow relative to other provinces during the sixty years since annexation with Pakistan in 1948. The literacy rate is low, people are still living in their traditional commune system and their conservative values have great cultural influence on the community even in this modern world. Animal husbandry, agriculture and government jobs are the main occupations for males. Men are dominant in Baloch communities in every aspect of life. Women and girls are highly dependent on the decisions of men for their everyday activities and their mobility is also limited unless a male accompanies them. The Baloch tribal system has a marriage system based on polygyny and exchange of women for marriages. Feudal anarchies among clans and sub-clans limit mobility of men, leading to increased immobility and suffering of women.

The Jhal Magsi (JM) District, Balochistan, was selected for this study because it is one of the most underdeveloped districts in Pakistan. Only 10% of pregnant women in JM have one or more antenatal visits[21]. Very little research has been conducted in the rural areas of Balochistan Province to influence the policy makers by understanding the behaviors of the population. Therefore, this study assesses the provision and utilization of ANC services and to identifies barriers to greater utilization of the Government's routine ANC services in a tribal community of the Jhal Magsi District in Balochistan Province, Pakistan.

2 Methods

This study was a community-based quantitative and qualitative survey conducted in August–December 2011 at the Pattri Union Council, Gandawa Tehsil, Jhal Magsi District, and Balochistan Province, Pakistan. Gandawa Tehsil

has a district headquarters hospital, while in Pattri Union Council primary health services, including maternal health services, are provided through one basic health unit (BHU) and a civil dispensary (CD). The majority of the Gandawa Tehsil residents are Baloch and about 90% of the population in the Pattri Union Council belongs to the Lashari clan of the Baloch tribes.

The qualitative research was conducted at several levels of the community. This research included eight focus group discussions (FGDs) conducted in the villages of Pattri UC. The purpose of these FGDs was to gather background information to assist in developing a substantively appropriate, clearly understandable questionnaire for the quantitative study. Four FGDs were conducted among pregnant married women who had experienced at least one live birth. Four FGDs were also conducted among married men. One male and one female respondent were invited randomly from each sub-clan and 5-6 people took part in each FGD.

Due to cultural norms, the first author (AG) could not conduct FGDs with females. An all-female research team was assembled, under the supervision of co-author NG, to moderate the FGDS. Notes were taken; audiotapes and photographs were not allowed. All the FGDs were conducted in the Balochi language. Transcripts of FGD proceedings were written and analyzed in Urdu. The first author with the help of two male research assistants moderated male FGDs, at which audio recording and photographs were taken.

Different guidelines were used for the male and female FGDs, and different male/female sets of five question guidelines were generated from the literature review and from the discussion with senior teachers at Chulalongkorn University in Bangkok and Balon Medical complex hospital in Quetta, Balochistan. The guidelines for female FGDs were based on the importance of ANC, when and where they to go for ANC in complicated or uncomplicated pregnancies. Male FGDs guidelines were about health concerns of women during pregnancy and perceptions about public health facilities.

The qualitative data were analyzed through content analysis with inductive coding and the grounded theory approach. In this report, qualitative study results are presented only as they bear on the content of the quantitative portion of the research. Other aspects of the qualitative research will be presented separately.

The quantitative research was a cross-sectional study, using a standardized questionnaire in face-to-face interviews. A three-stage sampling process selected participants. In the first stage, one of two tehsils (Gandawa) in JM District was randomly selected. In the second stage, one of four union councils (UC) in Gandawa was selected randomly. In the third stage, subjects in UC Pattri were identified using the Expanded Program on Immunization (EPI) lists. According to the EPI list of 2011, Pattri had a total population of 17,375 and about 712 women became pregnant every year. Women who participated in FGDs were not included in the quantitative survey. Overall the refusal rate observed was low (5%), as female research assistants approached subjects at their homes or work places (e.g., agricultural fields etc.) in accordance with cultural norms. Most refusals occurred among very religious families and some families with feudal anarchies (armed conflicts between clans and sub clans). In the area studied almost all births take place at home, and detailed information is not available about characteristics of the births. However, according to the Pakistan Demographic Survey in 2008 [19] Pakistani women typically reach a parity of 6.3 children per woman at the end of their childbearing age. The fertility rate in Balochistan of 4.1 is similar to the national rate[19].

The main outcome variable was routine antenatal care (at least one visit) during any uncomplicated pregnancy, including the current pregnancy, in a government facility. This facility could be at a secondary or primary care level, through health personnel including doctors, midwives and lady health workers. Visits for complications or problems that need hospitalization or referrals during pregnancy were not included. The study did not include ANC at private facilities, as ANC services are free in government facilities. Furthermore, considering the

low utilization of ANC in the study area the number of visits was set at one or more visits.

The questionnaire was developed through a literature review and was finalized after FGDs and a pretest for clarity in another tehsil. The questionnaire was administrated to the subjects through female and male research assistants. The questionnaire included questions about socio-demographics, (age, education, income and distance etc) knowledge about the schedule, the benefits of ANC, and attitudes toward ANC at government health facilities. The questionnaire was translated into Urdu (the Pakistani national language), and was translated verbally in the Balochi language (mother tongue of Baloch tribe) during interviews by trained Female research assistants for quantitative surveys.

The sample size was calculated using OpenEPI online[27], with the assumption that 60% of women would be using antenatal care [19]. Keeping the population size at 20,000 in the Pattri Union Council, the sample size was 363 with a 95% confidence level. We increased the size to cover all the villages of Pattri UC to further increase the generalizability of the study. Thus, a total of 513 subjects, aged 18-40 years, participated in the study.

Descriptive statistical tests were used to measure socio-demographic characteristics of the respondents, with continuous variables presented as mean and standard deviations (SD); categorical data were presented as numbers, and percentages. In a bivariate analysis, chi-square tests were used to characterize the associations between the dependent variables (ANC at a government facility during any pregnancy) and independent variables (socio-demographics, knowledge, attitude and any perceived problems). Independent variables for which $p<0.05$ were included in the model for multivariate logistic regression analysis. The analysis was calculated through odds ratios (OR) and 95% confidence intervals (CI) to reveal the strength of associations between dependent and independent variables. A p-value <0.05 was considered statistically significant.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) for Windows, version 16.

The Ethics Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University, Bangkok, Thailand, granted ethical approval in 2011. Permission to conduct research in the Jhal Magsi District was obtained from the District Health Officer and the Provincial Secretary of the Health Department, Government of Balochistan.

3 Results

3.1 Qualitative results

There are many cultural healers in the study area. These include family healers, midwives, herbalists, hakims, and religious healers. Modern allopathic modes of treatment were also available in the community and mostly unregistered practitioners provided these services to the pregnant women. Both Government hospital and private health clinics were also available in the district headquarters.

Most of the male and female participants in the FGDs complained about distance from services and pregnant women complained about their lack of autonomy to travel alone to health facilities. For example, one woman said, "*I never see a hospital in my life if my husband or brother doesn't go with me how I can go to hospital*"

Male participants tended to have the same view about distance. A 40 year-old man said, *"If we need to go hospital we must start our journey at 5 AM, early in the morning"*

Qualitative queries also revealed that low family income was also an important barrier for the utilization of ANC services, *"Most of the time the reason why we don't use the health facility is because of our financial problems"* said a man of about 40 years of age.

During FGDs the participants also showed negative attitudes that seemed to be the result of many factors. A female living in the village that had a basic health unit noted that, *"When we go there we don't find any lady who we talk and listen and make us understand and my husband not allow me to go there for any pregnancy related matter."*

Behavior of staff and the availability of drugs and other facilities also had an effect on the negative attitude of people in the community, A male school teacher noted that, *"we not have good experiences with government facilities, some time they don't have staff, some time they don't have medicine, even they don't talk well with us properly"*

Past experience was one of the major factors influencing the decision on whether or not to visit government facilities for maternal health. Most of the people who visited didn't have good experiences during their last visit for multiple reasons. Some never visited health facilities because of negative past experiences learned from others.

Most of the male participants had a negative impression about government health facilities. They stated that most of the health staff there were unfriendly.

One of the men expressed his feelings by saying that, *"last time my mother was sick and we went to DHQ for treatment, nobody was friendly and my mother was not happy."*

Women also had the same opinion that when they go to government health facilities they don't get proper treatment and the staff of the hospital makes them spend money unnecessarily. These experiences leave a bad impression on their decision makers.

A mother of four stated that, *"Last year I had severe problems after an abortion and I remained sick for one week at my home so we went to the hospital (BHU) in the nearest village, but didn't find any body in the hospital. We waited a lot but nobody come to treat me, and then in the afternoon we left for the hospital in Gandawa. Even there we didn't find anybody"*

A 40 year old man noted that, *"In my view, the medicines they prescribed were a lot and most were unnecessary"*

People also avoided visiting health centers/hospitals because of the attitude of the staff. Most of them said the hospital staffs are not friendly, but medical staff behaved well in the private clinics. Patients did not know about the jobs of the staff and who is supposed to take care of them for maternal health services.

The results of the qualitative study revealed that the majority of the pregnant women and men don't had proper awareness about ANC and most of the respondents had negative attitudes toward government health facilities that affected the utilization of the services at primary and secondary level.

3.2 Quantitative results

The minimum age of the respondents was 18 and maximum was 35. The largest group (49.1 %) of subjects were aged 21 to 25, and the mean age was 24.67 years. The number of children was 1 to 11 with a mean of 4.86. Health facilities were located 5-35 kilometer (km) from the respondent's living place with a mean distance of 17.7 km. The family income of 91% of respondents was under 10000 Pakistan rupees (PKR) per month, with a minimum of 1500 to 25000 and the mean was ± 6548 PKR (< 75 US $ / month). About 92% of the respondents had not received any formal education, and about 98% of the respondents were housewives or were engaged in agriculture along with their families.

Four hundred and thirty nine (85.6%) never had antenatal care during their current pregnancy or previous pregnancies and only 14.4% of them had had at least one antenatal visit. About 66.7% of the respondents had some perceived pregnancy-related problem like weakness, vomiting, and convulsions.

Table 1 shows the levels of knowledge and attitude. 408 (79.5%) respondents had low knowledge and scores and 105 (20.5%) had good knowledge. The attitude

towards ANC at government health facilities was mostly negative 296 (57.7), but 217 (42.3) had a positive attitude.

Table 1: Knowledge and attitude of the pregnant women

Knowledge (Min= 0 Max= 14)	**Number**	**Percentage**
Lower knowledge (0-7)	408	79.5
Higher knowledge (8-14)	105	20.5
Mean ± SD = 4.29 ± 3.50		
Attitude (Min= 10 Max= 30)		
Positive attitude (24-27)	217	42.3
Negative attitude (18-23)	296	57.7
Mean ± SD = 22.93 ± 1.98		

Table 2 shows the bivariate analysis showing association of independent factors with antenatal care. It shows that fewer children ($p<0.001$), family income ($p< 0.001$), education ($p<0.001$) and occupation ($p=0.001$) were associated with increased rate of ANC at government facilities. The table also reveals that perceived complications ($p<0.001$) are associated with less antenatal care utilization at a government facility. Distance also showed significant association ($p<0.001$) with ANC. However age was not significantly associated ($p=0.807$) with antenatal care utilization at a health facility. Knowledge levels were positively and significantly associated ($p<0.001$) with high utilization of antenatal ANC. It also shows that no women with low knowledge utilized antenatal care (complete nesting of knowledge level with antenatal care utilization). Thus, knowledge level could not be included as an independent variable in multivariable logistic regression analysis. The attitude towards ANC at government health

facilities was significantly (p=0.009) associated negatively with ANC and shows low utilization of ANC.

Table 2 : Associations between independent variables and history of any antenatal care at a government facility among pregnant ladies

Factors	Antenatal care Practice				p-value
	No= 437 (85.6%)		Yes= 74 (14.4%)		
N= 513	N	%	N	%	
Age					0.807
≤20	69	82.1	15	17.9	
21-25	217	86.1	35	13.9	
26-30	107	86.3	17	13.7	
>30	46	86.8	7	13.2	
Parity					<0 .001
≤3	57	68.7	26	31.3	
≥4	382	88.8	48	11.2	
Distance of residence from health facility (km)					<0.001
≤15	262	84.0	50	16.0	
16-20	42	70.0	18	30.0	
≥20	135	95.7	6	14.4	
Family Income (per month) PKR (92 PKR=$1 US)*					<0 .001
≤10, 000	414	88.7	53	11.3	
≥11, 000	25	54.3	21	45.7	
Education					<0 .001
No formal education	423	89.4	50	10.6	
Any years of education	16	40.0	24	60.0	
Occupation					0.001
House wife	434	86.3	69	13.7	
Government servant	5	50.0	5	50.0	
Any perceived pregnancy-related problem or complication					<0.001
No	107	62.2	64	37.4	
Yes	332	97.1	10	2.9	
Knowledge					<0.001
Lower knowledge	408	100	0	0.0	
Higher knowledge	31	29.5	74	70.5	
Attitude					0.009
Positive attitude	243	82.1	53	9.7	
Negative attitude	196	90.3	21	17.9	

Table 3 shows results from the multivariable logistic regression model, showing strong associations of education, parity, family income, perceived problems, and attitudes with antenatal care utilization at government health facility. However distance and occupation lost their significance in the multivariable logistic model. Again, due to complete nesting of knowledge with ANC status, knowledge could not be included in the model.

Table 3: Multivariable logistic regressions

Independent variables	**Odds Ratio**	**95%CI**		**p-Value**
		Lower	*Upper*	
Distance of residence from health facility (kilometers, ref ≤15)				
16-20	5.64	2.23	14.26	<0.001
≥20	0.38	0.11	1.32	0.131
Parity (ref ≤ 3)	0.33	0.15	0.758	0.008
Family monthly income (ref ≤ 75 US $)	4.32	1.53	12.19	0.006
Occupation (ref = government servant)	2.86	0.42	19.17	0.279
Perceived problems/complications (ref = no perceived problem)	0.80	0.036	0.178	<0.001
Negative attitude towards government health facility (ref = Positive attitude)	0.513	0.252	1.042	0.065
Education (ref = any years of education)	5.92	2.027	17.325	0.001

4 Disscusion

In this study the outcome variable was utilization of routine antenatal care at government facilities and the association of different factors were considered. The factors were selected from the literature review and after the qualitative portion of current study.

According to the Multiple Indicator Cluster Survey (MICS) Balochistan and PDHS 2007 health survey utilization of ANC in rural areas is less than 10% with the standard being at least one visit [19, 21]. Annual analysis reports of the District Health Information System (DHIS) Balochistan 2010-11 reported 15% registration for ANC in all of Balochistan [24].The present study also found only 14.4% of the pregnant women had antenatal care from the government facility.

In both qualitative and quantitative studies it was observed that quite a significant proportion of the study participants had perceived pregnancy-related problems More than 60% of the respondents had perceived complications or problems related to pregnancy and this was significantly associated with less ANC utilization. The results of this study are consistent with other studies in the rural areas from neighboring countries [3, 28, 29] of the pregnant women who perceived problems or complications. The perceived complications and problems in the present study were significantly associated with ANC at public health facilities. According to the MICS Balochistan and PDHS 2007 health survey utilization of ANC in rural areas is less than 10% at the standard of at least one visit [19, 21] at a government health facility. Data from PDHS 2007, MICS Balochistan 2004 and a study conducted in a rural area at province of Sindh assessed the sources of ANC. According to their results most of their respondents had ANC from a doctor at a private clinic or hospital [19, 21, 26]. These studies also reported that in Balochistan Province about 60% of the pregnant women never had antenatal checkups from a government health facility or a private health facility and only 25% and 15% women had checkups from TBA and health personnel respectively.

In this study the pregnant women who had fewer children had more ANC utilization. The literature reviews revealed a mixed pattern. Some studies revealed that decreased parity is associated more ANC [29-31]. On other hand studies also have reported increased ANC with increased parity [28, 32, 33]. Studies have reported that the number of children is directly associated with pregnant women's health and utilization of ANC and the reason for the increased utilization may be related with health problems due to the increased number of children. With more complications more pregnant ladies are going to contact health personnel during pregnancy. But the current study and the study from the Mathews and colleagues [3]revealed less ANC among high parity women. This may be due to local cultural circumstances including low mobility and less education of women. Even women at risk of more complications may not go for ANC.

In almost every study exploring barriers at national or international level to ANC utilization, the educated pregnant women are more likely to realize the benefits of using maternal health services. There is a highly significant association of more education with more ANC utilization. [3, 10, 28, 34-36]. Although there are few pregnant women in this study that had any formal education but it showed a highly positive significant association with antenatal care utilization.

Family income and education serve as indicators of socioeconomic status. Studies have reported socioeconomic factors are the most important barriers and have observed more ANC utilization in higher income families [30, 37, 38]. In the current study most of the community were illiterate and a high proportion of women belonged to a low-income group. After multivariate logistic regression analysis, income was found to be a significant factor for utilization of antenatal care.

Studies have shown that awareness and knowledge of health facilities, benefits, complications and realization of importance of ANC in community and individuals have significant positive effect on ANC utilization [38] and utilization rates are high among high knowledge pregnant mothers in Pakistan and other parts

of world [12, 39, 40]. The current study showed that most of the respondents had low awareness and knowledge about antenatal care and government health facilities. The quantitative part of this study also revealed a tight positive association of ANC use with knowledge.

In this study both qualitative and quantitative methodologies showed negative attitudes toward health facilities and health workers. These perceptions continued even though the majority of the health workers, including doctors, nurse, midwives, paramedics, and community health workers, provide private services as well. Focus group discussions and participant observation revealed that accessibility, staff behavior, shortage of medicines and financial costs were creating a negative perception. In the quantitative survey attitudes also showed significant negative association toward ANC at government health facilities. The logistic model confirmed this negative association. In the literature review some studies have reported that the negative attitudes of health care workers and reduced positive relationships between health care workers and pregnant women are one of the most powerful impediments to ANC utilization [14].

Many studies have reported significant associations of distance and occupation of women with ANC utilization[33, 36, 41]. In the rural areas, where roads and transport are not available, distance to the health facility appeared as an important barrier in the qualitative component of the study and in the quantitative survey. The Multivariable Logistic Model also showed statistically significant association with increased ANC use.

Literature reviews also indicate that age is an important barrier for the utilization of ANC services[10, 42, 43]. Studies in Pakistan and neighboring countries also have shown that women in tribal society use less ANC [3, 35, 44] The reason might be the lack of autonomy of the females and their reduced mobility, which was expressed by the respondents in the qualitative part of the study.

In the current study age did not show any significant association with ANC. It might be because of the culture of the tribal society of the community studied. Baloch culture is a male dominant society and women in the society don't have autonomy to travel alone or take decisions independently irrespective of the age of the women.

ANC services in Pakistan are based on WHO protocols of at least 4 visits in uncomplicated or normal pregnancy and these visits can be carried out at the primary health care level. This study also would have considered the outcome variable as four visits for ANC at any facility. After pretesting and qualitative study results were analyzed, several limitations were encountered. For example, there was no established system of modern ANC in the community studied, and none of the respondents had complete four visits for any of normal pregnancy. ANC utilization is low and that may lead to the respondent's recall bias, as fertility rate is high in the area studied.

Seventy percent of the health services in Pakistan are provided through the private (for profit or non-profit) health sector and the Government Public Health System provides remaining services. Because the aim of the study was to assess provision and utilization of ANC services at government health facilities, the main outcome variable was changed to at least one visit to routine ANC at a government facility. This also reduced the chance of a recall bias.

5 Conclusion

This study found that knowledge about ANC, attitudes toward Government health facilities, education, income, and perceived problems and complications during pregnancy were important factors that influence utilization of ANC services in the Baloch tribal society in the rural area. Due to continued bad experiences, disparities and negligence of the rural areas the rural tribal

community has developed negative attitudes to routine ANC in Government health facilities.

The study has raised several direct and indirect, practical, policy and research issues. Rural areas in Balochistan Province don't have the basic infrastructure and in normal circumstances during pregnancy uncomfortable travel and unavailability of good quality care hinder the utilization ANC services. Knowledge also plays an important role in utilization as it leads to awareness about the provision of Government services. Comprehensive health promotion through the Lady Health Workers Program and access of the health personnel in the tribal community to routine ANC should be increased and implementation should be more targeted to increase the uptake of routine ANC services.

At the policy level this study suggests that when interventions related to maternal health include women and their husbands, awareness and education will have long-term positive effects on ANC utilization in the Baloch community. Further research studies are recommended to elaborate the problems and perceptions of the men in the rural area, especially men living in tight cultural values in Balochistan province In addition, health workers should be trained according to the local and cultural values to increase the uptake of routine ANC and preventive services in general.

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