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EFFECT OF SOCIO-ECONOMIC, CULTURAL AND DEMOGRAPHIC FACTORS ON WOMAN REPRODUCTIVE HEALTH

Mohammad Mumtaz Khan[1]* Mohammad Iqbal Zafar[1], Tanvir Ali[2] and Ashfaq Ahmad[1]
[1]Dept. of Rural Sociology, University of Agriculture, Faisalabad
[2]Dept. of Agri. Extension, University of Agriculture, Faisalabad
*Corresponding author's e-mail: mumtaz_urp@yahoo.com

Enormous population growth is badly affecting the socio-economic, cultural, demographic, and political development of the country. Unchecked population growth is serous threat to national development and integration. Preferences for large families and unfavourable attitude towards contraception are growing challenging for government need to be investigated on scientific ground. The main objective of this study is to identify the determinants of reproductive health–family size and contraceptive use within the socio-economic, cultural and demographic framework. The socioeconomic factors include education of husband and wife, occupation of both, family income, and family structure. The demographic factors are related to current age, family size and sex preference, and marriage pattern, Cultural factors are found in terms of gender roles: wife's participation in the decision-making process, husband-wife communication on contraceptive, religiosity, physical cost of contraceptive, normative cost of contraceptive, and program factors in terms of availability and accessibility of reproductive health facilities, utilization behavior of health facilities, and attitude of health facilities, and attitude of health providers. The study was conducted in two randomly selected districts-Peshawar and Kohat. The study was conducted in urban areas including with the random selection of three communities from each district. 60 users of contraceptive from the family planning clinics and 60 non-users from each community were selected using systematic random sampling technique. In this way the total sample size was 720 (360 users of contraceptives and 360 non-users of contraceptive). A well-structured interviewing schedule consisting of open-ended and close-ended questions was prepared to explore the research objectives.
Inferential and multivariate analysis demonstrates the importance of socio-economic factors to determine the respondents' family size and their choices about the use or not-use of contraception. Gender roles and relationship in terms of spousal communication, women participation in decision-making process regarding family and non-family matters also play an important role in influencing reproductive health status. The cost of contraception –physical and normative–is a strong predictor of contraceptive use. Positive attitude of health care providers towards their clients in providing health care services does affect positively the utilization of health facilities available at the health care outlets resulting in improved women reproductive health status.
Keywords: Reproductive health, socioeconomic factors, physical cost, family size and contraception

INTRODUCTION

It is very sad to note that every year worldwide, more than 500,000 women die from pregnancy related causes in developing countries. Globally, 43% of all women and 51 % of pregnant women die from iron-deficiency anemia. One hundred and twenty million women say that they do not want to be pregnant, but are not using family planning methods, due to non-availability of services and other socio-cultural hindrances. Twenty million unsafe abortions are resulting in thousands of deaths and millions of disabilities in a year. More than fifteen million girls' aged 15 to 19 years give birth every year (World Bank, 2004).

In Pakistan 28 thousand women die every year due to pregnancy and childbirth complications. The fertility rate is very high i.e. 6 to 7 children (2004-5). Contraceptive prevalence rate is very low with 34% only. The population is increasing with very high growth rate of 1.9% p.a. today we are more than 165 million. Fifty percent of women in Pakistan having 3 children do not afford more children. 55% of all maternal deaths can be saved if women stop becoming pregnant after the age of 35. The life of thousands and thousands mothers can be saved if they avoid the follow "toos", for example, too many, too-close, too early and too late (Demographic and Health Survey, 2002).

Reproductive health care is defined as the constellation of methods, techniques and attitude that contribute to reproductive health and well being by preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement related to reproduction and sexually transmitted diseases. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have to decide. Implicit in this last condition are the right of men and women to be informed and to have access to save, effective, affordable and acceptable methods of family planning of their choice, for regulation of fertility which are not against the law. The right of

access to appropriate health care services that will enable women to go safely through pregnancy and child birth and provide couples with the best chance of having a healthy infant, should be ensured.

The demographic and health characteristics of Pakistan (NWFP) are typical of other developing countries. In spite of high infant and maternal mortality rates, wide spread communicable and infectious disease patterns coupled with a high growth rate and malnutrition problems still the emphasis has been given to curative based clinical medicine. Most of the resource allocation is being diverted at the expense of a Primary Health Care (PHC) approach. Even the health manpower policy is also typically clinically oriented, again mainly focused on doctors. Development of nursing and paramedics with requisite training skills and knowledge, especially of LHV/Community Nursing has lagged behind (Hakim, 2000).

The wide spread influence of gender, particularly low in equality between women and men affects their reproductive health. They can be communication regarding important matters like use or not use of contraception and number of children. Different programs concerning services that take account of gender roles and long-term encouragement, equality between the spouses. In 1990 UNICEF launched a media campaign to promote women potential for the achievement; when they received education and sport. That has been changing people attitude regarding reproductive health. Important lesson gender awareness has also been learned from these programs to increase participation through communication. Information, understanding and commitment are vital for bringing about behavior change that leaves to successful and sustainable population development and poverty reduction programs. Changes in the social norm of small family size and use of contraception could be promoted with the introduction of changes in cultural system. The formation of such attitude in acceptance of values is important in this regard (Hakim and Miller, 2000).

Spousal communication is crucial step toward increasing women's participation in reproductive health. Since men can play key role in reproductive health. Communication is necessary for making, responsible healthy decisions which enables husbands and wives to know each other's attitude toward family size and contraceptive use. It allows them to voice their concerns about reproductive health issues such as worries about undesired pregnancies. Communication also can encourage shared decision-making and more equitable gender roles. Research over more than forty years consistently demonstrate that men and women who discuss family planning are more likely to use contraceptives, and to use it effectively and to have fewer children i.e. small family size. In contrast, when men and women do not know and lack of communication by their partner's fertility desires and contraceptive preferences, the consequences (Zafar, 1996).

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Traditional culture often discourages married women from starting discussion about contraception. For their part man may feel there is nothing to discuss or no need to take account of their wives feeling and opinions. In countries such as Pakistan, India, Kenya, and Nigeria, traditional male dominance is a major obstacle for spousal communication about family size. A husband and might consider his wife unfaithful if she try to discuss such problem with him. In some culture it is easier for unmarried women to negotiate and discuss such activity with men including the use of contraception with her partner (Karim, 1997).

The health care delivery system in the public sector consists of three levels i.e. primary, secondary and tertiary care. Primary health care facilities, namely BHU, RHC, MCH centers, Dispensaries etc. are grossly under utilized, as are, also, some of the secondary level health care facilities. Multiple factors contribute towards this dilemma. Most important of them are absenteeism/non availability of staff, and non availability of drugs and equipments. Absence of financial incentive for patients; ineffective referral procedures and their entertainment at public and private hospital, coupled by rapid urbanization further add to this problem. As a consequence the tertiary level hospitals are over crowded leading to poor service delivery (Hakim, *et al.,* 2001; Kayani, *et al.,* 2001).

Keeping in view poor reproductive health status in the entire country particularly in NWFP, a study is designed to identify factors affecting reproductive health within the socio-economic, cultural framework and to suggest measures to enhance reproductive health status of women in NWFP.

MATERIASL AND METHODS

The N.W.P.F. is the third province of Pakistan with respect to population size. The population of the Province is increasing very tremendously. The women are facing multidimensional health problems. Very limited studies on reproductive health issues are conducted in the Province so far due to the cultural constraints. Cross-sectional survey was conducted for gathering data on reproductive issue. Two districts - Peshawar and Kohat are selected randomly. The study was conducted in urban areas including with the random selection of three communities from each of district. 60 users of contraceptive from the family planning clinics and 60 non-users from each community were selected using systematic random sampling technique. The total sample size was 720 which was decided keeping in resources available, time, analysis plan, and level of variation in the socio-economic, cultural variables and reproductive health status. Pearson's correlation, regression analysis and logistic regression were used to analyze the data.

Findings

As mentioned earlier, the correlation analysis was used for examination of the degree of association or strength of association between variables. The results of correlation analysis helped to know the relationship between dependent and independent variables that has shown the level of association of demographic, cultural and socioeconomic variables with family size and contraceptive use. All values of correlation co-efficients are given in Table 1.

This Table 1 shows that the correlation of all predictor and response variables. Family size is significantly dependents on respondent age at marriage, husband age at marriage. respondent education, husband education, family income, family setup, sex preference, domestic chore, household activity, woman participation in decision-making process, spousal communication, religiosity, physical cost, normative cost, attitude of health provider with correlation coefficients -0.147, -0.125, 0.1501, -0.0549, -0.1377, 0.0624 -0.4402, -0.0589, -0.3833, -0.0884, -0.1101, -0.3234, -0.2501, 0.1932, all these socio-economic, demographic and cultural variables are significant at one percent level. The significance of all these independent variables with contraceptive use is also established reflecting the importance of socio-economic, cultural, demographic and service related factors in predicting woman reproductive health status in NWFP.

The multivariate analysis (multiple linear regression) is also carried out to find relative significance of independent variables in explaining dependent variables. The multiple linear (Stepwise) regressions require certain assumptions to be met for its application. The assumptions are that each group must be from a multivariate normal population and the population variance-covariance matrix for all groups must be equal. There are several ways to verify these assumptions. The scatter plot of residuals (difference between the observed value and the value predicted by the regression model) against the predicted values is easy approach to test the assumption of linearity and homogeneity of variances. If the data meet the

Table 1. Pearson's (pair wise) correlation between predictors and outcome variables.

Sr. No.	Predictor variables	Family size/ever born children	Contraceptive use/not use
1	Respondent age at marriage	+0.147**	-0.154**
2	Husband age at marriage	+0.125**	-0.065**
3	Respondent Education	-0.1501**	0.428**
4	Husband education	-0.0549*	+0.0085**
5	Family income	-0.1377**	+0.0751**
6	Family setup	0.0624**	0.1846**
7	Sex preference	0.4402**	-0.5326**
8	Domestic chore	-0.0589*	+0.0937**
9	Household activity	-0.3833**	+0.4888**
10	Woman participation	-0.0884**	+0.2445**
11	Communication	-0.1101**	+0.1948**
12	Religiosity	+0.3234**	-0.4007**
13	Physical cost	+0.2501**	-0.4786**
14	Normative cost	+0.1932**	-0.1274**
15	Attitude of health provider	-0.4430**	+0.5352**

*The Coefficient is significant at 5 percent probability level (2 tailed).
**The Coefficient is significant at 10 percent probability level (2 tailed).

assumptions of linearity and homogeneity of the variances, then there should be no relationship among socio-economic and attitudinal variables indicating that the assumption of linearity and homogeneity of the variances seemed to be satisfied. Moreover, a histogram was also constructed to examine whether the groups came from a multivariate normal population. The distribution of residuals presented in the form of histogram confirmed that the data were from multivariate normal population. It is pertinent to mention here that slight deviation from the assumption does not affect the results because it is unrealistic to expect the observed residuals to be exactly normal. Some deviation was expected because of sampling variation. To identify the relative importance for each of the independent variable in term of explained variation in the response variable was discussed in the following section. Two measures standardized regression co-efficient (betas) and co-efficient determination (R^2) were used to establish the importance of each of the independent variable in determining response variable. The regression co-efficient estimates the effect of the independent variables in predicting response variable. The higher the value of regression co-efficient, the higher the impact of independent variable on the dependent variable. The co-efficient of determination R^2 measures how well the independent variable explains the dependent variable. Regression coefficient and standard errors and t-values showing the effect of independent variables in determining dependent variable (family size) given in Table 2.

Table 2 presents the results of multiple linear regressions. As mentioned earlier, the regression analysis is carried out to identify the relative significance of predictor variables in predicting response variable Regression coefficient (beta) value is used to know the relative importance of independent variable. The above Table 2 shows that socio economic characteristics in terms of age at marriage of respondents, education of respondents respondent, husband education and family income with regression coefficients -0312, 0.2763, -0.162 and -0.0757 all are significant at 1% level indicating the importance of socio-economic characteristics in determining family size.

The gender roles relationship in terms of spousal communication, the women participation in decision making process and participation of husband in household activities are contributing factors with regression coefficients +0.095, -0.117, -0.2956, all are significant at 1% level in determining family size. The Table 2 also identified the significance of intangible factors such as normative cost, religiosity physical cost, attitude of health provider and sex preference in influencing the family formation. Sex preference with regression coefficient 0.306, physical cost of contraception with beta value -0.1934, normative cost with beta value 0.0804 and attitude of health provider with regression co-efficient 0.3551, all these variables have strong effect at one percent level of significance on contraceptive use. It also emerged from the table that the most important predictive variables were the

Table 2. Stepwise regression analysis results for family size of respondents with independent variables that is spousal communication

Sr. No.	Independent Variables	Regression Coefficients-Betas with Standard Errors	t-Values
1	Age at marriage	-0.312 ± 0.0205	7.012**
2	Respondent's education	-0.2763 ± 0.0458	6.027**
3	Husband's education	-0.162 ± 0.0321	2.221**
4	Income of family	-0.0757 ± 0.0209	3.622**
5	Spousal communication	-0.0950 ± 0.0221	4.303**
6	Woman participation in decision making process	-0.1157 ± 0.0303	3.817**
7	Normative cost	0.0804 ± 0.0336	2.391**
8	Religiosity	-0.1335 ± 0.0272	4.917**
9	Household activities (chores)	-0.2596 ± 0.0282	9.190**
10	Family setup	0.1418 ± 0.0423	3.349**
11	Physical cost of contraception	-0.1934 ± 0.0273	7.085**
12	Attitude of health providers	-0.3551 ± 0.0287	12.38**
13	Sex preference	0.3026 ± 0.0316	9.574**
	Coefficient of Determination (R^2)	**0.7856**	

attitude of health provider, age at marriage, respondent education, household activities and sex preference in determining the family size because these variables have the highest values of regression coefficients.

regression, one can directly estimates the probability of an event occurring.

The family system of respondents and her husband education, age at marriage, income, communication,

Table 3. The value of beta, standard error, and wald statistics of various socio-economic and cultural variables regressed on contraceptive use

Sr. No.	Variables	Beta	Std. Error	Wald statistics	D Freedom	Ex(B)
	No. of respondent = 720					
1	FAMILY SYS (NUC, JOINT)	0.761**	0.193	15.548	1	2.140
2	RESP'S HUS EDUCATION	0.230**	0.108	4.511	1	1.258
3	RESPONDT EDUCATION	0.287**	0.100	3.491	1	0.830
4	NORMATIVE COST FCONTRA	0.905**	0.190	22.673	1	2.471
5	INCOME OF SPOUSE	-0.483*	0.247	3.803	1	1.620
6	COMMUNICATION	0.375**	0.130	8.361	1	1.455
7	RELIGIOSITY	0.759**	0.152	24.795	1	2.135
8	SET UP FAMILY (PAT, MAT)	-0.577**	0.239	5.824	1	0.561
9	HLT P ATT (CONSULTATION)	0.224*	0.134	2.785	1	1.251
10	PHY COST CONTRACEPTION	-0.479**	0.154	9.692	1	1.615
11	SEX PREFERENCE	0.485**	0.187	63.121	1	0.442
12	ATTD OF HELTH PROVIDER	1.309**	0.170	59.182	1	0.270
13	CONSTANT	7.506**	1.166	41.448		0.001

Significant, * = P<0.05, ** = P<0.01

The value of coefficient of determination (R^2) is 0.7856 reflecting the independent variables in regression model are responsible for explaining 79% variation in explaining family size. It has been argued if the value of R^2 is more than 40% that regression model is considered as best fit model (Zafar, 1993). As the results of regression show that the variables in regression model are the most relevant appropriate variables in predicting the family size for the province of NWFP.

Logistic Regression for explaining contraceptive behavior

The logistic regression is applied when variables are binary in character, the objection arises that why ordinary regression model is not used. The basic cause to avoid its use is that, the binary variables has different nature, on the grounds given under, therefore logistic model is applied on it.

1. The error term occurs when variance of the dependent variable is different with different values of the independent variables.
2. The error term is not normally distributed because y takes on two values violating another
3. The predicted probabilities can be greater than 1 or less than 0, which can pose problem, if predicted values are used in subsequent analysis.

The logistic model is used to study the probability of occurrence of an event in population studies. In logistic

consultation in family affairs, physical and normative cost of contraception, religiosity, family structure and sex preference, attitude of health provider, are the variables with significant beta values showing that these variables are positively related with binary variable known as use/not use of contraception.. Beta coefficients show that variables' bearing positive sign indicates their positive influence on response variable. Those variables which have negative values; showed negative influence on above described variables. The level of significance regarding likelihood value was .9988 and goodness of fit, the level significance value was .9934.

Table 4 indicates that all impendent variables such as family system respondent education, respondent husband education, normative cost, physical cost, spousal communication, religiosity, sex preference and attitude of health provider are important correlates or determinants of contraception.

Table 4. Classification: Use or not use of contraception

Observed	Yes	No	Percent correct	
Yes users	384/87.7	54/12.3	438	60.83%
Nonusers	87/30.9	195/69.1	282	39.17%
Total	471/100	249/80.4%	720	80.4%

In Table 4 classification of users and non users identified in logistic regression model indicates that among 438 users 384(87.7%) were correctly identified as users of contraception, while 54(12.3%) were incorrectly identified as users. They might have the characteristics of nonusers but they were using contraception may because they have already large family size. It can also be interpreted that these users of contraception (12.3%) may have the tendency to discontinue. On the other hand among 282 non users of the contraception 195(69.1%) were correctly classified as non users while 87(30.9) were incorrectly classified as non users. In other words these 87 (39.9) might have the characteristics of users and may be they are in early age of child bearing. It can be said that these non users have tendency to use contraception in near future. The overall (80.4%) of the respondents were correctly identified by the regression model. The logistic regression results have been matching with the results of correlation and multiple linear regression.

CONCLUSION

As women's equality with men increases, so does their ability to communicate about reproductive matters and to participate in reproductive decision. When a women shares decision-making power, she is better able to bring up and discuss family size, family planning and health matters with her partner. In particular, better-educated women can communicate easily as the study has shown. More educated women are better informed, better able to gather information and mass media and usually more articulate. Education may also increase the women early capacity; and thus her leverage decision in household decision-making and raise her self-esteem. The closer a man and woman are in their levels of education, the more likely they are to discuss family problems. The study showed that higher educated couples discussed the problem frequently and confidently, also higher class respondents discuss such problems frequently. A woman who has more economic power may be more likely to discuss family matter with her husband. In this study women who belonged to middle or upper middle class have highest level of communications with their husband. The type of marriage whether free choice arranged also affects the power of communication with her husband. Those marriages, which are arranged in younger age have an effect on family size and contraceptive use –the important indicators of reproductive health. The age of woman at first marriage relates to their ability to communicate on reproductive health issues. The younger the woman especially if she much younger than her husbands the less communication about family matters.

POLICY RECOMMENDATIONS

1. The policy makers should focus on woman education with the establishment of more educational institutions along with provision of information on reproductive health.
2. There should be ability of women to bring about innovation in form of formal norm and creation of open social system with the formal participation in decision-making among spouse.
3. It is recommended that elevation of status of women within family through better communication on all matters among spouse could lead toward more confidence building in the personality of females, and better health of mothers.
4. It is recommended for the policy makers that there should be more steps to create more awareness and knowledge among females regarding birth control methods and low status due to non-earning hand and low status has been leading towards lower communication among spouse.
5. There is need to ensure accessibility and availability of family planning methods at each basic health unit to promote small family norms.
6. Majority respondents had misconception about the Islamic view about contraceptive use, there is need to create awareness among the people regarding true Islamic spirit of family formation.
7. Marriages of women in younger ages should be discouraged. People should make aware about socio-demographic and reproductive health implications of women early marriages.

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