DETERMINANTS OF MARITAL FERTILITY IN PAKISTAN

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Pakistan is at an early stage of demographic transition and experiences rapid rate of population growth. Many strategie:s have been adopted. to slow the pace of population growth but limited success has been achieved so far. The differentials . of f.ertility levels demand careful assessment. The.present study is based on Pakistan Demographic Health Survey (PDHS, 1990-91). The bivariate and multivariate statistical techniques are used to understand the relationahip between fertility and social and demographic factors. The regression analysis demonstrates that ba:c~,ground variables such as   type of re.sidence, duration of marriage, education of respondents and nU'l't>e'r of dead children exert   an important influence on reproductive behaviour. It is recommended that social aspects of women life in terms of education, mother-child health facilities should be improved and a conducive environment should be provided to them so that they can freely participate in development process.

Key words: children ever born, determinants of marital fertility, Pakistan

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In Pakistan, like many other developing. countries, mortality has declined in recent decades, whereas fertility levels remained high which resulted in a rapid population grovyth. A population growth exceeding 2.5 % causes doubling of population in 25-28 years and is inconsistent with efforts to raise the quality of life. The latter does not seem possible without achieving the demographic targets. The number of children ever born (CES) is about 4.1 (PDHS, 1990- 91), while GNP growth decreased from 3,47 % (1995) to 2.37 % in 1997 (Economic Survey, 1996- 97). On the other hand, due to better health facilities and successful immunisation programme, the infant mortality rate declinedfrorn 150 to 180 per thousand live births in 1947 to less than 100 in 1991. The life expectancy at birth has increased from 35-38 years in 1947 to 60 years in 1990 (PDHS, 1990-91). However, the standard of housing facilities, employment opportunities, literacy rate and health services is far below than those of the developed countries. Pakistan has one of the lowest literacy rate (31 % I in the world and about 30 % of its population lives below the poverty line (Hakim, 1997). A large amount of budget is being spent to promote the concept of small family norms and to encourage the use of modern methods of family planning but population targets have not yet been achieved. In order to achieve the desired population goals and for proper planning and formulating the successful policies, the identification of fertility differential is

essential. In this paper, an attempt is made to identify the determinants of marital fertility.

MATER.IAL AND METHODS

The data for this study were taken from the Pakistan Demographic and Health Survey (PDHS), collected by the National Institute of Population Studies during 1990- 91. The PDHS sample is a sub-sample of the Federal Bureauof Statistics master sample and consists of 6611 women. The study includes only currently married women who had at least one child after 5 years of their marriage and whose husbands were alive. In coding, a value of zero was given for a 'no' response. The number of children ever born (CES) is taken as a dependent variable. To investigate the effect of regressor variables, the bivariate and multivariate analyses were carried out. An asymmetric eta coefficient is used as a bivariate measure with CES as a dependent variable. Eta-square measures the proportion of variability in dependent variable by determining the values of independent variable. The multiple regression technique is used for examining the relationship between predictor variables and the dependent variable. Ordinary least squares method is applied to obtain the estimates of the explanatory variables for the following linear specification:

$$CEB = L \; f?>;x + \epsilon_j$$

Where Xi is a vector of regress.or variables, which inelude variables such as type of residence (rural/urban),

educational level of respondent, number of dead children, ever used contraceptives, duration of marriage, spousal discussion on number of children, husband's demand for number of children, education level of husband and work status of the respondent. Adjusted R-square was used to measure the proportion of total variability about the mean of Y explained by regression. Stepwise regression analyses was used to identify the significant predictors influ~ncing fertility.

RESULTS AND DISCUSSION

Tables 1 and 2 show the results of eta coefficients and multiple regression respectively. The value of adjusted R-square indicates that 89.22 % of variation in dependent variable is explained by the seven independent variables such as type of residence (urbanlrural), educational level of respondent, number of children dead, ever used contraceptives, duration of marriage, spousal discussion on number of children and husband's demand for number of children. The findings of both bivariate and multivariate analyses are discussed in the following paragraphs.

Fertility levels were observed to be higher among rural women than their urban counterparts. The observed significance level for this background variable is P = 0.03. This is because the cultural and societal factors are still very strong in favour of high fertility in rural areas. The knowledge and use of contraceptives and socio - economic development have not yet reached a stage where those are able to influence the traditional fertility behaviour. Urban fertility appears lower because the population has a larger proportion of couples who are well-educated and mostly have white collar jobs. They are likely to marry late and also they may be afraid of the higher cost of raising the children in an urban setting (Hakirn, 1994). Urban fertility was also found to be lower than rural fertility in Taiwan and Thailand. Although some analyses did not find any urban _ rural fertility differentials in Pakistan but others did find (Sathar, 1979; Alam and Shah,1986) .

The level of respondent's education is found to be inversely correlated with CEB. The educational level of the respondent comprised five categories: no education, primary, middle, secondary and higher education. Eta _ square value indicates that about 3% of variation in CEB is explained by the educational level of respondents. The coefficient remained large even when adjusted for other predictors in multiple regression. The empirical findings of a number of studies supported such an inverse relationship between education and fertility (Zafar, 1996). Actually there are numerous channels through which education affects fertility. Education

certainly affects age at marriage, attitude towards ideal family size and costs of rearing and raising children.

The mortality variable (infant mortality) was found to be Positively and significantly related to CEB. Its effect as Eta (bivariate analysis) and B (multivariate analysis) values remained significant. Eta - square indicates that about 26 % of the variation in CEB is explained by the leve/of infant mortality. The variable contraceptive use is a&ummy variable, dichotomising those who had' never used contraception, they were given a value of zero andthpse who had used, or were using contraception/Of sterilisation, were given a value 1. The variable was foun(-1 to be positively related to CEB i.e. the fertility is hi9her>Clll1onthe 'users' of contraception. This is due to the rea$Qn that women in Pakistan begin using contraceptives only-after a large family size has been achieved. In Countries like Pakistan where the fertility is not commonly Controlled by contraceptives, the analysis of duration of marriage i.e. the length of reproductive period becomes very important, since a longer exposure period is expected to end up with higher fertility. A large value of t = 66.41 revealed a highly significant effect of duration of marriage on CEB.

A positive association is observed between spousal discussion on number of children and CEB. This startling result is due to the reason that Pakistani society is male dominated. Majority of decision concerning maritCil and family life are made by men as head of household. About 30 % of the men want more children than their wives (PDHS, 1990 - 91). The demand for children among men is higher due to their preference for male issues. Men probably feel that higher number of children would elevate their status. Most of them have also the feelings that sons (male issues) would support and stand by them during their old age. The variable 'husband's demand for number of children' consists of three categories. Husbands/wives wanting less number of children than their spouse, were given the value 0, the same number of children by both (value 1) and more number of children by husband were given the value as 2. The variable 'husband's demand for number of children' emerged as an important factor of fertility differentials and is a reflection of husband's domination in reproductive matters in the Pakistani environment. The husband's education did not show any association with fertility. The observed significance level for this factor was P = 0.35. Its effect on CEB. as Eta coefficient was suppressed in multiple regression due to inclusion of other variables in the model. Similarly, there was an indication of weak inverse relationship (B= -0.69) of work status of women to their fertility (P = 0.49). 'Husband's education' and 'work status of respondents' were removed from equation by stepwise

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Table 1. Values of Eta coefficients and their squares for Ct6as a dependent variable

Explanatory variables	Eta	Eta-square	Number of observations
Type of residence	0.0224	0.0005	6227
Educational level of respondent	0.1714	0.0294	6227
Number of dead children	0.5097	0.2598	6227
Ever used contraceptives	0.1799	0.0324	4953
Age at first union	0.1551	0.024	6227
Spousal discussion about number of children	0.0222	0.0005	5975
Husband's demand for number of children	0.0636	0.004	3877
Educational level of husband	0.1411	0.02	6214
Work status of respondent	0.0445	0.002	6212

Table 2. Estimated regression equation for the determinants of fertility behaviour:Dependent variable "CEB"

Explanatory variables	Regression coefficients	t - values	Sig.
Type of residence	0.145	2.29	0.0219
Educational level of respondent	-0.179	-6.38	0
Number of dead children	0.84	25.7	0
Ever used contraceptives	0.94	13.5	0
Duration of marriage	0.22	66,41	0
Spousal discussion about number of children	0.168	2.82	0.0048
Husband's demand for number of children	0,45	10,47	0

R-square = 89.22 %

regression procedure because of their non-siqnlficant effect on reproductive behaviour.

Limitations: Respondents of the questionnaire were women so 'no response' and misreporting was expected, especially in the questions regarding family planning methods, age, etc. Reporting is likely to be more defective amongst rural and illiterate women. This naturally may distort the results of the study because the measures of fertility levels and patterns are crucially related to age and family planning methods. It also caused reduction in the number of cases included in the multiple regression model. The results of the present study should therefore be examined in the light of the data problems pointed out in this paragraph.

Conclusions and Recommendations: Contraceptive use was found to be positively related to fertility. Couples were using contraceptives after achieving a large family size in Pakistan. The Govt. of Pakistan should make a plan to motivate younger couples to limit their family. If the sense of small family is promoted in their most fecund years! fertility will show a marked decline. A high mortality was viewed to be associated with high fertility. Better health facilities for mothers and children are essential to lower the high level of infant and child mortality because the fertility decline is linked with decline in infant and child mortality. Lastly, it is the need of time that the matter of women's autonomy should be reviewed because in a 'husband and in - laws male dominated society', the women's participation in the decision making process about family matters is ineffective. Women status needs to be elevated to achieve the desired population goals.

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