Women Well-being

A Life in Progress

WOMEN WELL-BEING
A LIFE IN PROGRESS

An In-depth Analysis of
Pakistan Demographic and Health
Survey 2012-13

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Acknowledgement

Preface

This book "Women wellbeing: A life in Progress" (an In-depth analysis of PDHS 2012-13) is prepared under the auspicious of NIPS-UNFPA Annual Work Plan 2016. It is the latest among three books on In-depth Analysis of PDHS, so far completed. The other two are on Women and Children's Health (In-depth Analysis of PDHS 2006-07) and Women Wellbeing and Child Health (In-depth Analysis of PDHS 2012-13) published in 2006 and 2015 respectively. In each publication, research papers were contributed by NIPS research staff, internees, research associates and scholars from other institutions.

This book is rich in analysis & research and takes into account those issues and areas that are so long not fully explored and unveiled. It contains nine research papers on various topics. In preparing this analytical research work, the use has been made of some of the ideas and analysis emanating from various existing researches as indicated in each research paper. All papers concluded with policy recommendations for the planners, and policy makers.

This book will be widely disseminated and will be useful to the Federal as well as Provincial Governments for awareness, sensitization and actions to be taken.

Not only will the findings of this in-depth analysis be useful in understanding the current state of emerging issues but these will also eventually, make the policy makers and civil society be aware of and create the integrated approach for women and especially youth in the development of healthy society. The findings will also be used to prepare campaigns for appropriate policy and mindset changes for building new action plans whenever and wherever necessary. Findings and key messages from all papers are summarized below:

Women's Empowerment and Contraceptive Use in Pakistan seeks to investigate the relationship of current use of family planning methods and empowerment of women. Women's participation in household decisions, health care decisions, ownership of household assets and women violence are some of the variables considered important for women empowerment. Besides this, socio-economic and demographic factors are controlled to see the net effect of women's status and empowerment on contraceptive use. The findings reveal that health care decision making and ownership of assets have strong association with current use of contraceptive.

Levels and Trends of Health Care Services Utilization among Married Women in Pakistan explores the maternal health care utilization in Pakistan. In this analysis four components, ANC visits (at least four visits), Iron intake during pregnancy, safe delivery by skilled health professional and postnatal checkup within 42 days after delivery are considered important to evaluate the state of health care services utilization. In addition, the association of socio-economic variables such as educational level of women and her husband, economic status, child interval and order in births, exposure to mass media, region and place of residence with the health care services are also examined. The results show that women's education, safe delivery and postnatal care has positive and significant association whereas maternal age shows weak association with health care services utilization. The worse situation of utilization of health care is found in rural areas. The findings suggest that young women should be motivated to utilize antenatal and postnatal care services by skilled health providers because it is a necessary and sufficient condition for maternal health.

Is Child Marriage Associated with the Survival Status of First Pregnancy? aims to determine the relationship between early age marriages (less than 18 years) and the survival status of first pregnancy with reference to social, economic and demographic

attributes of women. This study refers to all those currently married women who have experienced at least one pregnancy and are between the age group of 15-24 years. The results indicate that early marriage is significantly associated with the survival status of first pregnancy. Probability of losing pregnancy (either by miscarriage or still birth) is relatively lower among women who marry at higher age as compared to girls who married at younger age (18 years or below).

Correlates of Consanguineous Marriages in Pakistan investigates the prevalence of marriages between cross cousins. The focus of the study is to look into the association of key background factors such as age of women at the time of marriage, level of education and work status before the marriage and right to choose/select her husband, with blood related marriages. Additional factors such as place of residence, region, multiple marriages and women's rank among wives are controlled while investigating the net effect of background characteristics of women. The findings reveal that overall 65.3 percent women married to blood related men. The proportion of consanguineous marriages in rural and urban areas is 71 and 54 respectively. The key factors associated with consanguineous marriages are education, women's age at marriage and multiple marriages.

Socio-economic Factors Affecting Gender Specific Fertility Preference among Women in Pakistan analyses the fertility behavior of women to measure the gender inequality in Pakistan. The study examined the differentials of fertility preferences and socio-economic factors associated with it. The impact of media in changing the mindset about son preference is specifically integrated. The findings reveal that there is a major shift in the attitude and behavior of Pakistani women. Majority of women has no sex preference of children.

Women's Mindset against Spousal Violence with Reference to Socio-Economic, Demographic and Empowerment Attributes aims at determining the impact of various socio-economic, demographic and empowerment factors on women's attitude towards Spousal Violence (SV). The results of the study show that women's past experience of SV, their decision making autonomy, access to media, wealth status, education level and type of residence are the major factors influencing the women's attitude towards SV. The results indicate that past experience of violence, women autonomy, access to media, wealth status, education and type of residence are major factors influencing the women's attitude towards violence. The study concludes that women themselves need to be well aware of their legal and religious rights for better relationship with husband and avoid non-humanitarian practice of spousal violence.

Knowledge about the Correct Mode of Transmission of Tuberculosis in Pakistan examines the awareness among men and women about the correct mode of transmission of tuberculosis. The gender wise analysis regarding awareness depicts that men were more aware as compared to women and overwhelming proportion of people living in Balochistan were aware of the correct mode of transmission of TB as compared to Punjab followed by Khyber Pakhtunkhwa, Islamabad, Gilgit Baltistan and Sindh. The people residing in urban localities were more aware as compared to the people of rural localities. The knowledge of people regarding the correct mode of transmission of TB shows an ascending trend with the increase in education.

Correlates of Dropouts from Primary and Secondary Levels of Education in Pakistan finds out socio-demographic factors that mainly influence the dropouts of children at primary and secondary level of education. The key findings reveal that dropouts at both the

levels are higher in rural areas. Students of richest household dropped less than poorest economic status and boy students dropped more than girl students. Female headed households had lower dropouts for their children as compared to male headed households. It is recommended that efforts should be made to reduce dropouts at primary and secondary level education by effective policy making, especially for underprivileged segment of population.

Role of Migration in Health Care Utilization in Pakistan analyses the role of internal migration to ascertaining its importance for policy formulation. The Logistic regression model has been used to identify the important predictors of migrant's reproductive health care utilization. The findings of this study show that socioeconomics and demographic factors such as age, education, work status and exposure to media play a significant role in taking decision of RH care utilization in Pakistan. However, it is also found that decisions relating to 'health seeking', 'household purchases' and 'visit to family or relatives' are not significantly related to the utilization of RH care proving that when net effect of migration is observed there is no impact of women empowerment.

At the end, availing this opportunity I would like to thank Dr. Mukhtar Ahmad, Executive Director for providing all the necessary input and support. His invaluable cooperation is highly commended as he took keen interest in this analysis and reviewed the earlier drafts and ensured the timely compilation of this book. The authors and contributors are also highly commendable for their tireless job to produce high quality analytical research papers.

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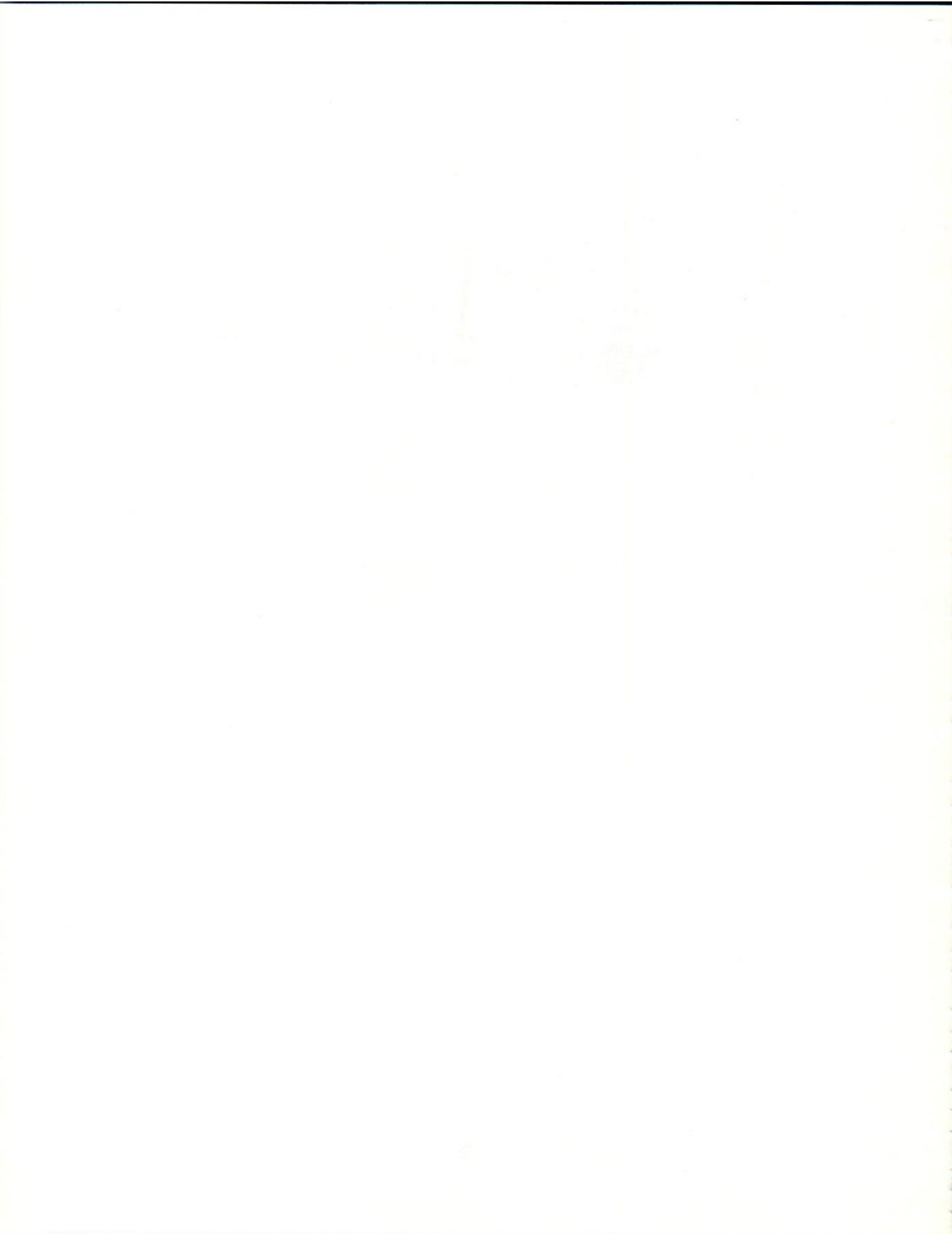
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WOMEN'S EMPOWERMENT AND CONTRACEPTIVE USE IN PAKISTAN

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WOMEN'S EMPOWERMENT AND CONTRACEPTIVE USE IN PAKISTAN

ABSTRACT

Improving women's status and empowering them to take decisions about their own health care are the important strategies to increase the contraceptive use for fertility regulation in the country like Pakistan. This study attempts to examine the net effect of various indicators of women's empowerment on contraceptive use in Pakistan by using data of Pakistan Demographic and Health Survey 2012-13. In the study women's empowerment was measured by women's participation in decision making at household level, opinion about wife beating, whether getting medical care is a problem and women's ownership of assets. Using logistic regression analysis, the findings of the study show that after controlling for women's status variables (exposure to media, education and working status), three of the four empowerment variables (participation in decision making, getting medical care is a problem and ownership of assets) remained important indicators explaining current use of contraceptive methods as the statistical significance is strong and remained unchanged. Moreover, measures of women's status remain significant determinants that influenced the contraceptives use. Apart from empowerment and status variables, age and number of living children, residence, region and wealth status are the significant predictors of current contraceptive use. Findings indicate that programmes should aim to promote women's education and to provide opportunities for work to become more empowered that is likely to accelerate the use of family planning methods.

1. INTRODUCTION

In recent years women's rights and issues have become a subject of great concern and have received serious attention in the planning and discussion forums at national as well as global levels not only in the developed countries but also in developing countries. After the "International Conference on Population and Development" held in 1994, the whole regime was shifted and women's empowerment and its strong linkage with their reproductive behavior turned as a focus of research and development in the patriarchal societies. Kabeer (1999, p. 435) explained women's empowerment as, "ability to exercise choice and incorporates three inter related dimensions: resources, agency and achievements". Resources mean access to material and social resources. Agency refers to the process (decision making) by which one can define his goal and act upon it for desirable outcomes that are called

achievements. Many research studies have observed the association between women's empowerment and their behavior towards reproductive health. Some scholars proposed that education and economic status increase women's empowerment that influence their fertility (Upadhyay & Hindin 2010; Kabeer 1999; Mason 1987; Woldemicael 2009). Findings of several research studies indicated that the changes in household composition, socio-economic status of women and their active participation in household decision-making are important factors of using contraception as well as long-term fertility reduction in developing countries (Binyam et al. 2011; Hindin 2000). According to Hakim `et al. 2003 gender equality through women's active involvement in decision-making at household level can promote women's autonomy and can accelerate the use of contraception. To prove this assumption researchers have conducted number of studies focusing on the link between these factors and fertility regulations.

Increase in contraceptive use is an important development strategy component in developing countries. In Pakistan Contraceptive Prevalence Rate (CPR) has been improved from 12 percent in 1991 to 35 percent in 2012-13 while use of modern contraception increased from 9 percent to 26 percent over the past twenty years. Overall, 20 percent of currently married women have an unmet need for family planning services. Unmet need for birth spacing is found among 9 percent women who wished to delay their pregnancy and unmet need for limiting births is observed among 11 percent women who wanted to stop child bearing. The total demand for family planning is 56 percent (NIPS & ICF 2013). There is a dire need to generate the demand for family planning through more efficient awareness campaigns and bridge the gap between supply and demand for family planning (MoPW 2002).

Several studies have analyzed different factors affecting the use of reproductive healthcare but some of them looked at the perspective of gender discriminations, particularly how women's empowerment at household level influence their use of family planning services (Dharmalingam & Morgan 1996; Furuta & Salway 2006). The current paper finds out and assesses whether women's empowerment have influenced their use of family planning methods in Pakistan.

2.   LITERATURE REVIEW

Major part of the relevant literature indicates that women's empowerment has different aspects and is therefore difficult to adopt some universal measuring objectives. The concept

of women's empowerment is used according to the culture and social norms of the society (Kishor & Subaiya 2008; Upadhyay & Karasek, 2010).

Studies that aimed to find out the associations between gender inequality and fertility reduction has concentrated on women's 'autonomy' (Furuta & Salway 2006; Cleland et al. 1996). In the literature women's autonomy has been measured by women's participation in decision making within household, control over her financial resources, freedom of movement to take care of her health, and attitudes toward wife beating. Although different studies used different indicators to measure women's autonomy but the findings reported by studies indicate high use of contraceptives and lower rates of fertility among empowered women (Wado 2013; Hogan et al. 1999; Balk 1994; Woldemicael 2009). The association between contraceptive use and women's mobility was also found to be very strong, even in the presence of the potential confounding variables. Implying that a woman having freedom of movement is more likely to be a user of family planning methods (Cleland et al. 1996).

Use of contraceptive methods is influenced by many factors but the women's decision-making power and their autonomy within the household maybe the main determining factor of contraceptive use (Roy TK, Niranjan S 2004; Nancy Riley 1997). In household, women's decision-making power is considered as her ability to share her personal views and influence on decision-making process (IIPS 1997; IIPS 2007). S.R. Patrikar et al. (2014) have confirmed a strong relationship between female autonomy and their utilization of family planning methods. Their findings indicate that household decisions are jointly shared by the couple and women's autonomy increases the practice of family planning. A research conducted in Nigeria found that empowered women preferred small family size and practice various methods of health and family planning (Kritz et al. 2000). Beside this, a study carried out in Zimbabwe confirmed that involvement of women in decision-making process was not associated with contraceptive use but had a relationship with lower fertility (Hindin 2000).

A qualitative research carried out in Indonesia analyzed women's empowerment with reference to their access to information and found it as a significant predictor of contraceptive use (Rina 2004). A study concluded that women's empowerment is an important determining factor of contraceptive use (Tadesse, et al. 2013; Wado 2013). Gage, A.J (1995); Gwako (1997) and Woldemicael (2009), found that every dimension of women's empowerment and different socio-economic and gender-specific measures are significantly associated with use of family planning methods. Overall the research findings support that the various aspects of women's empowerment representing opinion about wife beating, involvement in household

decision making, their mobility, ownership of assets and exposure to information had a positive association with the use of family planning methods.

3. OBJECTIVE

The objective of this paper is to examine the net effect of various indicators of women's empowerment on contraceptive use in Pakistan.

4. RESEARCH QUESTION

The research paper seeks to answer the research question: Is use of contraception influenced by women's empowerment?

5. CONCEPTUAL FRAMEWORK

The current study looked at the relationship between women's empowerment and current use of contraception. Our hypothesis is that women's empowerment affects their family planning utilization. It is based on the assumption that increased women's empowerment may increase their decision making ability and control over resources to practice family planning for fertility reduction and better health out comes.

The conceptual framework shows the relationship between women's empowerment and contraceptive use. The empowerment variables which include involvement in domestic decision making, ownership of property, opinions about wife beating and problem in getting medical care are observed as proximate determinants for practicing family planning. Additional indicators such as education level, working status and access to media are supposed to affect their family planning utilization. Demographic and economic factors such as age, number of living children, region, residence and wealth status may also influence women's family planning utilization.

Conceptual Framework

INDEPENDENT VARIABLES		DEPENDENT VARIABLE
Women's empowerment • Involvement in household decision making • Opinion about domestic violence • Problems in getting medical advice • Ownership of house and land **Women's status** • Educational attainment • Current working status • Exposure to media **Demographic &economic characteristics** • Age • Number of children • Region • Residence • Wealth status	→	**Use of family planning** Current use of any contraceptive method

6.   METHODOLOGY

6.1   Data Set

Nationally representative data from the 2012-13 Pakistan Demographic and Health Survey (PDHS) is used for the paper. In the 2012-13 PDHS, 13,944 households and 14,569 women of reproductive age (15-49 years) were covered. The survey collected detailed information on women's demographic and socio-economic characteristics, fertility, family planning, and maternal healthcare, their decision making autonomy and other status measures. Data set of 12,937 women age 15-49 years is taken into account.

6.2 Dependent Variable

The dependent variable of the study is women's current use of contraceptives. In the PDHS, women were asked whether they are currently using any method of contraception, the responses coded as 1 for 'yes' and 2 for 'no'. The study used a weighted sample.

6.3 Independent Variables

In the current paper 'women's empowerment', is measured by their involvement in household decision making, opinion about wife beating, problems in getting medical advice and women's alone or joint ownership of house or land. Wado (2013), Tadesse et al. (2013) and some other researchers have measured women's autonomy by using these variables. The variable, women's involvement in household decision making, derived from the PDHS question "Who usually makes decisions about (1) respondents healthcare (2) major household purchases and (3) visits to family and/or relatives?" Response categories are: "respondent; husband; respondent and husband jointly; family elders; someone else". These responses of each variable are recoded as "1" if woman involved in that decision alone or jointly, and "0" if she did not involve. After that, these variables are computed to make two categories: women who involve (alone or jointly) in the above three decisions, indicating empowerment, and women who do not involve in any of the decisions indicate no empowerment.

The second indicator of 'empowerment' is women's opinion about wife beating. The variable, derived from the question: "In your opinion, is a husband justified in hitting or beating his wife in the following situations: (1) if she goes out alone (2) if she neglects the children; (3) if she argues with him; (4) if she refuses to have sex with him; (5) if she neglect the in-laws and (6) if she burns the food?" Response options are recoded as "1" for yes, and "0" for no. Next, these variables are computed to make two categories: women who agree with at least one justification of wife beating, indicating no empowerment; and women who do not admit any justification, indicating empowerment.

To assess women's empowerment in the healthcare the PDHS asks "When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?" This question has included different elements and circumstances which may contribute to affect the woman's ability to get healthcare. Responses of each factor are computed to categorize the woman as 'empowered', who mention that each factor is not a hindrance to receive

medical advice; and 'not empowered', women who mention at least one factor as a hindrance to receive medical advice.

Another indicator of empowerment is ownership of a house and land. The variable, ownership of a house and land come from the questions: "Do you own this or any other house either alone or jointly with someone else?" and "Do you own any land either alone or jointly with someone else?" Responses are coded as: alone only; jointly only; both alone and jointly; and does not own. Responses are coded as "1" for alone only; jointly only; both alone and jointly, and "0" for does not own. Responses are divided into two categories: women who have house or land or both are consider empowered, and women who have no asset are not empowered.

Other indicators included current working status of women, highest level of education and access to media are examined as proxy variables to determine the women's status. PDHS asked that whether a woman listens to radio, watches television, or reads newspapers and magazines? This information is reflected in the variable 'access to media' and coded as "1" if a woman has exposure to any of the media sources, and "0" if she has no media exposure. Demographic and economic variables such as current age, number of living children, urban rural residence, region and wealth status are also entered in regression equation to see the net effect of all variables on the outcome variable.

6.4 Data Analysis

Data is analyzed using SPSS software version 22. The study first explains the distribution of background characteristics of the currently married women. Association between outcome and explanatory variables is explored by using cross-tabulation and chi square test. Variables are entered in the multi-variate regression equation based on the association at the bivariate level. Multivariate logistic regression analysis is run to find out the net effect of independent variables on the outcome variable. To check the significance, statistical tests are applied at the 5% level of significance. At the multivariate level three models are developed. First model is containing empowerment variables; second model has empowerment and additional women's status variables; and third model includes all background variables along with empowerment and women's status variables.

6.5   Data Limitation

Data on availability of health and family planning service facilities was very important for this study, but we are constrained to include services variable due to non availability of the community level data on such facilities in 2012-13 PDHS.

7.   RESULTS

7.1   Background Characteristics and Contraceptive Use

Table 1 displays the background information of currently married women age 15-49 in Pakistan. One-fifth of the women (21 percent) are age 15-24, two-fifth (40 percent)are in age group 25-34, and the same proportion is for over 35 years old. Two-third of the women (67 percent) are found uneducated. Sixty seven percent women are living in rural areas. More than half (57 percent) belong to Punjab province. About three-fourth of the women (74 percent) have no media exposure, and 74 percent were not working during seven days prior to interview.

Table 1: Percent distribution of women by selected background characteristics, Pakistan 2012-13

Background characteristics	Percent	Number
Age		
15-24	20.5	2647
25-34	39.6	5117
35+	40.0	5173
Number of living children		
None	13.4	1728
1-2	29.8	3856
3-4	29.2	3772
5+	27.7	3581
Educational status		
No education	56.8	7347
Primary	15.9	2057
Secondary	17.8	2308
Higher	9.5	1225
Residence		
Rural	66.7	8633
Urban	33.3	4304
Region		
Punjab	57.0	7374
Sinch	23.2	3002
Khyber Pakhtunkhwa	14.3	1855
Balochistan	4.3	553
ICT Islamabad	.5	62
Gilgit Baltistan	.7	91
Wealth index		
Poor	38.9	5034
Middle	19.7	2550
Rich	41.4	5353
Access to media		
No access to media	73.9	9556
Expose to at least one source	26.1	3369
Working status		
Not currently working	74.2	9610
Currently working	25.8	3327
Total	100.0	12937

Table 2 shows women's current-use of contraception according to selected background characteristics. More than one-third of women (35 percent) are currently using contraception. Current-use of contraception increases with the increase in age, it is highest (43 percent) in older age group (35+ years). An increasing trend is observed between current use of contraception and number of living children. Contraceptive use does not vary conspicuously by educational level of primary and beyond. However, uneducated women are less likely to practice family planning (30 percent). Urban women are more likely (45 percent) to use contraceptive methods as compare to women living in rural areas (31percent). Among regions, contraceptive use is highest in ICT Islamabad (59 percent) and lowest in Balochistan (20 percent). Moreover, use of family planning methods is highest among women from rich households (44 percent), women with access to media (44 percent), and those who are currently working (39 percent).

Table 2: Percentage of currently married women by current-use of contraception, according to selected background characteristics, Pakistan 2012-13

Background characteristics	Current use of contraception	Number of women
Age		
15-24	18.9	2647
25-34	36.2	5117
35+	43.0	5173
Number of living children		
None	0.9	1728
1-2	28.8	3856
3-4	46.4	3772
5+	47.6	3581
Educational status		
No education	30.2	7347
Primary	40.8	2057
Secondary	42.6	2308
Higher	43.8	1225
Residence		
Rural	30.7	8633
Urban	44.8	4304
Region		
Punjab	40.7	7374
Sindh	29.5	3002
Khyber Pakhtunkhwa	28.1	1855
Balochistan	19.5	553
ICT Islamabad	59.4	62
Gilgit Baltistan	33.6	91
Wealth index		
Poor	25.3	5034
Middle	38.2	2550
Rich	43.6	5353
Access to media		
No access to media	32.3	9556
Expose to at least one source	44.1	3369
Working status		
Not currently working	34.3	9610
Currently working	38.6	3327
Total	**35.4**	**12937**

Table 3 shows the distribution of women empowerment indices. It is encouraging to note that about 62 percent of women took part in household decision making. The percentages vary with women's background characteristics such as age, education level, access to media, urban rural residence, region, economic and working status. Analysis shows that older women, highly educated women, women living in urban areas, rich women, women having media exposure and currently working women, are more likely to involve in decision making at household level as compare to their counterpart.

In general, 57 percent of women oppose all reasons to justify wife beating. Higher proportions of women of age 25 and above, highly educated women, women living in urban settings, women from rich households, women having media exposure and currently working women disagree with all reasons of wife beating. Nearly two-fifth (36 percent) of women say that getting medical care is not a big issue. This proportion also varies by background characteristics: older women, highly educated women, urban women, women from rich households, women having media exposure and working women are more confident to get medical care for themselves as compare to others. Overall, only 13 percent of women have an ownership of assets. Older women, highly educated women, women belong to KP and women not currently working have an ownership of house or land or both.

Table 3: Percentage of currently married women by empowerment indices, according to background characteristics, Pakistan 2012-13

Background characteristics	Participation in HH decision making	Disagrees with all reasons to justify wife beating	Getting medical care is not a problem	Ownership of assets	Number of women
Age					
15-24	41.1	53.8	22.4	11.3	2647
25-34	59.2	58.0	35.0	11.6	5117
35+	74.2	57.5	44.6	14.6	5173
	P<0.001	P<0.001	P<0.001	P<0.001	
Number of living children					
None	40.7	58.2	26.7	11.2	1728
1-2	55.9	60.5	34.9	12.2	3856
3-4	68.7	57.4	40.0	13.8	3772
5+	70.0	51.9	38.4	12.9	3581
	P<0.001	P<0.001	P<0.001	P<0.05	
Educational level					
No education	57.7	48.8	28.7	11.9	7347
Primary	63.2	58.8	38.3	10.5	2057
Secondary	65.1	72.8	46.2	13.3	2308
Higher	74.3	84.3	59.7	20.2	1225
	P<0.001	P<0.001	P<0.001	P<0.001	
Residence					
Rural	57.0	49.4	54.3	12.8	8633
Urban	70.5	71.9	27.3	12.5	4304
	P<0.001	P<0.001	P<0.001	P >0.05	

Women's Empowerment and Contraceptive Use in Pakistan

Background characteristics	Participation in HH decision making	Disagrees with all reasons to justify wife beating	Getting medical care is not a problem	Ownership of assets	Number of women
Region					
Punjab	69.0	63.8	44.3	6.7	7374
Sindh	59.8	61.7	32.9	10.3	3002
Khyber Pakhtunkhwa	43.8	25.9	14.7	40.4	1855
Balochistan	29.7	46.6	18.6	8.9	553
ICT Islamabad	77.4	75.8	67.2	18.0	62
Gilgit Baltistan	50.5	22.8	23.9	35.9	91
	P<0.001	P<0.001	P<0.001	P<0.001	
Wealth index					
Poor	54.9	44.2	18.8	11.9	5034
Middle	62.2	50.9	37.3	12.0	2550
Rich	67.3	71.7	52.1	13.9	5353
	P<0.001	P<0.001	P<0.001	P<0.05	
Access to media					
No access to media	59.3	53.8	32.3	12.4	9556
Expose to at least one source	67.6	65.8	47.4	13.5	3369
	P<0.001	P<0.001	P<0.001	P>0.05	
Working status					
Not currently working	58.6	57.1	36.2	14.4	9610
Currently working	69.8	56.4	36.4	7.8	3327
	P<0.001	P>0.05	P<0.001	P<0.001	
Total	61.5	56.9	36.3	12.7	**12937**

Table 4 presents contraceptive use according to empowerment indicators. Women's use of contraceptives varies significantly with their involvement in decision making, opinion about wife beating, and getting medical care is not an issue. Current-use of contraception is higher among women who involve in household decision making process (42 percent) than the women who do not take any part in these decisions (25 percent). It is also higher in women who disagree with all justifications of wife beating (38 percent), who mention that getting medical care is not an issue for them (44 percent) and who have an ownership of assets (37 percent).

Table 4: **Percentage of currently married women by current use of contraceptives, according to women's empowerment, Pakistan 2012-13**

Empowerment variables	Current Contraceptive Use	P-Value	Number of Women
Participation in household decision making			
No participation in any decision	25.3	P<0.001	8246
Participation in decision making	41.7		4691
Opinion about wife beating			
Agree with any of the reason	31.8	P<0.001	5574
Doesn't agree with all reasons	38.2		7363
Getting medical care			
A big problem	30.3	P<0.001	8246
Not a big problem	44.4		4691
Ownership of Assets			
No ownership	35.2	P>0.05	11290
Ownership of assets	37.1		1647
Total	35.4		12937

8. MULTIVARIATE ANALYSIS RESULTS

Before applying the regression analysis, a correlation matrix of the predictor variables to be entered in the regression equation was run and the variables that were not highly correlated with each other were included in the regression analysis. Table 5 presents the results of logistic regression for current contraceptive use with controlling demographic and economic variables. The first model explains the net effect of key independent variables of empowerment (involvement in decision making, disapproving wife beating, to get medical care is not an issue and women's ownership of assets). The second model controls the effects of status variables such as exposure to media, education level and working status. In the third model background variables such as age, number of living children, urban rural residence, region and wealth index are included to observe the net effect of each and every variable included in the third model on the outcome variable.

8.1 Women's Involvement in Decision Making

Empowerment variables were entered in the model I. As expected, 'women's involvement in household decision making' has a positive impact on current contraceptive use (Table-5). This impact is not only large, it is statistically significant as well. This implies that the involvement in decision making is an important predictor of contraceptive use. In other words, women who involve in decision making are more likely to use contraceptives relative

to those who had no involvement in decision making at household level, the adjusted odds of using a method of contraception are significantly higher (1.903) for women who have shown involvement in decision making. With the addition of status variables, 'access to media', 'education level' and 'working status' (model-2), and demographic and economic variables (model III) small variations are observed in the magnitude of coefficients and the level of significance remains unchanged.

8.2   Disapproving Wife Beating

Table 5 shows that the positive impact of 'disapproving wife beating' is not large but significant. This means that 'disapproving wife beating' is a significant predictor of current use of contraceptives. Women who disapproved wife beating are more likely to use contraceptives than those who approved the wife beating. As compare to those who approved wife beating, the adjusted odds of using a method of contraception are significantly higher (1.090) for women who disapproved wife beating (model-I). The addition of women's status variables (model II), demographic and economic variables (model-III) the odds of current use of contraceptives is reduced for women who disapproved wife beating and bring about small variation in the magnitude of coefficients and the level of significance. This impact becomes negative and statistically not significant.

8.3   Problem in Getting Medical Care

The results show that 'problem in getting medical care' has significant impact on the use of methods. The odds of using contraception are higher (1.604) for women who state that to obtain medical care is not an issue, compared with the odds of women who state getting medical care is an issue for them (model-I). This means that women who say to get medical care is not an issue are more likely to use contraceptives than those who say getting medical care is a problem. This empowerment variable remains significant in the model II containing status variables (education level, access to media and working status) but after including demographic and economic control variables (age, number of living children, urban rural residence, region and wealth status) in model III the magnitude of coefficient becomes small and statistically not significant. .

8.4   Ownership of Assets

It is found that 'ownership of assets' has positive impact on current contraceptive use. The impact on contraceptive use is not large but it is statistically significant (model-I). This implies that the ownership of assets is an important predictor of contraceptive use. In other

words, women who owned assets are more likely to use contraceptives. The adjusted odds of using a method of contraception are significantly higher (1.126) for women who have assets as compared with the odds of current-use among women who do not have any assets. In model II the empowerment variable 'ownership of assets' remains significant in the presence of women's status variables. However, the impact of 'ownership of assets' further reduced in the presence of demographic and economic variables (model III) and becomes not significant.

8.5   Exposure to Media

In the second model, women's status variable 'exposure to media' is found to be a stronger predictor of contraceptive use in the multivariate analysis. As expected, 'exposure to media' has a positive and statistically significant impact on use of contraception. Among women who had been exposed to media, the adjusted odds of using contraception is higher (1.376) than women who never exposed to radio, television and newspaper. This means that women who are exposed to media are more likely to use contraceptives than those who never heard radio, watched television and read newspaper/magazines. The addition of demographic and economic variables in the equation (model-III) brings no visible variation in the odds of contraceptive use and the significance remains unchanged.

Table 5: Odds ratios from logistic regression analysis showing factors associated with current-use of contraception among currently married women, Pakistan 2012-13

Variables	Model I				Model II				Model III			
	Coefficients	Odd Ratios	95 % C I for EXP (B)		Coefficients	Odd Ratios	95 % C I for EXP (B)		Coefficients	Odd Ratios	95 % C I for EXP (B)	
			Upper	Lower			Upper	Lower			Upper	Lower
Empowerment variables												
No participation in decision making (ref)												
Participation in decision making	.644***	1.903	1.756	2.062	.611***	1.843	1.699	1.999	.489***	1.631	1.494	1.780
Agree with any reason of wife beating (ref)												
Does not agree with all reasons of wife beating	.086*	1.090	1.009	1.178	-.002	.998	.921	1.070	-.020	.981	.899	1.070
To get medical care is not a big problem (ref)												
To get medical care is a big problem	.473***	1.604	1.484	1.734	.402***	1.494	1.381	1.618	.069	1.071	.981	1.170
Does not own assets (ref)												
Ownership of assets	.118*	1.126	1.008	1.257	.109*	1.115	.997	1.248	.087	1.091	.962	1.238
Women's status variables												
No media exposure (ref)												
Exposure to media					.319***	1.376	1.263	1.499	.318***	1.374	1.253	1.507
No education (ref)												
Primary					.394***	1.484	1.336	1.648	.407***	1.503	1.335	1.691
Secondary					.412***	1.510	1.360	1.676	.511***	1.666	1.468	1.891
Higher					.291***	1.338	1.170	1.531	.694***	2.001	1.696	2.360
Not currently working (ref)												
Currently working					.222***	1.249	1.146	1.362	.207***	1.230	1.118	1.354
Demographic and economic variables												
Age 15-24 (ref)												
25-34										.235***	1.265	1.152	1.389
35+										.350***	1.419	1.221	1.649

	Model I				Model II				Model III			
Variables	Coefficients	Odd Ratios	95 % CI for EXP (B)		Coefficients	Odd Ratios	95 % CI for EXP (B)		Coefficients	Odd Ratios	95 % CI for EXP (B)	
			Upper	Lower			Upper	Lower			Upper	Lower
Number of living children 5+ (ref)												
None									-5.009***	.007	.004	.011
1-2									-1.249***	.287	.253	.325
3-4									-.336***	.715	.646	.791
Residence rural (ref)												
Urban									-.223***	1.250	1.125	1.389
Region ICT Islamabad (ref)												
Punjab									-.338	.713	.409	1.243
Sindh									-.821**	.440	.251	.771
Khyber Pakhtunkhwa									-.631*	.532	.301	.939
Balochistan									-.982**	.374	.206	.682
Gilgit Baltistan									-.301	.740	.359	1.528
Wealth index Poor (ref)												
Middle									.356***	1.428	1.272	1.604
Rich									.442***	1.556	1.369	1.768

*Significant at .05 level.
**Significant at .01 level.
***Significant at .001 level.
ref=Reference category.

8.6 Education Level

Another variable indicating women's status is 'women's education level'. Overall, women's education has a positive and highly significant effect on the use of contraceptive. The odds of contraceptive use are highest (1.510) for women who were secondary passed. After addition of demographic variables and wealth index the impact found largest (odds = 2.001) where women's education level is higher, though the significance level remains the same. Implying that the women with higher level of education are more convinced to practice family planning.

8.7 Working Status

Working status of women is considered to be positively influencing the use of contraceptives. As expected its effect on contraceptive use is found positive and statistically significant in both models (II and III). The likelihood of contraceptive use is almost 25 percent greater (odds=1.249) for women who were 'currently working'. This means that currently working women are more likely to adopt the family planning methods. The likelihood slightly decreased (odds=1.230) when the demographic and economic variables are introduced.

8.8 Women's Age

Women's age has positive effect on current use of contraceptives. Odd ratios of contraceptive use increase with age and the impact is statistically significant. Odds are higher for women who were in older age group (1.419) relative to those women in younger age group. The odds ratios of this variable indicate that women in middle and older age groups are more likely to use contraceptives then the women in younger age group.

8.9 Number of Living Children

Another demographic variable 'number of living children' is entered in the regression equation. The analysis shows that this variable has a significant negative impact on current contraceptives use. The odd ratios of currently using contraception decreased with decreasing number of living children. This indicates that women having fewer children are less likely to use contraceptives as compare to women who have five or more living children.

8.10 Place of Residence

The controlling variable 'Place of residence' has shown a positive and significant impact on current contraceptives use. Odd ratio of contraceptive use for women who lived in urban areas is higher (1.250) relative to those women living in rural areas. This implies that

contraceptive use is more common among urban women as compared to their rural counterparts.

8.11 Region of Residence

In the regression equation 'Region of residence' has a negative impact on current contraceptives use. The odds of contraceptive use for women who belonged to other five regions decreased as compared to ICT Islamabad. The impact for women living in Sindh, KP and Balochistan is statistically significant. However, this impact is not significant for Punjab and Gilgit Baltistan. This means that women of these regions are less likely to use contraception relative to women living in ICT Islamabad.

8.12 Wealth Status

The economic variable 'wealth status of women's household' is entered in the regression equation. The results highlight that 'wealth status' is a significant predictor of current use of contraception. The odds of using contraceptive methods increase with the increase in wealth quintiles. The results indicate that the likelihood of contraceptive use is about 55 percent greater (odds=1.556) for women who were from rich households. This means that rich women are more likely to use contraceptives than the women from poor households. This relationship is not only positive it is statistically significant as well.

9. DISCUSSION AND CONCLUSION

This study examined the effect of women's empowerment indicators on women's current use of family planning methods in Pakistan. Findings show strong relationships between the outcome variable and empowerment indicators. The regression analysis in Model-I included only empowerment variables and shows a statistically significant impact of empowerment variables on current use of contraception. After controlling the women's status variables, three out of four empowerment variables (decision making, getting medical care and ownership of assets) remained important indicators explaining current use of contraceptive methods as the statistical significance is strong and remained unchanged. This finding is similar with findings of other earlier research studies that women's empowerment, particularly women's involvement in decision making within household has strong effect on their contraceptive use (Wado 2013; Woldemicael 2009; Upadhyay & Hindin 2005).

As observed earlier, results highlight that direct measures of women's empowerment are more important factors of women's current contraceptive use. Moreover, measures of women's status including exposure to media, women's education level and current working status, remain significant determinants that influence the contraceptives use. Women's regular exposure to media is essential to enhance women's information regarding family planning. Women's education level shows a strong effect on the use of methods. This finding is similar with the findings of a number of studies conducted in the past (Furuta & Salway 2006; Mistry et al. 2009; Wado 2013). This is because educated women are more exposed to information and knowledge that in turn brings positive attitude towards practicing family planning. Significant impact on working status and use of contraception indicates that interventions based on enhancing women's working opportunities may also accelerate fertility decline. Apart from empowerment and status variables, age and number of children, residence, region and wealth status are the significant predictors of current contraceptive use. As expected, urban women are more likely to use contraceptive methods. In Pakistan health and family planning services are more commonly available in urban areas. Government's initiative of Lady Health Worker Programme based in rural areas should be improved to reduce the gap between rural and urban areas. Women living in various regions of Pakistan are far behind in contraceptive use relative to the women residing in Federal Capital Islamabad. Provinces should develop strategies to strengthen the advocacy programmes and family planning services. It is also found that wealth status has shown a positive significant impact on current contraceptive use and draws attention to the need of enhancing economic welfare of the population at large.

10. POLICY IMPLICATIONS

The findings of this paper help to sensitize planners and program managers in Pakistan to promote gender equalities through empowering women, in order to achieve wider use of family planning methods. Findings show that education, working status of women and exposure to media has significant impact on contraceptive use. It is recommended that programmes should aim to promote women's education and provide opportunities for decent work to become more independent and empowered that is likely to accelerate the use of family planning methods.

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2

LEVELS AND TRENDS OF HEALTH CARE SERVICES UTILIZATION AMONG MARRIED WOMEN IN PAKISTAN

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LEVELS AND TRENDS OF HEALTH CARE SERVICES UTILIZATION AMONG MARRIED WOMEN IN PAKISTAN

ABSTRACT

This study analyzes the levels and trends of maternal health care services utilization in Pakistan. The study takes four components of maternal health care utilization, namely; at least 4 Antenatal Care (ANC) visits, iron intake during pregnancy, safe delivery (delivery by skilled health professional), and postnatal checkup by skilled health provider within 42 days after delivery. Study used the micro-data set of Pakistan Demographic and Health Survey (PDHS) 2012-13. The current study includes the recent live births and excludes multiple births by each respondent and uses the 7,256 observations in current analysis. In the first stage, study checks the association between outcome and explanatory variables using Pearson chi-square test, and further applies the logistic regression in second stage.

The study identifies several important predictors of maternal health care utilization in Pakistan, such as region, women education, husband education, economic status of household, birth order and interval, and exposure to mass media. Current analysis also finds that, the women who have made at least four ANC visits during pregnancy are more likely to utilize other three components of maternal healthcare as compared to those who do not make at least four ANC visits. The intake of iron supplement during pregnancy is positively associated with safe delivery and postnatal care. Safe delivery is a major determinant of postnatal checkup within 42 days after delivery, and results show that it increases the odds by 81 times. This study suggests that concentrated efforts by policymakers be made to motivate women to utilize antenatal care services by skilled health professional; because utilization of antenatal care services becomes a necessary and sufficient condition for postnatal care within 42 days.

1. INTRODUCTION

In all Demographic and Health Surveys (DHS) around the world, maternal health refers specifically to health care surrounding childbearing; that is, antenatal care, delivery assistance and postnatal care.

The DHS maternal health indicators measure maternal health care against national recommendations, such as the recommended number of antenatal care (ANC) visits and the preferred timing for postnatal care (PNC). The measures of maternal health care are also

compared to women's status. Maternal health care services are important for the health and safety of both mother and infant during pregnancy, delivery and the post natal period (Khan et al. 2013). ANC and PNC services are an important tool to decrease maternal and neonatal mortality and morbidity.

Health care and counseling before, during and after birth – or the lack of it– impact the survival of both mothers and children. Maternal health indicators help program staff identify the groups of women and infants at the national and regional level who are not accessing maternal health services.

The DHS Comparative Report shows that over all, the use of antenatal care services has increased worldwide (See for more details Wang et al. 2011).

To make the health care system more accessible and responsive to women particularly in developing countries, it is imperative to study the health-seeking behaviors and factors determining utilization of health care services (WHO 2014).

There is certainly a growing need to justify the significance of studying health-seeking behaviours for designing advocacy campaigns, lobbying for a policy shift and convincing donors to invest in priority areas. Moreover, policymakers need to be encouraged to design evidence-based policies that take into account information related to health-promoting, seeking and utilization behaviour and the factors determining these behaviours.

There is wealth of literature on health seeking behaviours and the determinants of health services utilization especially in the context of developing countries. However, very few focused studies have been seen in Pakistan in this regard.

This paper primarily covers the levels and trends in health care services utilization among Pakistani married women.

2.   OBJECTIVES

The concept of studying health seeking behaviour has evolved with the course of time and has ultimately become a tool for understanding how women employ the health care systems in their respective socio-cultural, economic and demographic setting. It is therefore, imperative to study the impacts of all the determinants, such as region, place of residence, education of the mother, education of husband, household head, media exposure, birth order and economic status of household. To build a responsive health system, there is a strong need

to understand the health seeking behaviours on the demand side and that is the only way to expect improved health outcomes.

3. DATA AND METHODOLOGY

3.1. Data

The study analyzes utilization of health care services in Pakistan using the third round of Pakistan Demographic and Health Survey (PDHS) 2012-13. The PDHS was a two-stage cluster design survey, consisted of total 500 clusters; 248 urban, and 252 rural. At each sampling point, 28 households were selected by applying a systematic sampling technique with a random start and result into 14,000 households (See for more information NIPS and ICF International, 2013). The PDHS successfully interviewed 13,558 ever married women (6,351 in urban, and 7,207 in rural), and 3,134 ever married men (1,521 in urban, and 1,613 rural) aged 15-49 years. The current study includes the recent live birth and excludes multiple births by each respondent and uses the 7,256 observations in current analysis.

3.2. Outcome/Dependent Variables

The current study refers only to ever-married who had experienced a live birth in their age 15-49 years, in last five years preceding the survey. The study analyzes four outcomes, at least 4 ANC visits, iron supplements during pregnancy, safe delivery, and postnatal checkup within 42 days of delivery. The operational definitions of variables are given in Table 1. Antenatal care (ANC) from a medically-trained provider is essential to keep a record of the status of a pregnancy so that any complications can be avoided and therefore prevent unfavorable pregnancy outcomes. Information on ANC was collected for women who had given birth five years prior to the survey. Women who had multiple live deliveries in last five years; for them only the recent one is included in analysis. Medically trained provider includes qualified doctor, nurse, midwife, and lady health visitor (LHV). It is most desired that there should be regular ANC throughout pregnancy period. The World Health Organization (WHO) recommends a minimum of four ANC visits (Thind et al., 2008). The study uses this as dummy variable if women received at least four ANC visits by medically trained provider during pregnancy coded as one, otherwise zero. The components of an antenatal care visit are an essential indicator of the quality of health services provided to pregnant women (NIPS & ICF International 2013). Focused antenatal care study analyzes the iron tablets and syrup during pregnancy and measured it as binary variable; one if women

took iron tablets or syrup during their last pregnancy preceding five years from survey, zero otherwise.

Appropriate medical consultation and hygienic conditions at delivery reduce the risk of complications at delivery time for both the mother and the new born. Hence, increased importance needs to be placed on a safe and hygienic delivery place: it is important to increase the proportion of births delivered in a safe, clean environment and under the supervision of a medically trained provider. A safe delivery is defined "safe" if it is attended by a doctor, nurse, midwife, and lady health visitor (LHV). The importance of postnatal care cannot be denied under any circumstances; it is an essential component of safe maternal health. Mothers can be counseled (how to care for themselves and their babies) as well as treated for delivery complications through postnatal checkups. The current study also defines postnatal care as dummy variable and coded it as one if female received postnatal checkup form medically trained provider within the 42 days after delivery, otherwise zero.

3.3. Explanatory/Independent Variables

The study includes socioeconomic and demographic explanatory variables such as maternal age (as continuous in completed years of age), place of residence (urban, and rural), region (Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, Gilgit Baltistan, and Islamabad), women's education[1] (no education, primary, secondary, and higher education), husband's education (no education, primary, secondary, and higher education), maternal working status (not working, work at home, and work away from home), wealth index (poorest, poorer, middle, richer, and richest), head of household (male, or female), birth order and interval (birth order 1, birth order second or third and interval ¡ 24 months, birth order second or third and interval > 24 months, birth order fourth or fifth and interval ¡ 24 months, birth order fourth or fifth and interval > 24 months, birth order sixth or above and interval ¡ 24 months, and birth order sixth or above and interval > 24 months), exposure to media (no exposure, and any exposure).

Exposure to media as measured by how often the women have been listening to radio, reading newspaper, and watching television. The PDHS 2012-13 had categorized this question into four categories; not at all, occasionally, at least once a week, and daily. The current study considered any exposure to media if the women listen radio or watch television

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[1] The no education refers to not any formal education, primary to 1-5, secondary 6-10, and higher 11 and above years of formal schooling.

or read newspaper at least once a week or daily, otherwise it categorized that women has no exposure to mass media. The wealth index is taken as proxy of economic status of household. The wealth index is constructed from household characteristics (having electricity, type of source of drinking water, access to sanitation facility, availability of cooking fuel, main roof material, main wall material and floor material) and ownership of durable goods (wardrobe, table, chair or bench, watch or clock, radio, television, bicycle, sewing machine and telephone) and land ownership. PDHS has divided the index into quintiles lowest to highest. The same quintiles have been included in the analysis (For more details Rutstein et al. 2004).

Table 1: Operational definitions of variables

Variables	Definition
Dependent Variables	
ANC (Antenatal care visits)	If women has at least 4 ANC visits = 1, otherwise = 0
IRON (Iron tablets/syrup)	If women took iron tablets/syrup during pregnancy = 1, otherwise = 0
SDLV (Safe delivery)	If delivery by a doctor/nurse/midwife/LHV = 1, otherwise = 0
PNAC (Postnatal care)	If women received within 42 days of delivery by medically trained provider = 1, otherwise = 0
Explanatory Variables	
MAGE (Maternal age)	Completed years of age, and treated as continuous variable
POR (Place of residence)	If the household belong to urban = 0, and rural = 1
REG (Region)	If household belong to Punjab = 0, Sindh = 1, Khyber Pakhtunkhwa = 2, Balochistan = 3, Gilgit Baltistan = 4, Islamabad (ICT) = 5
WEDU (Women's education)	If the women has No education = 0, Primary = 1, Secondary = 2, Higher = 3
HEDU (Husband's education)	If the husband has No education = 0, Primary = 1, Secondary = 2, Higher = 3
MWS (Maternal working status)	If women is not working = 0, work at home = 1, work away from home = 2
WEALTH (Wealth index)	If household economic status is Poorest = 0, Poorer = 1, Middle = 2, Richer = 3, Richest = 4
GENHH (Gender of head of household)	If gender of head of household is male = 0, female = 1
BORDINT (Birth order and Interval)	If child has first birth order = 0, birth order, 2/3 and interval ¡ 24 = 1, birth order, 2/3 and interval > 24 = 2, birth order, 4/5 and interval ¡ 24 = 3, birth order, 4/5 and interval > 24 = 4, birth order, 6 + and interval ¡ 24 = 5, birth order, 6 + and interval > 24 = 6
MEDIA (Exposure to media)	If women has any exposure to media = 1, otherwise = 0

3.4.   Methodology

The study estimates the association between utilization of health care services by selected socioeconomic and demographic variables, using logistic regression. The study estimates the four models namely; at least 4 ANC visits, iron intake, safe delivery, and postnatal checkup within 42 days of delivery. The functional forms of models are given below;

$ANC_{ij} = f(MAGE_i, POR_{ij}, REG_{ij}, WEDU_{ij}, HEDU_{ij}, MWS_{ij}, WEALTH_{ij}, GENHH_{ij}, BORDINT_{ij}, MEDIA_{ij})$ ....(1)

$IRON_{ij} = f(MAGE_i, POR_{ij}, REG_{ij}, WEDU_{ij}, HEDU_{ij}, MWS_{ij}, WEALTH_{ij}, GENHH_{ij}, BORDINT_{ij}, MEDIA_{ij}, ANC_{ij})$ ....(2)

$SDLV_{ij} = f(MAGE_i, POR_{ij}, REG_{ij}, WEDU_{ij}, HEDU_{ij}, MWS_{ij}, WEALTH_{ij}, GENHH_{ij}, BORDINT_{ij}, MEDIA_{ij}, ANC_{ij}, IRON_{ij})$ ....(3)

$PNAC_{ij} = f(MAGE_i, POR_{ij}, REG_{ij}, WEDU_{ij}, HEDU_{ij}, MWS_{ij}, WEALTH_{ij}, GENHH_{ij}, BORDINT_{ij}, MEDIA_{ij}, ANC_{ij}, IRON_{ij}, SDLV_{ij})$ ....(4)

In first stage the study checks the association between outcome and explanatory variables using Pearson chi-square test (see Table 3), and further apply the multivariate analysis using logistic regressions[2] (see Table 4). Further estimates the odds ratio using 95 percent confidence interval.

4. RESULTS

4.1. Sample Characteristics

Table 2 describes the sample characteristics of women by selected background variables. One fourth of women belongs to age group of 15-24 at the time of childbearing. The majority belong to rural areas, and in terms of region most of women belongs to Punjab. More than half women do not have formal education, and two third husband have formal education. Only two in ten are working, more than 40 percent of females belong to poor households, and one in ten household is headed by female. Every two in ten child belong to first birth order, and one in ten belongs to second and third birth order with birth interval less than 24 months. Half of females have exposure to media, and they listen radio, read newspaper, and watch television on weekly basis. Every two in five female received at least four ANC visits, and nearly half took iron supplements during pregnancy. Nearly 55 percent females received delivery by doctor/nurse/mid wife/LHV, and 45 percent women received postnatal check by medically trained provider up within 42 days after delivery.

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[2] Study uses the sampling weights in both econometric and non-econometric analysis.

Table 2: Percent distribution of women who had at least one live birth during the last 5 years preceding the survey by background characteristics for the most recent live birth, Pakistan, 2012-13.

Background Characteristics	Percent	Number
Maternal Age		
15-24	23.60	1,712
Less than 18	0.44	32
18-19	2.59	188
20-24	20.57	1,492
25-29	29.28	2,124
30-34	24.81	1,801
35-39	14.77	1,071
40-44	5.78	419
45-49	1.76	129
Place of Residence		
Urban	29.92	2,171
Rural	70.08	5,085
Region		
Punjab	56.02	4,065
Sindh	23.32	1,692
Khyber Pakhtunkhwa	14.84	1,077
Balochistan	4.65	338
Gilgit Baltistan	0.75	54
Islamabad (ICT)	0.42	30
Women's Education		
No Education	55.95	4,060
1-5 (Primary)	16.56	1,201
6-10 (Secondary)	18.43	1,337
11+ (Higher)	9.06	658
Husband's Education		
No Education	33.20	2,409
1-5 (Primary)	16.43	1,192
6-10 (Secondary)	34.02	2,469
11+ (Higher)	16.35	1,186
Maternal Working Status		
Not working	71.97	5,222
Work at home (Housewife)	10.85	788
Work away from home	17.18	1,246
Wealth Index		
Poorest	23.11	1,677
Poorer	20.87	1,514
Middle	19.53	1,417
Richer	19.48	1,413
Richest	17.01	1,235
Head of Household		
Male	91.22	6,619
Female	8.78	637
Birth Order and Interval		
Birth order, 1	19.10	1,387
Birth order, 2/3 and interval ? 24 months	14.27	1,035
Birth order, 2/3 and interval > 24 months	21.92	1,590
Birth order, 4/5 and interval ? 24 months	7.36	534
Birth order, 4/5 and interval > 24 months	15.99	1,160
Birth order, 6 + and interval ? 24 months	6.79	493
Birth order, 6 + and interval > 24 months	14.57	1,057
Exposure to Media		
No exposure	53.51	3,882
Any exposure	46.49	3,374
At least 4 antenatal care (ANC) visits		
No	64.12	4,653
Yes	35.88	2,603
Iron tablets/syrup took during pregnancy		
No	55.18	3,282
Yes	44.82	3,974
Safe Delivery		
No	45.24	4,004
Yes	54.76	3,252
Postnatal care		
No	52.97	3,843
Yes	47.03	3,413
Total Number of respondents	**100.00**	**7,256**

Note: All numbers and percentages are weighed.

4.2. Trends in Maternal Healthcare Utilization

Figure 1 represents the trend analysis of maternal health care utilization during 2006-07 through 2012-13. Result reveals a remarkable improvement in three indicators of maternal health care; namely at least four Antenatal care (ANC) visits, safe delivery, and postnatal care. This improvement may be the reflection of supply (like policy interventions, and increase in government spending), and demand factors (such as increase in awareness, and improvement in living standards). A trend analysis also reveals unsatisfactory improvement in iron intake during pregnancy.

Figure 1: Trends in maternal healthcare service utilization among women (aged 15-49 years), Pakistan demographic and health survey (PDHS), 2006-07 to 2012-13.
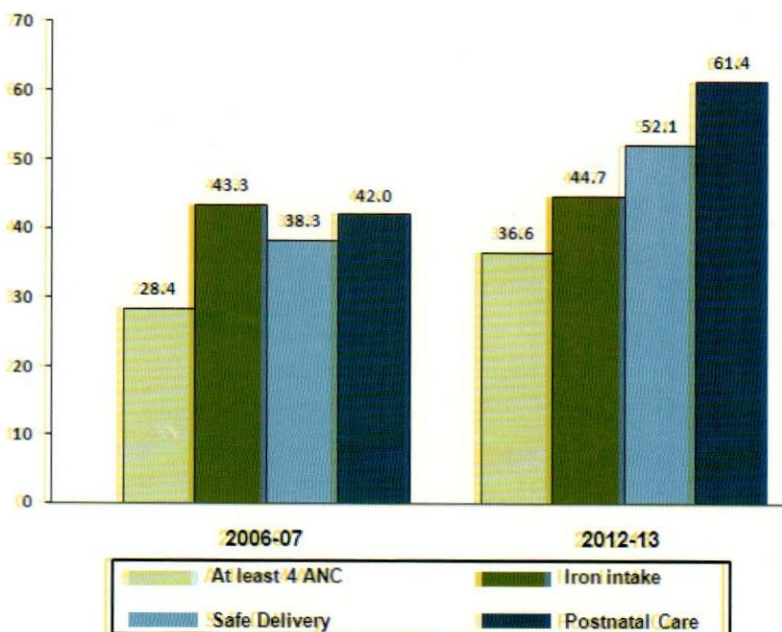
Source:Pakistan Demographic and Health Survey 2006-07 and 2012-13.

4.3. Bivariate and Multivariate Analysis Results

The results of odd ratio and confidence intervals for all four models of maternal healthcare utilization are presented in Table 4. The maternal age shows the weak association with maternal healthcare in two models; safe delivery, and postnatal care within 42 days by

medically trained provider. The women in rural areas are less likely to get at least four ANC visits, and safe delivery as compared to women in urban areas, and place of residence does not show significant impact in other two models. Non-econometric analysis shows that rural areas are worse off in maternal health care utilization as compared to urban areas in all four models, but econometric analysis does not support this evidence. Region of household is one of the important determinants of maternal healthcare in Pakistan and results show heterogeneity across regions. A household belongs to Sindh and Islamabad has more likelihood of utilizing maternal health care as compared to Punjab. The maternal education is major determinant of maternal healthcare and odd for higher year of schooling is four times higher as compared to no education category in first model of at least four ANC visits, two times for iron intake, and three times for safe delivery. The odds for higher and secondary education categories are statistically significant and increasing with year of schooling. This shows the strong and significant level impact of female education on maternal healthcare utilization in Pakistan. In last model, maternal education shows no significant impact on postnatal care. The higher (11+) education of husband shows the significant relationship with iron intake during pregnancy, safe delivery, and postnatal care. In first model of four ANC visits husband education up to secondary level shows significant impact. Working status of female is negatively associated with safe delivery, and does not show significant relationship in other three models. The non-econometric analysis shows that working women are less likely to utilize maternal health care services. In model for at least four ANC visits during pregnancy (safe delivery), the odd ratio for the wealthier household is six (three) times higher as compared with poorest. The wealth index is second most important factor determining iron intake, and safe delivery after maternal education and this reflects that for utilization of these two components the awareness is most important factor than wealth.

Table 3: Percentage of women who had at least one live birth (aged 15-49 years) during the last 5 years preceding the survey by usage patterns of maternal health care services by background characteristics, Pakistan, 2012-13.

	At least 4 ANC	Iron intake	Safe delivery	Postnatal care
Maternal age	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
15-24	36.76	47.40	58.24	50.07
25-29	38.98	44.44	57.05	49.30
30-34	38.16	46.79	53.54	46.12
35-39	32.83	43.71	51.93	44.81
40-44	19.95	35.28	44.23	35.27
45-49	17.78	29.30	45.75	38.85
Place of Residence	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
Urban	61.42	57.62	72.00	65.30
Rural	24.97	39.35	47.40	39.23
Region	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
Punjab	37.77	43.92	53.90	48.69
Sindh	43.88	49.20	64.66	58.06
Khyber Pakhtunkhwa	23.54	49.98	53.91	34.24
Balochistan	9.22	16.59	19.00	14.20
Gilgit Baltistan	30.86	29.97	32.20	19.90
Islamabad (ICT)	80.63	79.69	87.53	79.07
Women's Education	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
No Education	19.40	33.90	40.93	32.93
1-5 (Primary)	37.96	46.79	56.75	49.01
6-10 (Secondary)	60.85	59.76	76.70	68.26
11+ (Higher)	83.02	78.25	91.94	87.39
Husband's Education	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
No Education	20.32	32.19	39.90	31.33
1-5 (Primary)	27.45	37.11	46.66	41.21
6-10 (Secondary)	43.31	50.86	62.11	53.67
11+ (Higher)	60.47	65.64	77.81	70.97
Maternal Working Status	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
Not Working	39.29	47.89	60.19	51.37
Work at home (Housewife)	34.66	41.27	50.01	44.47
Work away from home	22.32	34.19	35.01	30.50
Wealth Index	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
Poorest	12.19	28.75	33.48	26.52
Poorer	20.90	34.40	42.11	33.88
Middle	30.79	43.12	52.13	43.68
Richer	49.08	56.35	68.85	60.04
Richest	77.15	68.16	86.09	80.00
Head of Household	(pr=.076)	(pr=.047)	(pr=.000)	(pr=.964)
Male	35.71	44.67	54.21	47.45
Female	37.56	46.34	60.48	42.68
Birth Order and Interval	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
Birth order, 1	50.25	53.82	70.98	63.91
Birth order, 2/3 and interval ? 24 months	36.50	45.95	58.96	49.65
Birth order, 2/3 and interval > 24 months	44.23	48.04	61.71	54.26
Birth order, 4/5 and interval ? 24 months	26.06	40.37	43.82	37.13
Birth order, 4/5 and interval > 24 months	31.15	44.85	48.22	40.44
Birth order, 6 + and interval ? 24 months	15.62	29.99	32.63	25.67
Birth order, 6 + and interval > 24 months	23.43	36.16	41.94	33.66
Exposure to Media	(pr=.000)	(pr=.000)	(pr=.000)	(pr=.000)
No exposure	22.99	37.34	43.97	34.77
Any exposure	50.71	53.42	67.18	61.15
At Least 4 ANC	NA	(pr=.000)	(pr=.000)	(pr=.000)
No		31.62	40.46	31.88
Yes		68.40	80.32	74.13
Iron intake	NA	NA	(pr=.000)	(pr=.000)
No			41.85	33.99
Yes			70.66	63.10
Safe Delivery	NA	NA	NA	(pr=.000)
No				4.27
Yes				82.36
Total	35.88	44.82	54.76	47.03

Note: "pr" represents the significance level estimated form Pearson's chi-squared (χ^2) test, and all percentages are weighted.

Table 4: Binary logistic regression model showing odd ratio (OR) and confidence interval (CI) for receiving maternal health care among women (age 15-49 years) who had at least one live birth in during the last 5 years preceding the survey, Pakistan, 2012-13.

Covariates	At least 4 ANC		Iron intake		Safe delivery		Postnatal care	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Maternal age								
Continuous	0.996	0.979-1.014	0.994	0.979-1.010	1.024*	1.007-1.041	1.019‡	0.998-1.041
Place of Residence								
Urban (ref)	1.00		1.00		1.00		1.00	
Rural	0.691*	0.569-0.838	1.153	0.951-1.400	1.211‡	0.983-1.492	1.056	0.787-1.418
Region								
Punjab (ref)	1.00		1.00		1.00		1.00	
Sindh	1.683*	1.383-2.049	1.304*	1.085-1.567	2.024*	1.668-2.455	1.058	0.805-1.391
Khyber Pakhtunkhwa	0.687*	0.562-0.840	1.778*	1.479-2.138	1.196‡	0.984-1.454	0.317*	0.243-0.415
Balochistan	0.306*	0.224-0.417	0.434*	0.339-0.557	0.360*	0.285-0.456	0.400*	0.278-0.576
Gilgit Baltistan	1.597*	1.197-2.130	0.663*	0.502-0.877	0.502*	0.373-0.676	0.248*	0.151-0.407
Islamabad (ICT)	2.651*	1.954-3.597	2.137*	1.612-2.832	1.819*	1.267-2.610	0.667‡	0.430-1.034
Women's Education								
No Education (ref)	1.00		1.00		1.00		1.00	
1-5 (Primary)	1.402*	1.105-1.781	1.166	0.939-1.448	1.098	0.875-1.377	0.979	0.716-1.338
6-10 (Secondary)	2.238*	1.775-2.822	1.343†	1.064-1.695	1.581*	1.231-2.031	0.985	0.709-1.369
11+ (Higher)	4.771*	3.381-6.733	2.223*	1.567-3.154	3.021*	1.977-4.616	1.520	0.882-2.620
Husband's Education								
No Education (ref)	1.00		1.00		1.00		1.00	
1-5 (Primary)	0.957	0.745-1.230	1.035	0.825-1.299	0.961	0.769-1.200	1.365†	1.009-1.848
6-10 (Secondary)	1.271†	1.026-1.576	1.309*	1.079-1.590	1.155	0.951-1.403	1.230	0.927-1.631
11+ (Higher)	1.228	0.938-1.607	1.583*	1.238-2.024	1.304†	1.012-1.681	1.497†	1.045-2.146
Maternal Working Status								
Not Working (ref)	1.00		1.00		1.00		1.00	
Work at home (Housewife)	1.182	0.922-1.515	0.968	0.766-1.224	0.810	0.630-1.043	1.001	0.740-1.354
Work away from home	0.933	0.709-1.228	0.954	0.752-1.209	0.553*	0.439-0.698	0.838	0.599-1.171
Wealth Index								
Poorest (ref)	1.00		1.00		1.00		1.00	
Poorer	1.754*	1.302-2.362	1.010	0.794-1.284	1.166	0.925-1.469	1.139	0.821-1.582
Middle	2.171*	1.593-2.960	1.237	0.948-1.614	1.344†	1.032-1.750	1.087	0.756-1.563
Richer	3.203*	2.295-4.472	1.643†	1.217-2.217	1.942*	1.435-2.629	1.040	0.690-1.568
Richest	6.127*	4.147-9.052	1.504†	1.040-2.177	2.757*	1.844-4.123	1.259	0.753-2.105
Head of Household								
Male (ref)	1.00		1.00		1.00		1.00	
Female	1.212	0.929-1.580	0.965	0.759-1.227	1.263‡	0.978-1.632	0.489*	0.346-0.691
Birth Order and Interval								
Birth order, 1 (ref)	1.00		1.00		1.00		1.00	
Birth order, 2/3 and interval ? 24	0.563*	0.433-0.733	0.917	0.709-1.185	0.658*	0.497-0.871	0.614*	0.425-0.888
Birth order, 2/3 and interval > 24	0.877	0.681-1.130	0.908	0.714-1.155	0.660*	0.507-0.859	0.797	0.558-1.139
Birth order, 4/5 and interval ? 24	0.478*	0.330-0.693	0.963	0.683-1.360	0.418*	0.299-0.585	0.617‡	0.381-1.001
Birth order, 4/5 and interval > 24	0.559*	0.416-0.753	1.027	0.777-1.359	0.390*	0.288-0.527	0.584†	0.384-0.891
Birth order, 6 + and interval ? 24	0.405*	0.245-0.668	0.847	0.574-1.249	0.333*	0.223-0.498	0.446*	0.252-0.789
Birth order, 6 + and interval > 24	0.648†	0.448-0.940	0.969	0.688-1.364	0.402*	0.282-0.574	0.515*	0.321-0.824
Exposure to Media								
No exposure (ref)	1.00		1.00		1.00		1.00	
Any exposure	1.214†	1.024-1.438	1.038	0.880-1.224	1.163‡	0.980-1.380	1.407*	1.126-1.757
At Least 4 ANC								
No (ref)	NA		1.00		1.00		1.00	
Yes			3.158*	2.673-3.732	2.585*	2.151-3.106	1.910*	1.496-2.437
Iron intake								
No (ref)	NA		NA		1.00		1.00	
Yes					1.760*	1.501-2.063	1.501*	1.204-1.870
Safe Delivery								
No (ref)	NA		NA		NA		1.00	
Yes							81.60*	62.33-106.8
Constant	0.301*	0.141-0.641	0.280*	0.142-0.555	0.180*	0.089-0.366	0.046*	0.016-0.131
Observations	7,256		7,256		7,256		7,256	
Pseudo R2	0.2383		0.1331		0.2195		0.5688	

Note: *Level of significance: * p<0.01, † p<0.05, ‡ p<0.1*

5.   DISCUSSION

The current study identifies several important determinants of maternal health care utilization in Pakistan, such as region, women education, husband's education, economic status of households, birth order and interval, and exposure to media.

The maternal age shows weak association with maternal health care utilization and showed significant impact on safe delivery and postnatal care. The reason behind this relationship may be are; (1) the older women have greater pool of knowledge as compared to younger women, (2) the educated female are tend to marry in latter age as compared to illiterate females, and (3) age also reflects the empowerment and control on decision making regarding her own health. The current finding is supported by many studies, the study of Peru shows that older women are more likely to seek maternal healthcare than their younger counterparts (Elo 1992). Similarly evidence from Nigeria shows that females in a higher age bracket are quicker in obtaining medical assistance (Rai et al. 2012). In India a "curvilinear pattern" was observed: women in middle ages were less probable to avail maternal care than their peers in the late or early child bearing ages (Singh et al. 2012).

The cross tabs shows the worse situation of utilization of maternal healthcare in rural areas for all four indicators, but econometric analysis show significant relationship only with at least four ANC visits, and safe delivery. As these traits are expected to be usually missing in the rural women they would be less likely to utilize maternal care and opt for deliveries at home via the help of a *dai* (mid wife). In Nepal a higher proportion of urban women than of rural women receive antenatal and delivery care (Mpembeni et al. 2007). The rural areas have many disadvantages like low level of knowledge regarding maternal health, access to healthcare facilities, and low quality of healthcare services. The study proposed a comprehensive maternal health policy plan for rural areas of Pakistan including increase in health care facilities, and as well as provision of public transport. In remote areas, there is a need for subsidized ambulance services.

Various studies have been conducted that reveal the significant effect of a female's education in utilizing maternal healthcare (Akhtar et al. 2014; S. A. Khan et al. 2014; Rai et al. 2012). The current study founds positive and significant impact of women's education on utilization of health care services in Pakistan. The reason behind this relationship is that educated women have better understanding and access to information regarding health-care, and can utilize these information and resources optimally (Antai 2011). Early age child bearing is not

only hazardous for the mother but for the child as well. Numerous studies have reported the adverse outcomes of teenage pregnancies in terms of health of both mother and child. Education not only makes a woman realize the beneficial effect of maternal care but also increases her autonomy.

A study conducted in Kenya confirmed that education played a pivotal role in delaying first child birth (Ferré 2009). Another reason may be that in developing countries like Pakistan, women's education represents the greater autonomy to make decisions and it ensures that she will utilize quality health care services (Celik et al. 2000; Mpembeni et al. 2007). In Nepal education was found to be the most important variable influencing a woman's decision about utilization of maternal care services (Wang et al. 2011). Along with female's education,study also found significance of husband's education on the outcome variables in last three models. The study includes husband's education as a categorical variable and found that it had varying effect on utilization of health care services. Husband's education up to primary education had no significant effect in first three models except postnatal care, secondary education have significant effect in two models at least 4 ANC visits and iron intake, and higher education have strong and significant effect on utilization of health care services in all models except at least four ANC visits. There may be two possible reasons; education brings about the awareness and access to information regarding maternal health care, and second reason may be that husband's education can be transformed into higher earning which ensure spending more resources on health-care services utilization of women during pregnancy.

The maternal working status show negative and significant effect on utilization of health care only in one model of safe delivery. In Pakistan, of the working females more are employed in the informal sector under poor working conditions with no holidays to claim that constrained them to seek health services. The study proposed the proper implementation of laws that will ensure paid holidays for working women at the time of delivery.

"Poverty not only excludes people from the benefits of health care system but also restricts them from participating in decisions that affect their health, resulting in greater health inequalities" (Antai 2011). Poor people are at a disadvantage when it comes to seeking medical help as they lack the most basic of resources. In rural India socio economic status was an important determinant in utilization of maternal care; women belonging to lowest income quintile are less likely to make use of maternal care services (Thind et al. 2008). For Sub Saharan Africa results were similar too; women who had higher level of incomes and education were more likely to make use of maternal care services (Elo 1992). The current

study takes wealth index as proxy for socio-economic condition of household and found its strong and significant effect on utilization of health care services in three models, except postnatal care. In model of at least 4 ANC visits, wealth index shows highest impact on dependent variables as compared to all other predictor variables. The only strong relationship reflects that wealth is ultimate solution; richer households are able to bear the cost of quality health care services. In our first model 'at least 4 ANC visits' during pregnancy richest households have six times more odd ratio as compared to reference category (poorest). The study proposed the subsidized health facility for poor households.

A woman with a high birth order possesses sufficient knowledge regarding the birth of a child and would not feel the need to utilize the maternal care service. Additionally there could also be a possibility of time and resource constraint being faced by the family (Rai et al. 2012). In India women with higher birth order are more liable to deliver at home (Thind et al. 2008). In sub Saharan Africa, the scenario is no different and women with higher order birth are likely to have access to poorer health services (Rutstein et al. 2004). The study uses a composite variable of birth-order and birth interval as categorical independent variable. The result shows that the utilization of maternal health care services reduces for all categories as compared to first birth order. The result also shows the differences in level of birth interval, and proposed awareness campaign for child spacing.

The exposure to mass media shows positive and significant relationship with utilization of maternal health care services in three models, except iron intake. It shows the importance of mass media in creating awareness regarding the importance of health care utilization. The importance of this variable has been recognized in the literature. If the woman has exposure to mass media there would be a higher probability that she would have greater awareness about her own health as well as the child's and can take preventive care. Those with access to electronic media in India in both Andhra Pradesh and Karnataka were more likely to receive maternal care (Celik et al. 2000). A study conducted in rural India "found significant influence of education, standard of living, and media exposure on the use of maternal care services" (Kwast et al. 1988). This study proposed a media campaign for the awareness about family planning and utilization of health care services.

In all the models we take explanatory variables namely; maternal age, place of residence, region, both women's and husband education, maternal working status, wealth index, gender of household head, birth order and interval, exposure to media. For iron intake we include an extra variable that is at least four ANC visits and results shows that if female visits at least 4

ANC it will increase the likelihood of utilization of iron supplements during pregnancy. The possible explanation of this relationship is that the prenatal care provider suggests the female to use iron supplements if required that shows the quality of maternal health services. The study uses the above mentioned variables along with at least 4 ANC visits and iron intake in last two models of safe delivery and post natal checkup.

The iron intake during pregnancy and at least 4 ANC also increases the likelihood of utilization of safe delivery and postnatal checkup within 42 days after delivery. Women who utilized safe delivery care were also more likely to use postnatal care. This finding is consistent with those of other studies conducted in other developing economies (Bloom et al. 1999; for India; Dujardin et al. 1995; for Zaire; Kwast et al. 1988; for Ethiopia). This study recommends concerted efforts by policymakers to motivate young women to utilize antenatal services provided by medical trained provider; because it will increase the utilization of postnatal care within 42 days.

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IS CHILD MARRIAGE ASSOCIATED WITH THE SURVIVAL STATUS OF FIRST PREGNANCY?
Evidence from PDHS 2012-13

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IS CHILD MARRIAGE ASSOCIATED WITH THE SURVIVAL STATUS OF FIRST PREGNANCY?

ABSTRACT

Child marriage i.e. less than or equal to eighteen years of age is quite common in Pakistan which has an impact on reproductive health of adolescent girls and leads to adverse pregnancy outcomes. This study aims to determine the relationship between early age marriages and the survival status of first pregnancy with reference to social, economic and demographic attributes of women. The study is based on the data of a nationally representative cross sectional survey i.e. Pakistan Demographic and Health Survey, 2012-2013. The analysis of the study is limited to a sample of ever married women between the age of 15 to 24 who at least had one pregnancy in order to compare the survival status of first pregnancy of both the cohorts of early marriages (less than or equal to 18) and adult marriage (greater than 18).Relationship between child marriages and survivals status of first pregnancy is assessed by calculating the adjusted odds ratios (AORs) using binomial logistic regression model after controlling for social, economic, and demographic variables. The results indicate that girl child marriage is significantly associated with the survival status of first pregnancy and girls married at the age of 18 or below 18 are more likely to lose their first pregnancy either due to miscarriage or stillbirth. The results also indicate that socio-economic and demographic factors including education and region are important predictors of pregnancy outcomes. However, work status is found not significant in determining pregnancy outcomes. In order to eliminate the adverse consequences of early marriages in the form of pregnancy loss, the legal age at marriage for girls needs to revised and fixed beyond 18 years.

1. INTRODUCTION

Universally a child marriage takes place when either one or both the contracting parties is still a "Child". According to Article 1 of 1989 Convention on the Rights of the Child (UNICEF 1989:1) *"An individual classifies as a child if he or she is below the age of eighteen, until and unless maturity is attained earlier as specified by the law"*. However in Pakistan,under the Child Marriage Restraint Act of 1929 a marriage is a child marriage if the male is below eighteen years of age, whereas the female is below sixteen years of age (Child Marriage Restraint Act 1929, No.XIX). But age at which a marriage constitutes as child marriage varies from culture to culture and country to country (UNFPA 2007). However

various human and child rights organizations are advocating for setting the legal age of marriage at eighteen years of age for both males and females (UNFPA 2007).

Child Marriage is not only a human rights violation but it is also considered one of the biggest barriers to the mental and physical development of both the young parent and offspring. One of the major outcomes of child marriages is adolescent pregnancy. Pregnancy during adolescence is a significant problem globally, with the highest incidence rates occurring in developing nations (Bruce and Clark 2004). While early childbearing has often been regarded as a social issue, there is mounting evidence that young maternal age may be linked to adverse pregnancy outcomes including still births and miscarriages (Chen at al. 2007 ; Schempf et al. 2007).

Attempts to elucidate the etiology of these poorer pregnancy outcomes among adolescent women have produced conflicting data and the issue has often been debated whether the excess risks are due to biologic immaturity or are the consequence of deleterious social and environmental factors (Chen et al. 2007; Fraser et al. 1995;Abdullah et al. 2007).

In Pakistan early marriage is one of the most pressing development issues. Where more than 30 percent of the girls are married off as child brides (UNFPA 2007). This practice is not only a fundamental human rights violation but has diverse consequences for girl's sexual and reproductive health (Bruce and Clark 2004).

This study aims to investigate the relationship between young maternal age and its effect on pregnancy outcomes. The study proceeds as follows: Section 2 gives a brief description of the relevant literature. Section 3 and 4 comprises of the problem statement and the conceptual framework of the study. Methodology, data and the limitations are explained in Section 5. Section 6 comprises of results and section 7consists of discussion and conclusion. The paper ends with policy recommendations in section 8.

2.   LITERATURE REVIEW

Finlay et al. (2011) have concluded that there is a significant association between the age of mother and the survival status of the first pregnancy once the model is adjusted for social and economic factors. Kumar et al (2013) is of the opinion that this is a purely biological effect with intrinsic characteristics which can explain the increased pregnancy wastage among adolescent mothers. Young teenage mothers have not yet attained full reproductive and psychological maturity and thus the risk of pregnancy-related complications during pregnancy and childbirth increases. Moreover, such women are unable to gain adequate

weight which causes further problems for them. Fraser et al. (1995) state that since young mothers are still growing themselves, they tend to compete with the fetus for nutrients leading to wasted pregnancies. Furthermore, among adolescent mothers, psychological immaturity also undermines their ability to care for the fetus.

On a study conducted in rural India Van der Knaauw and Wang (2011) established that a U-shaped relationship exists between maternal age and pregnancy wastage,when socio-demographic variables including the location, sex of child, ethnicity, mother's education, wealth of household and other household and village characteristics are adjusted for.

Similarly a study conducted by Rahman et al. (2010) concludes that in Bangladesh age at first conception is significantly associated with miscarriages or still births among adolescent girls.Similar results were reported by Magahi (2004) who found that in Kenya, 7.5 percent of all the reported adolescent pregnancies ended in miscarriages or still births , while the remaining 92 percent ended in live births either prematurely or full term. In India more than 46 percent of the girls are married before the age of 18 (NFHS 2007) and a large proportion of these girls then have adolescent pregnancies. A study conducted by Surindaar (2010) states that in India women conceiving at younger ages experience pregnancy wastages and child loss as compared to women who conceive at a relatively older age.

Studies conducted in less developed countries have found that when the socio-demographic factors are adjusted, the U-shaped association between maternal age and adverse pregnancy outcomes is derived (Akinyemi et al. 2013). Moreover, other studies conducted in less developed countries have found an independent and persistent association between maternal age and survival status of the first pregnancy.Kumar et al (2013), Ikamari (2013) has suggested a psychological causal pathway between maternal age and pregnancy wastage.

As adolescent mothers are more likely to be poor, less educated, and has fewer social supports than older mothers, socioeconomic and lifestyle factors have often been cited as the main explanatory variables for disparities in reproductive outcomes (Ketterlinus et al. 1990). However, a number of studies have shown strong associations between maternal age and adverse pregnancy outcomes even after controlling for these factors (Fraser et al.1995). Thus, investigations in both industrialized and developing nations lend support to an intrinsic biologic risk associated with young maternal age (Hedgier et al. 1997; Sharma et al. 2008).

Despite the fact that early marriages is a norm in Pakistan but literature investigating the relationship between the age at marriage and pregnancy outcomes is non-existent and this study is aiming to fill this research gap.

3. PROBLEM STATEMENT

This paper aims to analyze the association between child marriages and the survival status of first pregnancy. The study hypothesizes that child marriage is significantly associated with lost pregnancy. For this analysis the survival status of first pregnancy would be used as a dependent variable, while age at marriage, socio-economic and demographic variables would be used as control variables.

This analysis is different from previous work in two ways. First of all it is done on the latest PDHS data of 2012-13. Secondly, the analysis will be done on all those ever married women between the age of 15 to 24 years, following the outline given by Nasrallah et al (2013), Raj et al (2009) and Kamal (2012).

4. CONCEPTUAL FRAMEWORK

The following figure shows the conceptual framework of the study. The conceptual framework outlines the path way through which the research is carried out.

Figure 1: Conceptual framework

Is Child Marriage Associated with the Survival Status of First Pregnancy?
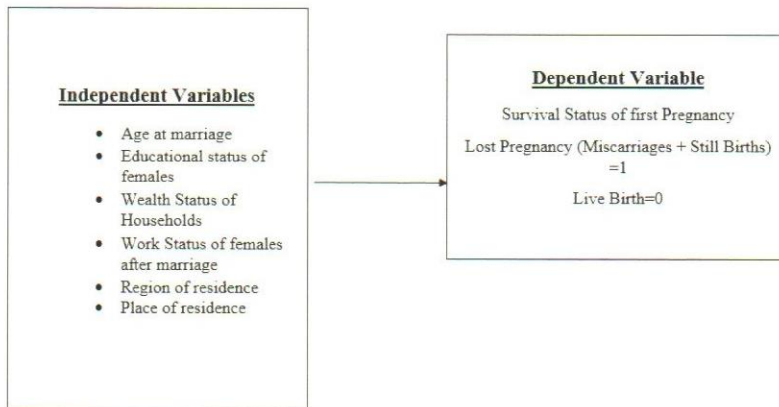
5. METHODOLOGY

5.1 Data

The data for this analysis is taken from the nationally representative Pakistan Demographic and Health Survey of 2012-13.This survey was conducted on a sample of 14000 households in which all ever married women of reproductive age were interviewed.

All currently married women's dataset consists of interviews with 13558 women between the ages of 15-49 years. However the analysis is restricted to all those ever married women between the ages of 15 to24, who have had at least one pregnancy. Therefore analysis is conducted on a sample of 1818 women. The figure below shows the sample derivation.

Figure 2: Sample derivation
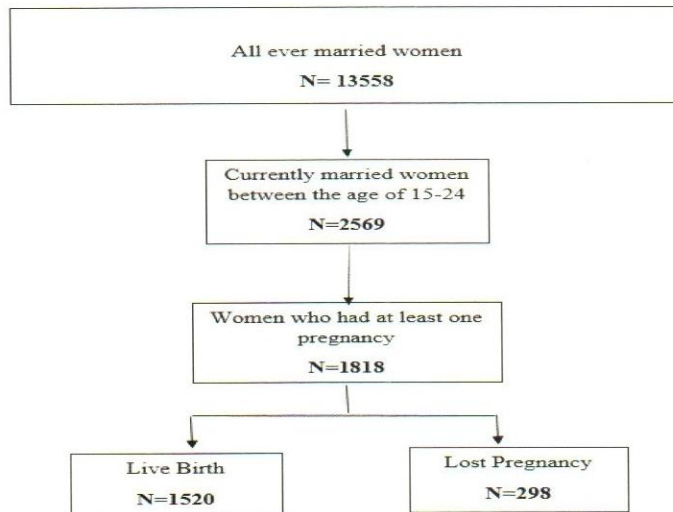
5.2 Key variables and measurements

5.2.1 Dependent Variable

This study refers to all those currently married women who have experienced at least one pregnancy and are between the age group of 15 to 24 years. The status of first pregnancy is computed through data of all the pregnancies taken from the pregnancy history of the respondents and is interacted with the survival status of first pregnancy. The outcomes are

categorized into live births and lost pregnancies. Here induced abortion is excluded from the analysis and still births and natural miscarriages are categorized as lost pregnancies.

5.2.2 Independent Variables

The socio-economic and demographic characteristics of the sample participants are assessed by variables such as age at marriage, the highest level of education attained, area of residence, region/province of residence, wealth index, and respondents work status. The "area of residence" is categorized into urban and rural areas. On the other hand, a "wealth index" is calculated in quintiles based on ownership of consumer items and dwelling characteristics and classified as the poorest, middle income and richest.

The variable of education is classified into two categories. The first category includes those women who have attained at least primary level of education and are termed as "educated" women. The second category consists of women who are "uneducated". "Region" is classified into the four provinces of Pakistan and two territories ; namely Punjab, Sindh, Balochistan, Khyber Pakhtunkhwa and territories of Gilgit Baltistan and Islamabad Capital Territory (ICT).Furthermore the respondents are also asked about their "work status at the time of marriage" and are asked whether they are in any form of paid employment immediately after marriage or not.

Early marriage is classified into two categories in terms of "married at age 18 or less" and "married after the age of 18 years".

5.3 Limitations

The findings would provide an important insight into child marriage and survival status of adolescent pregnancies in Pakistan, but they must be interpreted in the light of certain study limitations. The majority of the outcomes were based on self-report, which is based on social desirability and recall biases.

6. RESULTS

Figure 2 shows the frequency distribution of pregnancy status of ever married women between the reproductive ages of 15 to 24 years. Out of all the respondents (1818), majority of the women i.e. 84 percent have a live birth while 16 percent have lost their first pregnancy either through a miscarriage or a still birth.

Figure 3: Frequency distribution of pregnancy outcomes

PREGNANCY OUTCOMES

■ Lost Pregnancies   ■ Live Births
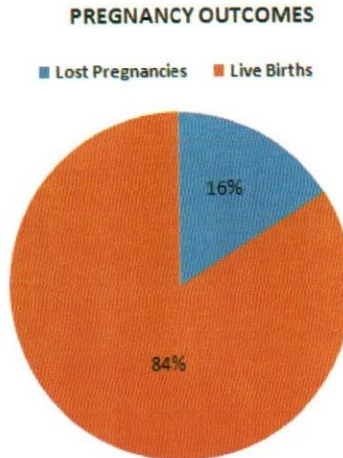
6.1 Bivariate Analysis

The total sample of the study consists of 1818 ever married women between the age of 15 to 24 years who have experienced at least one pregnancy. The table shows age at marriage is significantly associated with lost births. Of the women married as child brides 18 percent have lost their first pregnancy while only 15 percent of the women married at the right age i.e. above 18 have lost their first pregnancy.

Moreover when pregnancy outcomes are analyzed in accordance to region the analysis indicate that both of these variables have a significant relationship. Women living in provinces of Balochistan and KPK have more lost pregnancies i.e. 22 percent and 19 percent respectively. On the other hand women living in Punjab, GilgitBaltistan and Islamabad have less lost births (less than 15 percent). Similarly women residing in comparatively developed areas of Islamabad have more live births i.e. 91 percent as opposed to women from a relatively under developed province of Balochistan and KPK (78 percent and 80 percent).

The results also show that that the association between wealth and pregnancy termination is significant. Women from the poorest households have greater lost pregnancies (17 percent) as compared to women from richer backgrounds (14 percent).

Since the chi-square test value is more than 0.05, place of residence and the pregnancy status of women do not show a significant association. The analysis indicates that rural women have

a higher percentage of lost pregnancies (17 percent) while as the percentage of having lost pregnancies among urban women is 15 percent.

Female education is significantly associated with pregnancy outcomes. Works of Raj et al (2009) and Kamal (2012) shows that women who are more educated are more likely to have a live birth as their ability to care for their fetus increases due to more knowledge. The results indicate that 17 percent of uneducated women have lost their first pregnancies as compared to the educated women where loss of pregnancies is 16 percent.

Furthermore, work status of females is also found to be significantly associated with their first pregnancy outcome. The results indicate that women who started working immediately after marriage have lost more first pregnancies (24 percent) as compared to women who are not working (22 percent).

Table 1: Percent distribution of women age 15-24 years by survival status of their first pregnancy and background characteristics. source: original data file of 2012-13 PDHS.

Variables	Categories	Pregnancy Outcome		Total		Chai-Square Test
		Lost Pregnancy	Live Birth	N	Percent	
Total		16	84	1818	100	
Age at Marriage	Less than or equal to 18	18	81	1312	100	0.000
	Greater than 18	15	85	506	100	
Region	Punjab	14	86	490	100	0.008
	Sindh	18	81	391	100	
	Khyber Pakhtunkhwa	19	80	430	100	
	Balochistan	22	78	253	100	
	Gilgit Baltistan	14	85	172	100	
	Islamabad (ICT)	9	91	82	100	
Wealth Status of Household	Poorest	17	83	787	100	0.054
	Middle Income	16	84	391	100	
	Richest	14	86	640	100	
Type of place of residence	Urban	15	85	721	100	0.148
	Rural	17	82	1097	100	
Educational Status	Educated	16	84	911	100	0.007
	Uneducated	17	83	907	100	
Women start working immediately after marriage	Yes	24	76	618	100	0.009
	No	22	78	1200	100	

6.2   Multivariate Analysis Results

In order to find inferential relationships between variables, binomial logistic regression is applied on them. Before the logistic regression is applied on the data the discrete variables were tested through a correlation matrix. In the logistic regression only those variables are added which are not highly correlated with each other.

Table 2 presents the logistic regression results for the pregnancy outcome when regressed with age at marriage along with other demographic and socio-economic variables. In this model age at marriage, educational status of female, region of residence, wealth status of household and working status of females after marriage are added to find their net effect on the dependent variable i.e. pregnancy outcome.

Table 2: Logistic regression coefficients and affects (odd ratios) of selected predictor variables on pregnancy outcomes

Dependent Variable: Live births with reference to lost pregnancy		Model	
Predictor Variables		Coefficients	Odds Ratio
Constant		-1.169***	
Age at marriage	Less than 18 (R)		
	Greater than 18	-0.725*	0.484
Region	Punjab (R)		
	Sindh	0.020	1.020
	KPK	0.055	1.038
	Balochistan	0.531	1.594
	Gilgit-Baltistan	-0.074	0.798
	Islamabad (ICT)	-0.502**	0.128
Wealth Status of household	Wealth		
	Poorest (R)		
	Middle Income	0.518	1.679
	Richest	-0.512**	0.599
Education	Uneducated (R)		
	Educated	-0.373**	0.638
Women started working immediately after marriage	Not working immediately after marriage(R)		
	Working immediately after marriage	0.127	1.136

*Significant at 0.05 level
**Significant at 0.01 levels
***Significant at 0.001 levels
R= Reference Category

6.2.1   Age at Marriage

Women's age at marriage is entered into the model as a categorical variable where women below the age of eighteen are termed as reference category. As expected there is a negative

relationship between the age at marriage and outcome of first pregnancy that means women married before the age of eighteen are more likely to lose their first pregnancy. This impact is not only large but is also statistically significant. The significance level shows that the age at marriage is an important determinant of survival of first pregnancy. The odds ratio indicates that women married after eighteen years of age are 0.484 times less likely to lose their first pregnancy as compared to women married before the age of eighteen.

6.2.2 Region

Region is also added as a categorical variable to analyze region wide comparisons. Here Punjab is taken as a reference category. Only the region of Islamabad (ICT) is found significant in explaining the pregnancy outcomes of the women whereas all the other regions are not significant. Women living in Islamabad are 0.128 times less likely to lose their first pregnancy as compared to Punjab.

6.2.3 Wealth Quintile

The poorest household is used as a reference category in order to analyze the net effect of wealth on pregnancy outcomes of women. The results show that the relationship between rich income households is significantly influencing the pregnancy outcomes of women, whereas middle class women are found statistically not significant in explaining this relationship. The odds ratio shows that women from richest families are 0.599 times less likely to lose their first pregnancy as compared to women of poorest families.

6.2.4 Education

Women's education is added into the model as a control variable. The variable is categorized as a dichotomous variable and has two categories as "educated" and "uneducated" and uneducated women are used as a reference category. As expected the results depict a significant relationship between women's education and the survival status of first pregnancy. The odds ratio of 0.638 indicates that the educated women are 0.638 times less likely to lose their first pregnancy as compared to uneducated women.

6.2.5 Work Status of Women Immediately after Marriage

Work status of women immediately after marriage is added as a categorical dichotomous variable in the model and not working women are taken as the reference category. However, overall the relationship is not significant.

7.   DISCUSSION AND CONCLUSION

The practice of child marriage is one of the worst forms of gender discrimination as it prevents children from achieving their full potential. Various human and child rights organizations are advocating for setting the legal age of marriage at eighteen years of age for both males and females. However in Pakistan under the Child Marriage Restraint act of 1929 a marriage is a child marriage if the male is below eighteen years of age, and the female is below sixteen years of age (Child Marriage Restraint Act, 1929, No.XIX). The bill was amended in 2014 and the penalties for those guilty of committing such heinous act were revised, but the government failed to increase the legal age at marriage for females. This practice is not only a fundamental human rights violation but has adverse consequences for girl's sexual, reproductive health and pregnancy outcomes.

This paper uses both bivariate and multi variate analysis in order to examine the effect of age at marriage on the survival status of the first pregnancy with reference to different social and demographic variables of all ever married women between the age group of 15 to 24 years who have at least one pregnancy.

The bivariate analysis indicates that most of the females in the sample are married before the age of 18 (72 percent) and have become pregnant. Out of this 84 percent have delivered a live birth and 16 percent have lost their first pregnancy either due to a miscarriage or still birth. Probability of losing a pregnancy is relatively lower in women of higher age groups. Indicating that the age at marriage is positively associated with the survival status of the first pregnancy.

The multivariate analysis of the study shows that age at marriage is a significant predictor of pregnancy outcomes. It also proves that educated mothers tend to have a higher chance of delivering a live birth as compared to uneducated mothers. Education of the female child can play a significant role in delaying marriage and hence delaying childbearing, thus protecting the young girl from being exposed to the various complications of teenage pregnancy and pregnancy loss. Moreover women living in developed region have a greater probability of delivering a live baby as opposed to women coming from less developed regions. The study also incorporated the work status of mother and it proves that women's work does not have an impact on the pregnancy outcome. The findings of the study are in accordance with findings of Raj et al (2010), Nasrallah et al (2014), Kamal (2012), Godha et al (2013) who have successfully proved that age at marriage is positively associated with the survival status

of first pregnancy and girls delivering children at an early age are at a higher risk of losing their first pregnancy.

8.   POLICY RECOMMENDATIONS

The results of this study indicate that girls married at an early age are unable to endure the burden of child bearing and as a consequence have to withstand adverse pregnancy outcomes, jeopardizing both the health of the mother and child. It is important that policy makers understand the deep rooted consequences of child marriages and must increase the legal age at marriage beyond eighteen years of age. So that girls are not denied the childhood they deserve, and are not forced to become adults before time.At the same time severe penalties for the defaulted parents need to be set in place and the issue needs to be highlighted through mass media. Moreover, education and regional development needs to be put forward on the development agenda of both the government and non-government organizations. Such improvements will certainly minimize the loss of pregnancies particular among teenage married girls.

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Annex 1: Inter-correlation among independent variables

		1	2	3	4	5	6	7	8
1.	Age at marriage	1.000							
2.	Pregnancy Outcome	.046	1.000						
3.	Wealth	-.234	.136	.057	1.000				
4.	Education	-.131	.067	.036	.543	1.000			
5.	Region	.036	-.021	.055	.085	.078	1.000		
6.	Residence	.223	-.079	-.065	-.525	-.343	-.372	1.000	
7.	Work Status	.051	.020	.084	-.247	-.213	-.174	.257	1.000

4

CORRELATES OF CONSANGUINEOUS MARRIAGES IN PAKISTAN

Azra Aziz
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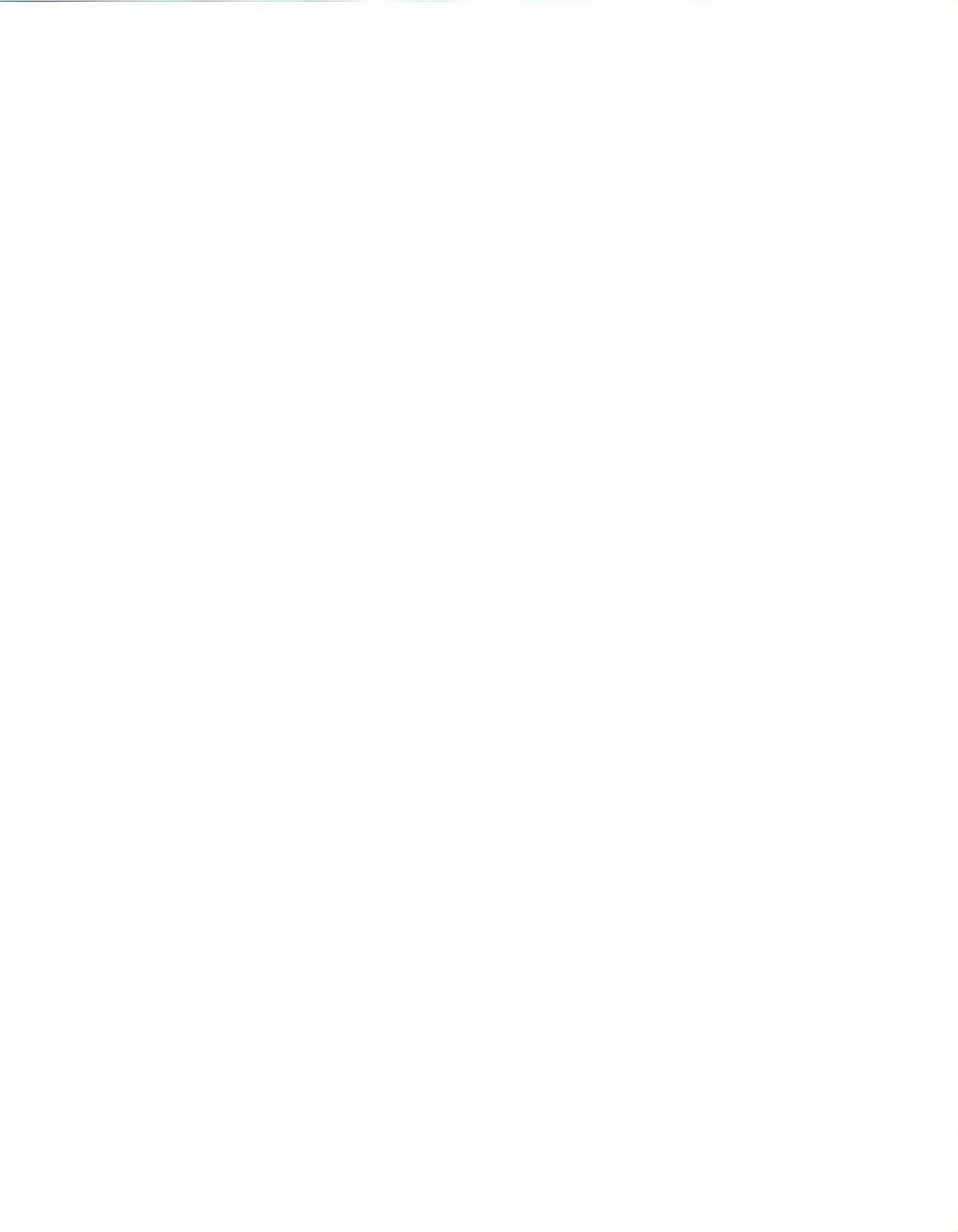
CORRELATES OF CONSANGUINEOUS MARRIAGES IN PAKISTAN

ABSTRACT

This study examines the major correlates of consanguinity. Age of women at the time of first marriage, her level of education and work status before marriage, her choice for selecting husband are considered the main factors having influence on marriage preferences. In addition, place of residence, region she was living in at the time of marriage, women's number of marriages, and her rank among wives are also thought some of the factors that affect marriage type. It is hypothesized that it is the individual woman's decision to be married within blood relatives. This is why consanguineous marriages are continuing despite increasing level of education and employment especially among female.

Source of data is the Pakistan Demographic and Health Survey 2012-13. The results show that work status at the time of marriage and choice of selecting husband are significant and positively associated with consanguineous marriages. However, consanguinity has inverse relationship with age at first marriage and educational level of women. Preference of working women is more towards consanguineous unions than non-working. The odds for women who were in consanguineous union by their own choice are more than those women who has no say in selecting their husband. Age at first marriage is found an important predictor of consanguineous marriages. Similarly, the likely hood of marriage with blood relatives is higher for age group less than 20 years as compared to higher age groups. Less educated women are more likely to marry with cousin as compared to primary or higher educated women.

This study concluded that prevalence of consanguinity in Pakistani society is high. Socio-demographic factors have strong correlation with blood related marriages. Increasing age at marriage and level of education have played major role in reducing the prevalence of consanguinity. Whereas, right for selecting husband, women's working status and multiple marriages have positive association with consanguinity.

1. INTRODUCTION

Marriage is one of the most important factors that regulate the level of fertility and considered the proximate determinant of fertility. Marriage between close biological kins is widely regarded as genetically disadvantageous in contemporary western societies, but consanguineous unions remain preferential in North Africa, the Middle East, and large parts of Asia. The most common prevailing form of consanguineous marriage is between first

cousins (Al–Salem and Raishdeh 1993). However, consanguineous marriages range from cross cousins to more distant relatives and their prevalence varies by cultural traditions followed by a community (Bittles *et al.* 1992; Yunis *et al.* 2008; Jurdi, Saxena 2003).

Model and Darr (2002) found that one-fifth of the human population around the world lives in communities with a preference for consanguineous marriages and at least 8.5 percent of children have consanguineous parents. The prevalence of preference for consanguineous unions is particularly high in South Asian population (Beck 1972; Chakraborty and Chakravarti 1977). Hussain and Bittles (2000) analyzed the Indian National Family Health Survey data (1992-93) and found that the prevalence of consanguineous marriage is around 12 percent but, among Muslims, it is 22 percent. Beck (1972) 'plotted the distribution of preference for consanguineous marriage thereby demonstrating that four South Indian states including Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu, follow a widespread practice of consanguineous marriage in all their administrative districts'. Goode (1963) has frequently argued that consanguineous marriage will decline with development, urbanization and the decline of arranged marriage.

A study of Iran by Shavazi et.al. (2008) shows considerable regional variation in levels of consanguinity, and greater incidence in rural areas and among the lesser-educated, lending some support to the argument that it will soon decline, particularly bearing in mind the decline in arranged marriages in Iran. Nevertheless, consanguineous marriage has strong cultural support in Iran, and there is no evidence of a lowered incidence so far.

Economists have increasingly studied marriage practices and marriage markets, using costs-benefits models for an individual as well as for the family and suggested that many aspects of marriage decisions – the timing of marriage, characteristics of a partner, marriage payments, divorce decisions and even the risks of violence in marriage – can in fact be linked to a careful analysis of the costs versus benefits of these actions (Anderson 2007; Becker 1973; Casterline, Mensch and Singh 2005). There is evidence that children born in marriages between first cousins have double risk of congenital anomalies (Chintahpilli 2013).

Marital union in Pakistani society is of two types. Marriages, generally arranged within family or blood related and out of family or non-blood related. In the context of Pakistan, there are some evidences that consanguineous marriages may affect both fertility and health of children (NIPS and ICF International 2008). Previous researches show that Pakistan has one of the highest reported rates of consanguineous marriages in the world. A brief comparison of

data collected through PDHS 1990- 2013 on consanguineous marriages clearly show a consistent high prevalence of consanguinity with reference to age at first marriage, level of educational, province and residence (urban and rural) as shown in the Figure 1-4.

Figure 1: Comparison of consanguineous marriage, PDHS 1990-91, 2006-07, 2012-13.

Age at Marriage

	<15	15	16-17	18-19	20-21	22-23	24+
1990-91	66	72	65	58	60	57	58
2006-07	67	70	73	68	67	62	55
2012-13	64	72	72	68	65	56	52
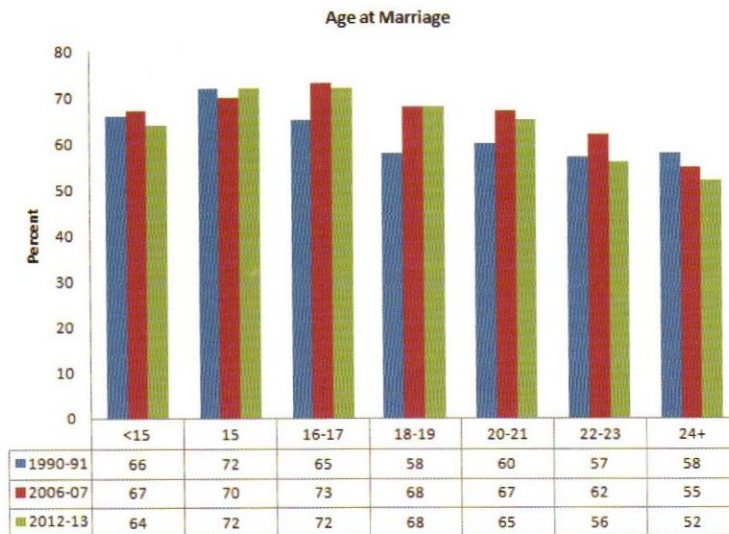
Figure 2: Comparison of consanguineous marriage, PDHS 1990-91, 2006-07, 2012-13

Level of Education

	No education	Primary	Middle	Secondary+
1990-91	65	65	55	45
2006-07	71	66	61	59
2012-13	71	66	59	54
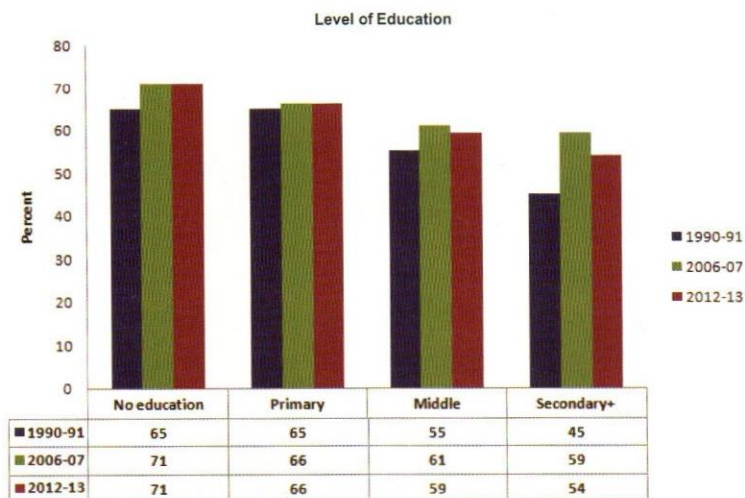
Figure 3: Comparison of consanguineous marriage, PDHS 1990-91, 2006-07, 2012-13

Residence

	Urban	Rural
1990-91	53	67
2006-07	58	72
2012-13	54	71
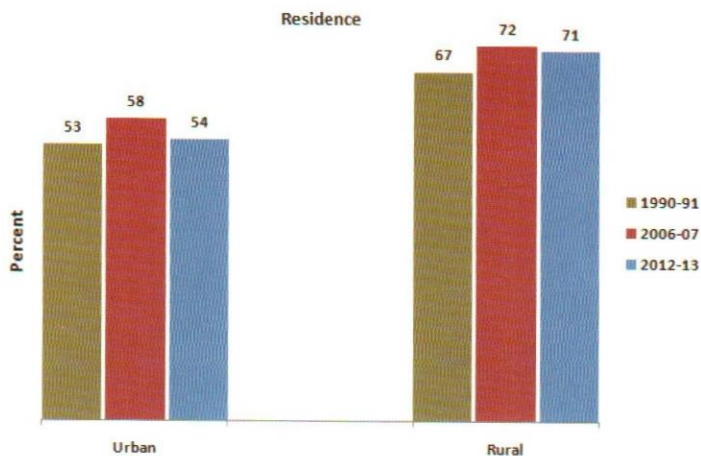
Figure 4: Comparison of consanguineous marriage, PDHS 1990-191, 2006-07, 2012-13

Province

	Punjab	Sindh	NWFP	Balochistan
1990-91	65	61	52	68
2006-07	68	70	57	72
2012-13	66	68	60	69
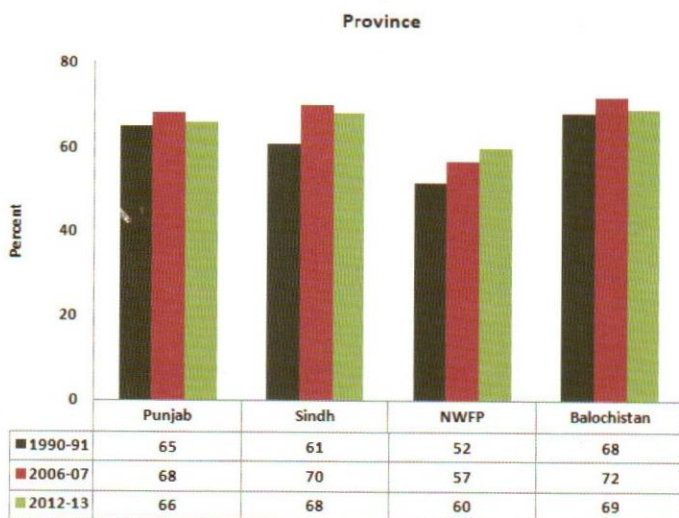
Pakistan Demographic and Health Surveys also reveal that Pakistan has a high rate of marriages between first & second cousins. Overall, the proportion of marriage between first cousins has decreased slightly, from 52 percent in 2007 to 49 percent in 2013.

However, very little is known about the preference of consanguineous marriages and their correlates. As pointed out in earlier studies that the consanguineous marriages have a number of socioeconomic, demographic and health implications. This study is designed to investigate the prevalence of consanguinity that could provide some inferential evidence of the factors that correlates with consanguineous union. This study seeks to find out the proportion of women in consanguineous marriages and analyze consanguinity by background characteristics. The **Specific Objectives** are to assess the variation in the level of consanguineous marriages by regions and socio-demographic groups across Pakistan. The study seeks to answer the research question: Are personal characteristics of women (age at marriage, education, working status before marriage and right for selection of husband) have any relationship with consanguineous union while controlling the other socio-demographic factors? What are the strong predictors for preference of consanguineous unions? The **Conceptual Frame Work** of the relationship between consanguineous marriage and personal traits of women and family background characteristics are described as below:
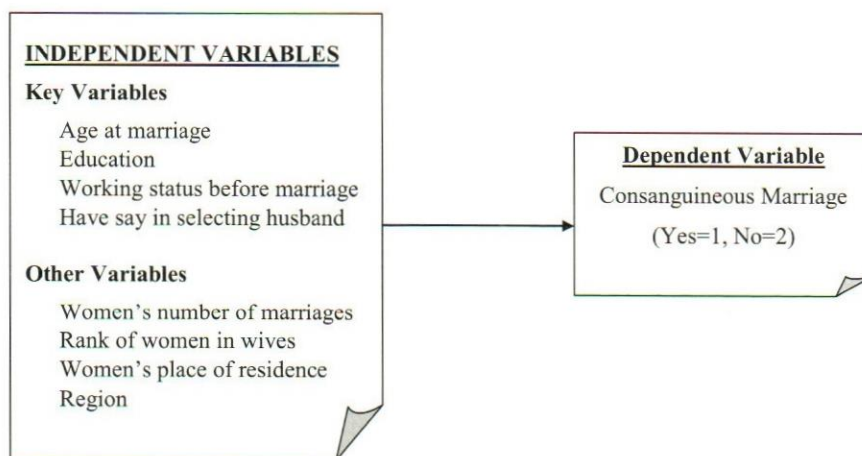
2.   DATA AND METHODOLOGY

Data regarding the occurrences of marriages between blood relatives including first/second cousins as well as between non-blood relatives were collected through interviewing 13558 ever married women, as part of the Pakistan Demographic and Health Survey (PDHS-2012-13). The present study uses the information regarding marriage and other family background

variables of ever married women of age 15-49 years. The specific questions asked to women age 15-49 were "Is/was there a blood relationship between you and your husband?" If the answer was in affirmative then following question was asked: "What type of relationship is/was it?" Another question in the series of questions about marriage was: "While getting married, did you have a say in choosing your (first) husband?" Similarly, questions are asked to women concerning the age at which she started living with her husband. Has she married once or more than once? What is the rank of her among other wives in case of multiple marriages, place of residence and region were also inquired.

Consanguineous marriages (Yes=1, No=0) is considered as dependent variable in the binary logistic model. Other independent variables are categorized as, age of women at first marriage (less than 20, 20-24, 25+), education of women (no education, primary, secondary and higher), work status of women (worked before marriage, not worked), marriage pattern (marriage by choice, not by choice), place of residence (rural, urban), number of marriages (once, more than once), rank among wife (first wife, second wife, third wife).

As stated earlier our objectives are to analyze the regional variations and prevalence of consanguinity with reference to other socio-demographic characteristics of total number of ever married women age (15-49), the in-depth analysis is carried out using two sets of variables in the equations. In the first equation, key variables (age at marriage, education, work status before marriage and right of selecting husband) were analyzed. In the second equation, variables of family background, place of residence and region were added to see the net effect of each factor on the marriage patterns.

3.   STATISTICAL ANALYSIS

The analysis is carried out using IBM SPSS version 22. Descriptive statistics are used to report the prevalence of consanguineous marriages on all selected background variables. Contingency tables and chi-square statistics are used to assess the nature of association between dependent and independent variables. Binary logistic regression analysis is used to assess the net effect of each independent variable which may influence the preferences of consanguineous union.

4. FINDINGS

4.1 Results

As mentioned above marital union in Pakistan is of mainly two types. Marriages, generally arranged within family and cross-cousins and out of family or non-blood related. This study examines the correlates of marriage types using the information provided by ever married women of age 15-49 years in a sample survey of PDHS 2012-13. The finding of bivariate analysis presented in Table 1 reveals that more than half (65 percent) of ever married women age 15-49 years were in consanguineous union and the rest (35 percent) were married to non-relative. Consanguineous union is most common in Balochistan (69 percent) followed by Sindh (68 percent), Punjab (66 percent), Khyber Pakhtunkhaw (60 percent), Islamabad (56 percent) and Gilgit Baltistan (49 percent).

Table 1: Prevalence of consanguineous marriages among regions and Place of residence in Pakistan, PDHS 2012-13

Region/Place of Residence/Major Areas		Percentage of Consanguinity	Sample Size of Women
Pakistan	Urban	53.6	4536
	Rural	71.2	9022
	Total	65.3	13558
Punjab	Urban	53.8	2526
	Rural	71.5	5264
	Total	65.76	7790
Sindh	Urban	52.39	1521
	Rural	82.36	1612
	Total	67.81	3133
Khyber Pakhtunkhwa	Urban	54.46	320
	Rural	60.69	1587
	Total	59.64	1907
Balochistan	Urban	66.95	114
	Rural	69.73	452
	Total	69.17	566
Gilgit Baltistan	Urban	46.06	15
	Rural	49.28	79
	Total	48.78	94
Islamabad (ICT)	Urban	51.1	39
	Rural	64.42	24
	Total	56.13	63

Overall, rural areas display greater occurrence of consanguineous marriages (71 percent) than urban areas (54 percent) of Pakistan. A large variation in rural and urban consanguineous prevalence is also seen in all provinces. Table 2 indicates that among consanguineous

marriages, a large proportion of women (74 percent) are married to first cousins (of either father or mother side) 12 percent to second cousin and 14 percent to distant relatives. Figure 5 and 6 show the provincial state of consanguinity by place of residence and type of cousins.

Table 2: Percent distribution of type of consanguineous marriages by regions in Pakistan, PDHS 2012-13

Region/Major Areas	First Cousin	Second Cousin	Distant Relation	Sample Size of Women
Pakistan	74.3	12.1	13.6	8851
Punjab	72.6	9.9	17.5	5119
Sindh	77.7	15.5	6.8	2124
Khyber Pakhtunkhwa	75.6	13.7	10.7	1136
Balochistan	74.3	17.8	7.9	391
Gilgit Baltistan	82.6	11	6.4	46
Islamabad	70.2	17.3	12.6	36

Figure 5: Percent distribution of consanguineous marriages by region and place of residence, PDHS 2012-13
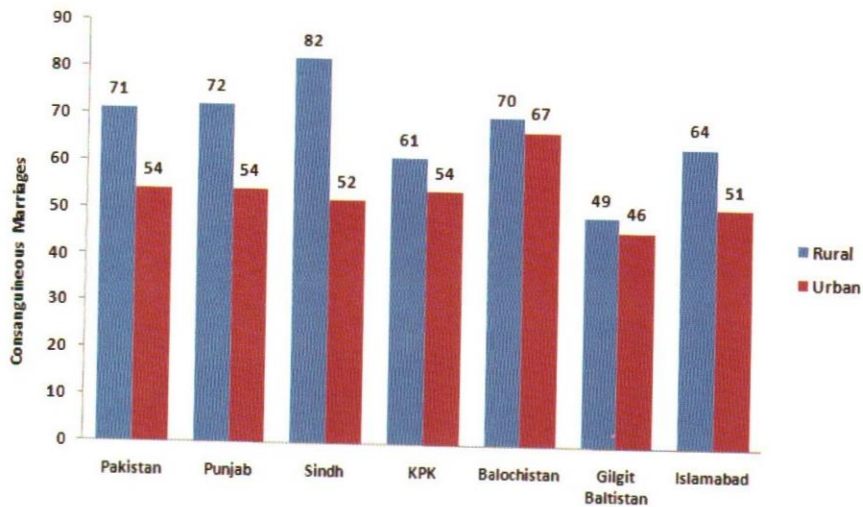
Figure 6: Percent distribution of marriages by type of consanguinity, PDHS 2012-13
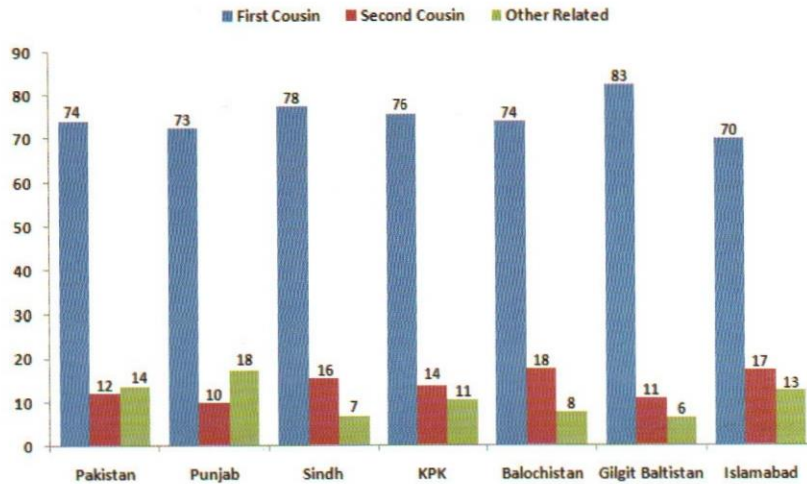

Table 3 shows the proportion of women marrying within blood relatives by different socio-demographic characteristics. The findings reveal that occurrence of consanguineous marriages varies across socio-demographic groups. In Pakistani society cousin marriages are reflected more in lower age at marriage. This is also evident among uneducated or those with primary education. The analysis indicates that about two third (2/3) of women under 25 years of age as well as less educated (i.e not educated or with only primary education) are married to their blood relatives compared to women with above 25 years and with higher education.

Contrary to our expectation, women who had say in the selection of her husband are more (67 percent) in consanguineous union than those who have not any right to select her husband (57 percent). The same pattern is seen for those women who were employed (76 percent) at the time of marriage. The results also show that the proportion of consanguineous marriage is more (66 percent) if woman marry once and lower (46 percent) in multiple marriages. However, consanguineous union is more (77 percent) if she ranked the first among wives followed by 48 percent in case of second wife and 52 percent if she is the third or higher in rank. The overall results of this study are encouraging as expected. The chi-square tests for all variables are significant meaning that selected variables have strong association with the status of consanguineous union.

Table 3: Percent distribution of consanguineous marriages by background characteristics of women in Pakistan 2012-13

Background Characteristics	Consanguineous	Non-Consanguineous	Sample size	Chi-Square
Age at first marriage				***
<20	69.5	30.5	8461	
20-24	61.2	38.8	3817	
25+	50.1	49.9	1279	
Educational level of women				***
No education	70.9	29.1	7736	
Primary	66.4	33.6	2156	
Secondary	56.2	43.8	2406	
Higher	47.1	52.9	1259	
Women have choice for selecting husband				***
Yes	67.4	32.6	10828	
No	57.2	42.8	2730	
Working status before marriage				***
Working	76.2	23.8	2465	
Not working	62.9	37.1	11092	
Women's number of marriages				***
Once	65.8	34.2	13235	
More than one	46.4	53.6	323	
Rank of women in wives				***
First wife	76.6	23.4	137	
2nd wife	48.2	51.8	326	
3rd wife or high	52.2	34.4	23	
Total	65.3	34.7	13558	

5.   ANALYSIS

5.1   Multivariate Results

The variables that were tested and found significant at bivariate level are included in the regression equations. Two statistical models are employed to test the correlates of consanguineous marriages. Four key variables, (i) age at marriage, (ii) education of women, (iii) working status of women, (iv) woman have say in selecting her husband, which are conjectured as strong predictors are included in the first model. The odd ratios of model 1 presented in Table 4 show net effects of key variables on consanguineous union.

Table 5 shows the results based on model 2 which adds background variables such as (i) woman's number of marriages (ii) rank of women in wives if husband had more than one wife, (iii) place of residence (Rural/urban) and (iv) region of residence, to the variables included in Model 1.

5.2   Age at Marriage

Age at marriage was entered into the equation as categorical variable, where women of age <
20 years is used as a reference category. As expected age at marriage has a negative impact
on consanguineous marriages. The odd ratios presented in Table 4 shows that women who
had married at older age are less likely to have consanguineous marriage as compared to
women who had married at age less than 20 years. The negative impact is not only large it is
statistically significant as well. This implies that lower the age the greater the likelihood to be
married within blood relatives, and it decreases as the age at marriage increases. The net
impact of age at first marriage remains more or less the same when the impact of other socio-
demographic factors is controlled in model 2.

**Table 4: Logistic regression model estimates (odd ratios) of consanguineous marriages by
background characteristics of women in Pakistan, PDHS 2012-13**

Background Characteristics	Model 1			
	Coefficients	Odd ratios	95% C1 for Exp(B)	
			Lower	Upper
Age at first marriage				
<20 (R)	-	1.00	-	-
20-24	-0.205	0.814***	0.749	0.886
25+	-0.560	0.571***	0.503	0.649
Education				
No education (R)	-	1.00	-	-
Primary	-0.152	0.859***	0.774	0.953
Secondary	-0.516	0.597***	0.541	0.659
Higher	-0.833	0.435***	0.382	0.495
Working before marriage				
No (R)	-	1.00	-	-
Yes	0.520	1.682***	1.516	1.865
Women have say in selecting husband				
No (R)	-	1.00	-	-
Yes	0.539	1.714***	1.570	1.873
Hosmer and Lemeshow Test Chi2	17.761**			
-2 Log likelihood	16808.443			
Cox&Snell R Square	.050			
Nagelkerke R Square	.068			

Note:-   a)   (R)-Reference Category,
*b)   Level of significance: * p < 0.05, ** p < 0.01, ***p<0.0001*

5.3   Education of Women

The level of education of woman is a statistically significant predictor of blood related
marriages. The education is found negatively associated with consanguinity. In Pakistan,
education is playing a significant role in reducing the prevalence of consanguineous

marriages. The likelihood of prevalence of consanguineous marriages decreases with the increase in the educational level of women. As compared to women with no education, the prevalence of consanguineous marriages is less likely among women with primary education (Odds=0.859, p<.0001, CI=0.774-0.953) which further reduces as the education increase to secondary level (Odds=0.597, p<.0001, CI=541-0.659) or higher level (Odds=0.435, p<.0001, CI=0.382-0.495). Implying that it is the higher level of education which brings change in women's attitude, and they are more convinced to marry out of family. It is the education which exposed women to other social groups and provide options to select partner other than her first or second cousin. The net effect of education on consanguineous marriages was found highly significant in both models.

5.4   Working Status

The working status was included as dichotomous variable where women who have not been working at the time of marriage is used as reference category. As expected, working for money gives women a better status and autonomy to take rational decision on her marriage preference. Contrary to our expectations, working women are 1.7 times more likely to marry with cousins as compared to non-working (Model 1). However, in model 2, the odds are little less (Odds=1.450, p<.0001, CI=1.301-1.616) when other family background factors are controlled. This relationship is also statistically significant and positively associated with consanguineous union. Implying that working women thought it could be more rational and secure to marry with cousins.

5.5   Have say in Selecting Husband

Another key variable influencing the marriage patterns is the right of women in selecting their own partner. Dichotomous variable was entered in model 1 and model 2 with "No right in selecting husband" as reference category. The results presented in Table 4 show the significant relationship of selecting husband variable with consanguinity. Unexpectedly, women who have say in selecting husband are 1.714 times more likely to marry within blood relatives as compared to those women who have no say for the selection of husband. In the second model the odds have marginally increased (Odds=1.780, p<.0001, CI=1.627-1.948) when other background variables are included in the analysis. Implying that women who have say in selecting their husbands are more convinced to marry within blood relatives than those women who did not have say in selecting husband.

Table 5: Logistic regression model estimates (odd ratios) of consanguineous marriages by background characteristics of women in Pakistan, PDHS 2012-13

Background Characteristics	Model 2			
	Coefficients	Odds ratio	95% C1 for Exp(B)	
			Lower	Upper
Age at first marriage				
<20 (R)	-	-	-	-
20-24	-0.229	0.796***	0.730	0.867
25+	-0.574	0.579***	0.508	0.659
Education				
No education (R)	-	1.00	-	-
Primary	-0.101	0.904***	0.811	1.007
Secondary	-0.374	0.688***	0.619	0.765
Higher	-0.635	0.530***	0.462	0.609
Working before marriage				
No (R)	-	1.00	-	-
Yes	0.372	1.450***	1.301	1.616
Women have say in selecting husband				
No (R)	-	1.00	-	-
Yes	0.577	1.780***	1.627	1.948
Women's number of marriages				
Once (R)	-	1.00	-	-
More than one	0.838	2.311***	1.825	2.925
Rank of women in wives				
1st wife (R)	-	1.00	-	-
2nd wife	-1.148	0.317***	0.198	0.509
3rd wife or higher	-0.393	0.675***	0.446	1.022
Women's place of residence				
Rural (R)	-	1.00	-	-
Urban	-0.616	0.540	0.496	0.588
Region				
Punjab (R)	-	1.00	-	-
Sindh	0.137	1.148	1.043	1.262
KPK	-0.481	0.618	0.554	0.690
Balochistan	-0.082	0.921	0.761	1.118
Gigit Baltistan	-0.935	0.393	0.259	0.596
Islamabad	-0.036	1.037	0.617	1.743
Hosmer and Lemeshow Test Chi-Square		51.686***		
-2 Log likelihood		16433.049		
Cox & Snell R Square		.076		
Nagelkerke R Square		.104		

5.6 Multiple Marriages of Women and Rank in Wives

A variable of "number of marriages of women" is included in the regression analysis to see the net effect of multiple marriages on consanguinity. The results are statistically significant and show that if women marry more than once it is 2.3 times more likely to marry within the family than those who marry only once (see Model 2).

The consanguineous odds are 0.317 if she is the second wife of her husband as compared to if she is the first wife. Unexpectedly, the odds increased to 0.675 if she is the third or higher in rank of her husband's existing wives. The relationship is highly significant.

5.7   Place of Residence

There are many factors affecting the consanguineous marriages and list is growing as the society getting complex and moving towards development and urbanization. To find out the adjusted net effect of socio-economic development, the place of residence was included in the regression analysis. In Bivariate analysis it is found that about 71 percent of rural women and 54 percent of urban women were in consanguineous unions.

In multiple regression model a large variation in the occurrence of consanguineous marriages are seen. Place of residence (see Table 5) is found to be a strong predictor for consanguineous marriage. The distribution of consanguineous marriages among urban women is 0.54 times less likely than rural women. It implies that rural living that is associated with traditions and patriarchal decisions could be instrumental in more consanguineous unions in rural areas than among urban residents.

5.8   Region of Residence

The information collected in PDHS shows a significant association of regions and consanguinity. Overall Balochistan, Sindh and Punjab show considerable occurrence of consanguineous marriages i.e. 69 Percent, 68 percent and 66 percent respectively (see Table 1). Data reveals that overall more than half marriages are consanguineous.

At multivariate level (see Table 5) odd ratios vary among different regions. The women living in Sindh and Islamabad are 1.148 times and 1.037 times more likely to marry within blood relatives as compared to Punjab. Whereas the prevalence of consanguineous marriages is less likely in Balochistan (Odds=0.921, CI=0.761-1.118) followed by Khyber PakhtunKhaw (Odds=0.618, CI=0.554-0.690) and Gilgit Baltistan (Odds=0.393, CI=0.259-0.596) as compared to Punjab. The results are found statistically not significant for all regions.

6.   SUMMARY AND CONCLUSION

Numerous earlier studies have focused on specific areas and social groups and described the prevalence of consanguineous marriages and its effects. The current study is a comprehensive effort to revisit the consanguineous marriages and its correlates with more recent national

level data using robust statistical methods to assess the prevalence and its impact on consanguineous marriages in Pakistan. This study examines the extent of prevalence of consanguineous marriage in Pakistan and its major socio-demographic correlates. The overall prevalence of consanguinity is found to be 65 percent, which is one of the highest reported rates of consanguineous marriages in the world. The practice of marriages with close relatives is considerably higher in all regions of Pakistan. Within the consanguineous marriages, the cross-cousin marriages are more preferred with first cousin. The assessment of occurrence of consanguinity by background characteristics reveals that, they are more prevalent among disadvantageous socioeconomic groups. The main factors associated with consanguineous marriage are women's age at marriage, education and multiple marriages. The findings of this study are in tune with, the findings of earlier studies in other communities. However, with more comprehensive analysis using recent data, this study re-establishes the fact that socio-demographic and cultural factors playing a critical role in continuation of the tradition of consanguineous marriages in Pakistan. Our perception is that couples may have found more financial gains and benefits of living within family than going out of the family and especially women feel more secure and at ease to be married with cousins. It could also be one of the reasons that living with close relatives provides sympathies of both families if some unforeseen events occur.

7. RECOMMENDATION

Recommendation for future research:- It is conjectured that consanguineous marriages adversely affect health of children through genetic degeneration. Further research is imperative to investigate the association of consanguineous marriages with genetic disability and health of children to be born.

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5

THE SOCIO-ECONOMIC FACTORS AFFECTING GENDER-SPECIFIC FERTILITY PREFERENCE IN PAKISTAN

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THE SOCIO-ECONOMIC FACTORS AFFECTING GENDER-SPECIFIC FERTILITY PREFERENCE IN PAKISTAN

ABSTRACT

In many societies, birth of a boy is generally preferred over a girl. In South Asia, where boys are expected to look after their parents in old age and earn a better socio-economic living, boy preference prevails vastly. By using data from Pakistan Demographic and Health Survey 2012-2013, the child gender preference among women in Pakistan is examined in this study. Multinomial regression is applied to predict the relationship between the socio-economic and demographic factors and child gender preference among women.

In this study a shift in the preferences of women in Pakistan is observed. From bivariate analysis it is observed that rather than male child preference, the highest proportion of women reported 'No gender preference' for children. It is revealed in the multivariate analysis that women's age, women's education, wealth status, media exposure, family type, working status, number of living children, sex composition of living children and show highly significant relationship with the boy preference relative to no gender preference. However, wealth status, work status, sex composition of living children and the province of Khyber Pakhtunkhwa appeared to be significant in predicting women's preference for girl child. The study concludes that women from poor wealth status, less educated, having no media exposure and not currently working are more likely to prefer boys relative to no preference. It is evident from the results that girl preference being inversely related with almost all the indicators, is less likely to prevail among the Pakistani women. Results indicate that it is important to focus on awareness programs and campaigns about the importance and value attached to the girl child, who is an equally important member of the society.

1. INTRODUCTION

Gender preference is the choice of having children of one or the other sex i.e. a son or a daughter. In the studies related to population and fertility, the parent's gender preference is seen to be one of the basic reasons behind the uncontrolled fertility growth (Metri et al. 2011). The gender preference for children in the developing countries is seen to be either son preference or preference of an equal number of both sons and daughters in an ideal family (Saeed 2012).

The trend of male child preference cannot be stigmatized with only developed or developing societies. *"As a society develops, son preference, where it is prevalent, should ordinarily diminish and girls should be treated increasingly with more equality with their male counterparts. However, with the pervasiveness of son preference in present times, it is obvious that modernization does not necessarily neutralize gender preference"* (Nnadi 2013 p.139).

However, the practice of son preference is seen to be more prevalent in the societies where there are distinct values of patriarchal system e.g. India (Reeve et al.2010; Metri et al. 2011; Oomman and Ganatra 2002). Moreover, some of these societies may reveal lesser extent of son preference in their customs and due to very mild prevalence the cases may not be noticeable (Nnadi 2013).

People when inquired about the gender preference for their children reported disproportionate gender demands i.e. 'more boys than girls' or 'only boys' (Hank and Kohler 2000; Nayab 1998). In addition, the gender composition of living children is observed to influence parent's gender demands for their future children (Jacobsen et al. 1999; Hank and Kohler 2000). Similarly, in a study it was concluded that pregnant women, who had more sons than daughters or no daughter, were seen to report their pregnancies as unwanted, as compared to those who had more daughters than sons or no surviving son (Hussain et al. 2000).

The purpose of this study is to create a need to focus on the behavior and perception of people about the shortcomings of bearing a girl child in the society. However, this study quantifies the level of gender-preference for children among the women and the factors that have impact on it. Findings of the study will also help to create policies to aware and educate people about the importance and value of females and to eliminate gender discrimination even before girl's birth.

1.1 Global Context

According to Ushie et al. (2013), in Nigeria a study found that women preferred to have a son than to have a daughter with a proportion of eight to one respectively. The quest for a male off- spring is so strong that even the health outcomes and risk factors behind are not taken in concern by the family members (Milazzo 2014).

In the context of developed nations, the evidences for son preference were seen to be reduced in past few decades (Chung 2007). However, people from Sweden and Finland were seen to prefer having at least one child of each sex (Anderson et al. 2006). A study by Chung (2007) concluded that in Korea reduction in son preference merely took place due to the change in normative patterns of the society, rather than the socio-economic advancements.

Besides this change, son preference in developed countries (e.g. Canada) is reflected by some drastic consequences. For women who knew the sex of their child in advance, mothers who had girls were less likely to be married than those who had boys. Similarly, parents of girls were more likely to be separated than parents of boys (Dahl and Moretti 2008).

When studied globally, the male gender preference does not always remain benign. Rather it heralds aggravated gender inequality and discrimination in many developing societies (Milazzo 2014; Bhalotra and Cochrane 2010). The practice of strong son preference initiates some social and demographic imbalance in basic proportions that are hard to control even by the government (Cecilia Lai-wan et al. 2006; UNFPA 2012).

The Sustainable Development Goals[1](2015) also emphasized the issues of gender equality and women empowerment to reduce discrimination against girls and to improve sexual and reproductive health. Similarly, UNFPA has recently tried to connect agencies like WHO , UNICEF, OHCHR and UN Women to actively address the issue of child gender preference (UNFPA 2012).

1.2   Regional Context

In regional context, countries of South and East Asia are popular for male child preference due to society's deep rooted patriarchal norms (Filmer et al. 2008). Evidences from Bangladesh, India, Nepal and Pakistan revealed similar patterns of son preference and its impact on disregarding attitude towards females (Jayaraman et al. 2009). Researches in Asia found that couples having first born girl or more than one girl are more likely to have another child as compared to those having first born boys (Westley and Choe 2007; Jayaraman et al. 2009; Hatlebakk 2016; Arnold 1997). Furthermore in a study in China, the interval between pregnancies is found to be shorter when the previous child is the girl (Graham et al. 1998). A Chinese saying quoted by Westley and Choe (2007) reveals the extent of boy preference:

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[1]   SDG is the latest agenda proposed by United Nations consisting a list of 16 goals to be achieved including(Goal 3.7); Ensure Sexual and Reproductive Health and (Goals 5 to 5.6); Achieve Gender equality and eliminate discrimination against girls at all levels; Transforming our world: the 2030 Agenda for Sustainable Development 2015.

"The birth of a boy is welcomed with shouts of joy and firecrackers, but when a girl is born, the neighbors say nothing" (p.2)

On the other hand, women in Nepal are considered more capable than ever before but the social, cultural and family impositions on bearing a male child is always reported among women. Despite the declining fertility in general, women are still expected to have more sons and behind every birth there is an intense demand. In the context of Nepal, a woman either tends to cope up with the trend of lower fertility or tries to increase her value by giving birth to a male child (Brunson 2010; Hatlebakk 2016).

Pakistan being a third world country is still far to achieve the global standards of equal rights for women and gender equality. Illiteracy, residence, family type, sex of living children and age differences between mates were observed to be directly related to son preference in Pakistan (Saeed 2012). Moreover, this son preference tends to affect the fertility behavior of the society resulting in a high fertility rate (Sathar et al. 2015). A study in Karachi focused on another aspect of gender preference where women were intended to abort their female fetus due to societal pressure and fear of family's ill behavior on bearing a female child (Sathar et al. 2015).

Almost all the studies in Pakistan concluded the association between number and sex of living children and son preference. Women having only boys or more boys than girls wanted no more children as compared to those having only girls or more girls than boys in a family (NIPS and Macro International 2008; Nayab 1998). Furthermore, it is observed that media access is one of the basic sources of information for gender equality and promotes unbiased fertility behavior (Metri et al. 2011). Awareness regarding the importance of female in the society is seen to be 54 percent through Television, 36 percent through peer group/friends followed by radio (16 percent) and print media (14 percent) (Kansal et al. 2010).

2.   OBJECTIVES

1.   To quantify the gender specific fertility preference for children among women.
2.   To analyze the socio-economic and demographic factors associated with gender specific fertility preference among women.
3.   To identify the role of media, if any in determining the gender-preference of child among women.

3.   DATA SOURCE

The study has used secondary data from the 2012-2013 Pakistan Demographic and Health Survey (PDHS). PDHS is a nationally representative survey conducted by the National Institute of Population Studies, Pakistan (NIPS) in collaboration with ICF international and USAID. PDHS uses several questionnaires to collect data such as the household questionnaire, the woman questionnaire, man questionnaire and community questionnaire. The main objective of the survey is to provide up to date demographic and health information including fertility preference. This study has used data from the woman questionnaire.

3.1   Methodology

Data analysis of this study is carried out on the weighted sample. Women who have no child are not included in the analysis. Frequency distributions and percentages are used to describe the characteristics of the target population. Cross tabulations with chi square test is carried out to show the association between independent and dependent variables. Logistic Multinomial Regression is applied to test the net impact of the socio-economic and demographic factors that influence the gender-specific fertility preference. The Logistic Multinomial regression is mathematically denoted as:

$$1n\frac{p}{1-p} = \alpha + \ddagger f_i X_i + u_i$$

3.2   Dependent and Independent Variables

The dependent variable in this study is the 'Gender-specific Fertility Preference' which is asked to the women in the woman questionnaire i.e. "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?". After getting the ideal number of children, specific sex preference was figured out from the question, "How many of these would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?". By getting the numeric values for ideal sons, daughters or either, six dummy variables are constructed as: 'only boys', 'more boys than girls', 'same boys and girls', 'only girls', 'more girls than boys' and 'either'. These variables are further merged and squeezed into three variables as 'boy preference' by combining 'only boys' and 'more boys than girls', 'girl preference' by combining 'only girls' and 'more girls than boys', and the third variable is 'no preference' made by combining 'same boys and girls' and 'either'. Hence, three categories of the dependent variable (gender preference) are made as: 'boy preference', 'girl preference'

and 'no preference'. As the reference category taken for dependent variable in Multinomial Logistic Regression should be the one most occurring (Hoffman 2004), 'No preference' is taken as the reference category and its code is customized while giving the value.
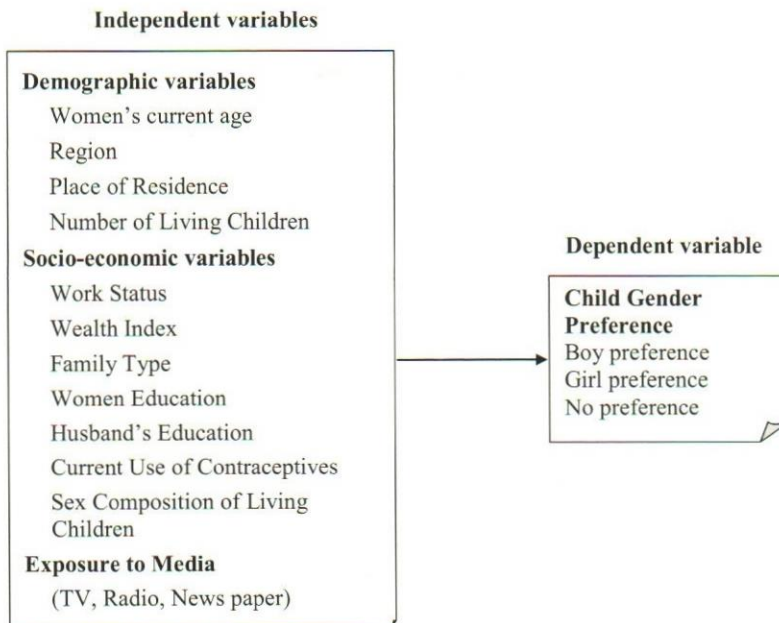
The Independent variables in the analysis contained 'Women's current age' which is taken as a continuous variable, 'Women's education level', 'Husband's education level', 'Women's work status', 'Place of residence', 'Region of living', 'Family type', 'Number of living children', 'Wealth index', 'Current use of contraceptives' and 'Sex-composition of living children' which is computed by summing up the total number of sons at home and elsewhere as well as total number of daughters at home and elsewhere. In addition, an independent variable of exposure to media was computed by combining the frequencies of listening radio, watching television and reading newspaper. A dichotomous variable is constructed for 'Media exposure' in which access to at least any one of the Media is considered 'Yes' and exposure to none of the media is considered as 'No' exposure of media.

3.3   Limitations

The limitations for this study are that some cultural aspects like family's demand for a male child especially demand of in-laws which may have a great impact, is not available in the questionnaire. However, being a cross-sectional data, the conjectured causal relationship is influenced. The societal affect such as 'changes in attitude after girl child bearing' was not available in the questionnaire, thus the macro level effects of some factor could not be observed more clearly.

3.4   Analytical Framework

The Analytical Framework below indicates the variables taken in analysis.

Independent variables

Demographic variables
   Women's current age
   Region
   Place of Residence
   Number of Living Children
Socio-economic variables
   Work Status
   Wealth Index
   Family Type
   Women Education
   Husband's Education
   Current Use of Contraceptives
   Sex Composition of Living Children
Exposure to Media
   (TV, Radio, News paper)

Dependent variable

Child Gender Preference
Boy preference
Girl preference
No preference

4.   RESULTS

This study shows a considerable difference in the level of child gender preference. Table 1 indicates women's gender preference for children by their demographic and socio-economic background predictors. All variables are found statistically significant at some level in the chi-square test. The result reveals that large proportion of women (61 percent) has no preference for specific gender, followed by boy preference (36 percent) and girl preference (2 percent). Findings of this study are similar with the findings of Filmer et al. (2008) regarding gender preference.

Table 1: Percent distribution of gender-preference for children by demographic and socio-economic characteristics of women

		Percentage Distribution of Preference of child by sex				Number	Chi-Square
		Boy Preference	Girl Preference	No Preference	Total		
Age of Women	15-24	32.9	1.7	65.5	100	1442	0.000
	25-34	35.0	2.4	62.5	100	4123	
	35 & above	38.1	2.5	59.3	100	4886	
Education of women	No education	41.4	2.0	56.6	100	5913	0.000
	Primary	32.4	2.5	65.2	100	1425	
	Secondary	28.6	2.8	68.6	100	1816	
	Higher	27.1	3.6	69.3	100	1297	
Education of husband	No education	41.0	1.7	57.3	100	3298	0.000
	Primary	36.7	2.6	60.7	100	1373	
	Secondary	34.0	2.7	63.3	100	3285	
	Higher	32.4	2.7	65.0	100	2474	
	Don't know	28.6	4.8	66.7	100	21	
Region	Punjab	29.6	3.2	67.2	100	2899	0.000
	Sindh	30.8	2.7	66.5	100	2345	
	Khyber Pakhtunkhwa	41.5	1.3	57.2	100	1984	
	Balochistan	39.4	1.9	58.6	100	1443	
	Gilgit Baltistan	59.1	1.1	39.8	100	1003	
	Islamabad (ICT)	27.8	3.5	68.7	100	777	
Place of residence	Urban	33.4	3.0	63.6	100	4950	0.000
	Rural	38.7	1.8	59.5	100	5501	
Number of Living Children	1 to 3 Children	33.5	2.3	64.3	100	5262	0.000
	4 to 6 Children	37.1	2.8	60.1	100	3921	
	7 or more Children	44.5	1.7	53.9	100	1268	
Sex composition of living children	Only Boys	44.2	0.6	55.2	100	1779	0.000
	Both Boys and Girls	36.5	2.2	61.3	100	7268	
	Only Girls	24.3	5.5	70.2	100	1404	
Family Type	Nuclear	34.6	2.5	62.9	100	4956	0.005
	Joint	37.6	2.3	60.1	100	5495	
Current working status	No	37.1	2.2	60.8	100	8304	
	Yes	32.7	3.2	64.0	100	2147	0.000
Wealth Index	Poor	43.9	1.2	54.8	100	3948	0.000
	Middle	35.5	2.9	61.6	100	1980	
	Rich	29.7	3.2	67.1	100	4523	
Current Use of Contraceptives	Not Using	37.3	2.4	60.3	100	6286	0.011
	Using	34.5	2.4	63.2	100	4165	
Exposure to media	No	45.0	1.4	53.6	100	2863	0.000
	Yes	32.8	2.8	64.4	100	7588	
Total		36.2	2.4	61.4	100	10451	

**The Chi-square value is significant at the .05 level

4.1 Current Age of the Women

Age is considered an important factor in the context of fertility preferences all over the world. However, weak relationship is observed when only sex-specific fertility preference is taken into account. The percentage distribution shows that the highest percent i.e. (59 to 66) of women among all age groups has no gender preference. No preference is seen the highest (66 percent) in the youngest age group, followed by age group 25-34 (62 percent) and 35 and above (59 percent) respectively. Boy preference and girl preference is seen the highest (38 percent and 3 percent respectively) in age group 35 and above. The chi-square test shows a highly significant association between gender preference and age groups.

4.2 Region

The highest proportion of women who have 'boy preference' is 59 percent in Gilgit Baltistan, followed by 42 percent in KPK, 39 percent in Baluchistan, 31 percent in Sindh, 30 percent in Punjab and 28 percent in Islamabad. However, 'no preference' is the highest among women in Islamabad (69 percent), followed by Punjab (67 percent), Sindh (66 percent), Balochistan (59 percent), KPK (57 percent) and Gilgit Baltistan (40 percent).

4.3 Family Type

'Boy preference' is found higher among women of joint family (38 percent) as compared to nuclear family (35 percent). On the other hand, 'no preference' is more among women of nuclear family (63 percent) as compared to Joint (60 percent).

4.4 Place of Residence

It is found that boy preference exists more in rural areas (39 percent) as compared to urban areas (33 percent). However, negligible differences are observed in the girl preference among women living in urban and rural areas. Moreover, the highest percentage of women has no preference in urban areas (64 percent) as compared to women in rural areas (59 percent). Similarly, place of residence has also found to be significant with gender preference in the study by Saeed (2012).

4.5 Women's Educational Level

Result shows that women with no education have more boy preference (41 percent) as compared to those women with primary education (32 percent), followed by secondary education (29 percent) and higher education (27 percent). Contrary to this, girl preference is

found two times more among highly educated women (4 percent) as compared to those with no education (2 percent).

4.6 Husband's Education Level

Women of uneducated husband have highest boy preference (41 percent) as compared to the women of primary educated husbands (37 percent), followed by women of secondary educated husbands (34 percent) and those women with husbands having higher education (32 percent). Moreover, 'no preference' is found higher (65 percent) in women of educated husbands, followed by secondary educated husbands (63 percent), primary educated husbands (61 percent) and not educated husbands (57 percent). In contrary, evidences from the study by Dur-e-Nayab (1998) and Mahmood (1992) shows an insignificant relation between both husband education and gender preference.

4.7 Working Status

Table 1 shows that currently working women have less preference for boys (33 percent) as compared to women not working (37 percent). However, girl preference is found slightly higher among working women (3 percent) as compared to not working women (1 percent).

4.8 Current Use of Contraceptives

Result reveals that boy preference is less among women currently using contraceptives (34 percent) as compared to those not using contraceptives (37 percent). Furthermore, no preference is found less in women not using contraceptives (60 percent) as compared to those women using contraceptives (63 percent). The result of chi-square test is found statistically significant at 0.05 level. This result also supported the observations concluded by Jayaraman, et al (2009).

4.9 Wealth Index

It is observed that boy preference (44 percent) is highest among poor as compared to women belong to middle wealth status (36 percent), followed by women of high economic status (30 percent). However, no preference is the highest among women from rich class (67 percent) and lowest in poor economic class (55 percent). An opposite result was concluded by Filmer et al (2008), where higher son preference was seen in better wealth status in South Asia.

4.10 Number of Living Children

According to the results, women having 7 or more children have the highest boy preference (45 percent) and the lowest girl preference (2 percent). However, women with 1 to 3 children have the lowest boy preference and the highest no preference (64 percent).

4.11 Sex Composition of Living Children

Table 1 shows that highest boy preference is found among women having only boys (44 percent) as compared to women having both boys and girls (37 percent) and those having only girls (24 percent). On the other hand, highest no preference is found among women who have only girls (70 percent) as compared to women who have boys and girls (61 percent) and also those who have only boys (55 percent). Moreover, the association between sex of living children and gender preference is also found significant in the study done in Karachi, by Hussain et al (2000).

4.12 Media Exposure

The results indicate that women with no media exposure have higher boy preference (45 percent) as compared to those women with media exposure (33 percent). However, preference for girl is found more among women with media exposure (3 percent) as compared to those women with no media exposure (1 percent). Similarly, no preference is also higher among women having media exposure (64 percent) as compared to women having no media exposure (54 percent).

5. MULTIVARIATE ANALYSIS RESULTS

Multi-nominal regression analysis is carried out to determine the net effect of the demographic and socio-economic variables for women's gender preference for their children.

In the first model the key variables such as woman's education, Wealth Status and exposure to media are included (Table 2). The second model contains some additional demographic and socio-economic characteristics of respondents (Table 3). These variables are used as control variables to give a clear explanation of every other variable on women's gender preference independently.

Table 2: Model 1: Logistic regression coefficient and odd ratios for predictor variables in determining child gender preference among women.

Predictor Variable	Equation 1 Boy Preference Relative to No Preference		Equation 2 Girl Preference Relative to No Preference	
	Coefficients	Odd Ratios	Coefficients	Odd Ratios
Constant	-.963		-2.933	
Woman's Education				
Higher (R)				
Secondary	.025	1.026	-.207	.813
Primary	.128*	1.137	-.206	.814
No education	.352***	1.422	-.038	.963
Wealth Index				
Rich (R)				
Middle	.105*	1.111	-.000	1.000
Poor	.308***	1.360	-.718***	.488
Media Exposure				
Yes (R)				
No	.223***	1.250	-.204	.815

R=Reference category   ****Significant at p<0.01 level, **=p<0.05 level, *=p<0.1 level*

Table 3: Model 2: Logistic regression coefficient and odd ratios for predictor variables after controlling for demographic and socio-economic variables in determining child gender preference among women.

Predictor Variable	Equation 1 Boy Preference Relative to No Preference		Equation 2 Girl Preference Relative to No Preference	
	Coefficients	Odd Ratios	Coefficients	Odd Ratios
Constant	-1.607		-2.080	
Women's Education				
Higher (R)				
Secondary	.052	1.053	-.201	.818
Primary	.205**	1.228	-.226	.798
No education	.402***	1.494	-.083	.920
Wealth Index				
Rich (R)				
Middle	.017	1.018	.066	1.068
Poor	.209***	1.233	-.668***	.513
Exposure to media				
Yes (R)				
No	.159***	1.173	-.119	.888
Women's current Age	.009***	1.009	.606	1.005

	Equation 1 Boy Preference Relative to No Preference		Equation 2 Girl Preference Relative to No Preference	
Region				
Islamabad (ICT) (R)				
Gilgit Baltistan	.953***	2.593	-.263	.768
Balochistan	.112	1.119	-.220	.803
Khyber Pakhtunkhwa	.263***	1.301	-.574**	.564
Sindh	-.095	.910	-.130	.878
Punjab	-.097	.908	.069	1.071
Type of place of residence				
Rural (R)				
Urban	.040	1.041	.219	1.245
Number of Living Children				
7 or more (R)				
4 to 6	-.147**	.863	.289	1.334
1 to 3	-.234***	.792	-.249	.779
Sex composition of living children				
Only Girls (R)	.332***	2.329	-1.007***	.365
Both boys and girls	.845***	1.393	-2.047***	.129
Only Boys				
Family type				
Joint Family (R)				
Nuclear Family	-.142***	.867	-.036	.964
Currently working				
Yes (R)				
No	.096*	1.101	-.372***	.689
Current Use of Contraceptives				
Using Contraceptives (R)				
Not Using Contraceptives	-.011	.989	.223	1.250

R=Reference category   *** Significant at p<0.01 level, **=p<0.05 level, *=p<0.1 level*

5.1   Women Education Level

Husband's education being correlated with women's education with the value of 0.540 as envisaged in the correlation matrix, is dropped in the analysis. In Model 1 (Table 2) it can be seen that women with 'no education' are more likely to prefer boy child with the highest odd ratio of 1.422, while women with primary education are 1.137 times more likely to prefer boys as compared to highly educated women. Moreover, secondary education level is not significant in both models. However, no education is highly significant in case of 'boy preference' and primary education is found significant at level p<0.1. It is evident from the figures that as education level increases, 'boy preference' decreases. Similar relation is supported by Pande et al. (2006) in his study. On the other hand, an inverse and not

significant relation is seen between all the educational levels of women with girl child preference which means that there is no such effect of women's education on girl preference (Table 2). Similar results are observed when other predicting variables are added in model 2.

5.2 Wealth Index

In model 1, poor wealth status is highly significant in case of both 'boy preference' and 'girl preference'. Moreover, middle wealth status is only significant in case of boy preference at $p<0.1$ level. It means that the chance of 'boy preference' relative to 'no preference' is more prevalent in women of poor wealth status with the odd ratio 1.360. On the other hand, 'girl preference' relative to 'no preference' is almost three times less likely to exist in poor status compared to women living in rich households. When other socio-economic variables are added, only poor wealth status remains significant in both equations and has an inverse relation with 'girl preference'. The decreasing odd ratio for increasing wealth status shows that 'boy preference' decreases as wealth status increases.

5.3 Media Exposure

No media exposure has shown significant association with 'boy preference' whereas no significant association with 'girl preference'. Table 2 shows that 'boy preference' relative to 'no preference' is 1.250 times more likely to exist among women with no media exposure. In model 2 (Table 3), the effect of no media exposure on 'boy preference' decreased from 1.250 to 1.173 when additional variables are controlled.

5.4 Women's Current Age

In model 2, current age of women is highly significant in case of 'boy preference' and not significant with 'girl preference'. It means that current age has an effect on women who prefer son but do not have any influence on girl preference.

5.5 Region

The indicator of region shows a very distinct result (Model 2). Kyhber pakhtunkhwa and Gilgit Baltistan are statistically significant with 'boy preference' whereas the other regions are not statistically significant (Table 3). With the highest odds of 2.593 (Model 2), 'boy preference' prevails more in Gilgit Baltistan as compared to other regions. Furthermore, 'boy preference' among women in KPK is 1.301 times more likely than women in Islamabad. However, 'girl preference' with an inverse relationship is significant only in KPK. This

shows that women in KPK are less likely (odds=0.564) to prefer girls than in Islamabad. Gender preference is not statistically significant in other regions.

5.6 Place of Residence

The place of residence is included in Model 2 to control the impact of the differences in urban and rural areas. The results show that the relationship between place of residence and gender preference is statistically not significant.

5.7 Number of Living Children

With reference to number of living children, a significant and inverse relationship is seen in case of boy preference for both parity levels (Table 3). Women with 1 to 3 children (odds=0.792) and women with 4 to 6 children are also less likely (odds=0.863) to prefer boys as compared to those having 7 or more children. On the other hand, number of children has no affect on 'girl preference' as this relationship is statistically not significant (Table 3).

5.8 Sex Composition of Living Children

Sex composition of living children in case of 'boy preference' relative to no preference is highly significant and gives some unpredicted results. With the highest odd ratios 2.329 (Model 2, Table 3) women who have children of both sexes are more likely to prefer male child as compared to women with only girls. However, women with only boys are 1.393 times more likely to prefer boys as compared to women with only girls. Similarly, in a study, Dur e Nayab (1998) found that women who already had boy child were more likely to prefer another son. In model 2, 'girl Preference' is found significant and inverse relationship with sex composition of living children (Table 3). It seems that women having only male child are somehow less likely to prefer boys when compared with women having children of both sexes. Some opposite results are given by Chaudhuri (2012) and Mansour (2015) that women with no or less number of male children are more likely to prefer another child specifically boy.

5.9 Family Type

In model 2, where family type is taken in the analysis, women from nuclear family are significant at p<0.01 level with the boy preference. An inverse relationship is found between nuclear family and 'boy preference', which shows that women from nuclear families are less likely to prefer male child (odds=0.867) compared to women from joint families. However, family type is not significant in case of 'Girl preference'.

5.10 Women's Working Status

Current work status in both equations (model-2) is statistically significant (at level $p<0.1$ with 'boy preference' and level $p<0.05$ with 'girl preference'). In Table 3 where boy preference is positively related to women's current working status, 'Girl preference' is found inversely related. Women not currently working are 1.101 times more likely to prefer boys as compared to working women. Similarly, not working women are less likely (odds=0.689) to prefer girl child. These results also confirm the findings concluded by Reeve et al. (2010). The women with no jobs seem to prefer boys, may be to strengthen her economic status and compensate her value in family.

5.11 Current Use of Contraceptives

There is no significant association between current use of contraceptives and gender preference when analyzed in both bivariate and multivariate analysis. This result could be the outcome of a peculiar situation in which current use of contraceptives may not have any kind of connection with the preferences asked in a hypothetical situation taken back the respondent to the time she did not have children.

6. DISCUSSION AND CONCLUSION

This paper examines the effects of demographic and socio-economic factors on child gender preference among women. Some indicators of region, family type, current age, wealth status, women education, working status, number of living children and sex composition of living children prove to be important in predicting boy preference among Pakistani women. However, a transition in women's preference for their child's gender seems to prevail across the country as more women are indicating no gender preference for children. Place of residence and current use of contraception were not found as important indicators. However, KP province, not working status, sex of living children and poor wealth status in case of girl preference relative to no gender preference show an inverse relationship.

In bivariate analysis the results reveal that majority of women in Pakistan have no sex preferences for children. This can be due to the reason that new trend of gender equality is emerging. In the process of development, woman is seen to play a very vital role in Pakistan. Girl child bearing and equal socialization for both genders is an element of human rights protection, as is adopted by the western society. Another perspective explains that the complacent attitude of women for child gender can be due to the religious impact, as in Islam equality between male and female is taught especially in rearing both with the same level.

Similarly, in a study using data of PDHS 1990-1991, Ali (2000) observed no significant difference in the utilization of health care services for male and female children in case of their illness. The concept of gender preference has also been dwindled because the socio-economic worth of women has been increasing in Pakistani society as well as around the world.

Nevertheless, in view of son preference envisaged among Pakistani women, there is a need to aware them about the importance of female child in the society. Awareness about the importance of female members should be spread at institutional level for a better social status of females in the society. In view of technological advancement, sex of the fetuses can be ascertained and the deep rooted cultural preference for male child can result in a higher ratio of male births than females in the society creating an imbalance. Hence, programs for gender equality and progressive role of women can be developed that may broaden the minds of people, which will help to create equal acceptability for daughters.

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Table 4: Correlation

	Preference of child by sex	Respondent's current age	Region	Type of place of residence	Highest educational level	Husband's Education	Wealth Index	Family type	Currently working	No of Living Children	sex composition	Current Use of Contraceptives	Media Exposure
Preference of child by sex	1												
Current age	-.027	1											
Region	-.103	.000	1										
Type of place of residence	-.063	-.071	-.089	1									
Women education	.125	-.103	.041	-.370	1								
Husband's education	.075	-.048	.098	-.278	.540	1							
Wealth index	.139	.079	-.070	-.537	.537	.478	1						
Family type	-.031	-.242	.054	.029	.041	.077	.037	1					
Currently working	.042	.076	-.156	.082	-.056	-.137	-.138	-.085	1				
Number of living children	-.066	.522	.030	.064	-.300	-.184	-.145	-.179	.049	1			
Sex of living children	.129	.006	-.006	-.017	-.007	-.006	-.006	-.021	.012	.036	1		
Current use of contraceptives	.026	.050	.014	-.144	.203	.161	.222	-.059	-.004	.071	-.032	1	
Exposure to media	.116	-.015	-.077	-.316	.389	.315	.464	.022	-.012	-.132	-.003	.192	1

6

WOMEN'S MINDSET AGAINST SPOUSAL VIOLENCE WITH REFERENCE TO THEIR SOCIO-ECONOMIC, DEMOGRAPHIC AND EMPOWERMENT ATTRIBUTES

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WOMEN'S MINDSET AGAINST SPOUSAL VIOLENCE WITH REFERENCE TO THE SOCIO-ECONOMIC, DEMOGRAPHIC AND EMPOWERMENT ATTRIBUTES

ABSTRACT

Spousal violence (SV) against women is a complicated issue having different rationalization for different people to comprehend it. This practice has deep rooted causes as women were considered the property of men since ancient time. Surprisingly, not only the men but women themselves consider spousal violence to be an integral part of male supremacy and customary part of the marriage experience. This study aims at determining the factors affecting the women's attitude towards SV using the data from Pakistan Demographic and Health Survey (PDHS) 2012-2013. The Multinomial Logistic technique is applied to examine the net effect of various predictors. The results of the study show that women's past experience of SV, their decision making autonomy, access to media, wealth status, education level and type of residence are the major factors influencing the women's attitude towards SV. However, working status is not found significant in explaining women's mindset towards SV. Hence, in order to eradicate this non-humanitarian practice of spousal violence, education can play an important role so that women themselves become aware of their legal and religious rights. Furthermore, government, policy makers and human rights organization should take actions and laws should be enforced in order to make women secure, mentally satisfied and empowered in the society.

1. INTRODUCTION

Violence against women is a global issue that kills, tortures or disable women physically, psychologically, sexually and economically. It is one of the most pervading human right violations that deny their dignity, equality, security, self respect and their right to enjoy fundamental freedom (UNICEF 2000, p. 3). The perpetrators of such violence may include the state and its agents, family members including husbands, friends, intimate partners or other familiar individuals and strangers. However, the women are directly exposed to and easily become victims of intimate partner violence or spousal abuse in almost every culture and region across the globe (WHO 2012). According to the definition of World Health Organization (WHO)intimate partner violence is *"the range of sexually, psychologically and physically coercive acts used against adults and adolescent women by current or former partners"* (WHO 2002, p. 5).

In traditional societies like Pakistan, the term of spousal violence (SV) is more prevalent as compared to intimate partner violence (IPV), since the perpetrator is mostly women's own husband. Spousal violence (SV) against women is a complicated issue having different rationalization for different individuals. This practice has deep rooted causes as women were considered the property of men since ancient time (Pakeeza 2015). The authority of men over women allowed them to use violence and with time this custom achieved the status of social acceptance in patriarchal societies. In such societies, violence is considered as an acceptable way to exercise control by men and settle disputes within the marriage.

Women's tolerant response to such abuse reflects their limited available options as either to accept the men's authoritative attitude or leave the relationship. But unfortunately, the adverse consequences in the form of divorce and the fear of further humiliation in the society make them to accept this attitude and bind them as regular victims of violence. Some women even consider spousal violence acts as an expression of love and interest of their husbands. It is widely believed that a man forgets the mistake and pardons his wife after beating her. Moreover, the acceptance and tolerance of women in such situation is believed as an assurance for the long term sustainability of the relationship.As a consequence, the social norms and women themselves start believing SV as the normal part of marriage and with this submissive attitude, the incidence of spousal violence rises (Uthman et al. 2011). Therefore, there exists a need to investigate the factors determining the attitude of women towards SV

2.   LITERATURE REVIEW

Violence is the consequence of the composite interplay of the individual, relationship, social, cultural and environmental factors (WHO 2012). When societal attitude leads to the acceptance and justification of the spousal violence, it makes women more vulnerable to the incidence of spousal violence (UNICEF 2000). The following section provides the literature on the attitude towards SV in global and regional context and highlights the factors influencing such attitudes.

2.1.   Global Context

Despite serious efforts devoted by the human right organizations in domestic and particularly IPV/SPV, there exists a limited literature on understanding the attitude of women towards SV. However, the majority of the existing studies depict a clear difference between the perception among the people in the developed and developing countries. For instance, in US, young males are found more likely to justify this act as compared to the young girls (Simon

et al. 2001). In contrast to that, studies in developing countries reveal that women have more supportive attitude towards the spousal violence as compared to the men. (Rani et al. 2005 ; Ilika 2005 ; Khawaja et al. 2007; Sheraz 2015). Suppression of the women, infliction of violence by male partner and acceptance by the female partner are the interplay of traditions and patriarchal beliefs (Mandan 2013).

The existing literature suggests a variation in the rates of acceptance of SV among women across the countries. For instant, the rate of acceptance of SV among women is 90% in rural Uganda (Koeing et al. 2003), 69% in Jordan (khawaja 2004), 53% in Zimbabwe(Hindin 2003), 50% in Egypt (Yount et al. 2014), 42% in rural Nigeria (Antai and Antai 2008), 29% in Nepal and 57% in India (Rani and Banu 2009).

Besides culture, ethnic and traditional factors, educational level and economic status are widely considered as the dominant factors influencing the women's attitude towards SV. Education leads to exposure and make women aware about their rights. Economic status is represented by wealth status in many studies and it is argued that people belonging to low wealth class are more mentally dissatisfied and give rise to conflicts among families. Age is also found to be an important factor in this regard. Married women with younger age are more tolerant for spousal violence in contrast to the women of old age. (Hindin 2003, Rani et al. 2004, Antai and Antai 2008)

Studies reveal that women's own experience of being a victim of violence has a direct association with the women's views in this regard. Women that have been victims are more likely to justify the spousal violence as compared to the other women (Khwaja et al. 2007). Women autonomy with some decisional power and high occupational status make women more reluctant to accept any act of violence (Hindin 2003; Antai and Antai 2008). Furthermore, women having exposure and media access are less likely to justify spousal violence as compared to the others. (Bhattacharya 2015; Antai and Antai 2008).

Previous literature reveals that such spousal violence increase when social norms and attitudes are supportive for the perpetrators (khawaja et al. 2007). Furthermore, Hansenetal (1997) and Uthman et al. (2011) found that there exists a positive association between positive attitude towards violence and the actual occurrence of violence against women.

2.2. Regional Context

Previous sub-section highlights various factors determining the attitude toward spousal violence such as, cultural, socio-economic and gender-based dynamics in the global context. However, the studies examining the attitude of women towards SV and the strategies to cope with the SV acts are limited in case of Pakistan.

Pakistan being a part of Indo-Pak subcontinent in the history remained influenced by other religions and cultures and does not truly practice Islamic values. In this region, the customs and traditions are mostly given preference and many wrong beliefs have become a part of their inseparable tradition. Women are mostly considered as the slaves of men and they are expected to obey their men in all terms (Pakeeza 2015).

Spousal Violence is mostly considered as a personal affair that does not need to be intervened in any way and women easily become victims of such spousal abuse. Surprisingly, women themselves consider spousal violence as an essential part of male supremacy and customary part of the marriage experience. Mostly women do not stand against this tradition in order to sustain their marriages. A combination of socio-economic factors makes them to think so and they do not stand for their rights. Most of the women do not report the incidence of such SV due to the fear of further humiliation and outcomes of separation or divorce (Andersson 2010). Furthermore, according to a case study conducted by Social Policy and Development Centre (SPDC), only 59 percent of the women in Pakistan are found to retaliate and protect themselves in case of such violence (Ghuas et al.2012).

3. OBJECTIVE OF THE STUDY

The objectives of the present study are as follows:

- To investigate the factors influencing the attitude of women towards spousal violence in Pakistan.

- To get the insight into social environment and norms surrounding spousal violence by specifically examining the relationship of attitudes toward SV with demographic, socio-economic and empowerment variables.

- To highlight the changes that are required to be made in order to eradicate this practice.

4. DATA AND METHODOLOGY

This study used the data of 2012-2013 Pakistan Demographic and Health Survey (PDHS) for the analysis. PDHS is a national survey that provides database for a wide range of demographic and health indictors for 12,943 households. A representative sample of 13,558 ever-married women aged 15-49 was selected for the women questionnaire, out of which 12,937 were currently married. However, the domestic violence module was implemented only on the sub-sample of one third of ever-married women (3,687). The analysis of this study is using the data on currently married women selected for the domestic violence module and they are 3,641 in number. Bi-variarte analysis is performed in order to assess the association between attitudes of women towards spousal violence and their socio-economic, demographic and empowerment attributes. Furthermore, multinomial logistic regression is employed in order to attain the net impact of various predicators which may influence the three categories of women's attitude towards spousal violence (SV). The logistic multinomial regression is mathematically denoted as follows.

$$\ln \frac{p}{1-p} = \alpha + \sum \beta_i X_i + u_i$$

Where;

p = the probability of holding modern or mixed views towards SV

$1-p$ = the probability of holding traditional views towards SV.
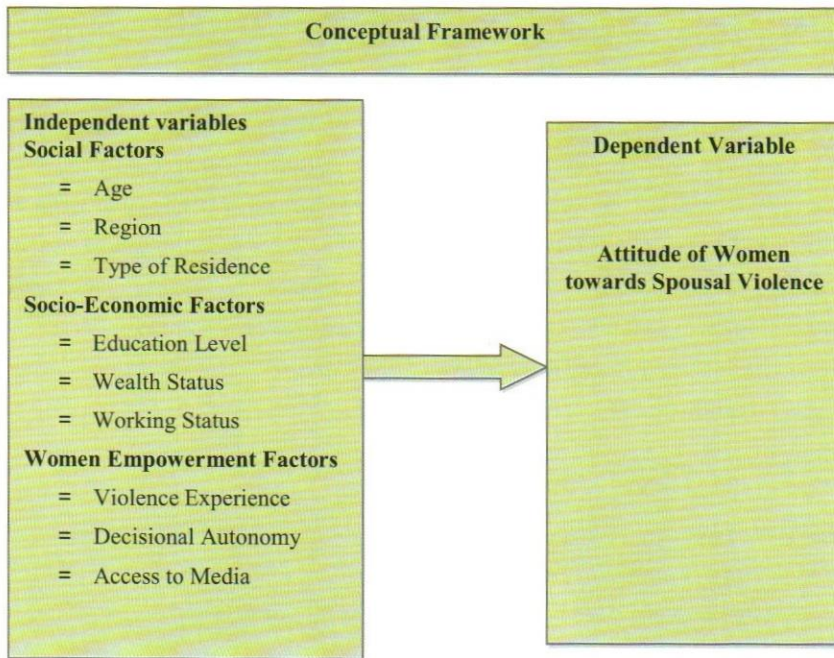
α = Intercept

β = the estimated regression coefficient

X_i = the predictors influencing women's attitude towards SV

u_i = Error Term

5. CONCEPTUAL FRAMEWORK

The relationship between dependent and the list of independent variables is shown in the conceptual framework given below.

Conceptual Framework

Independent variables
Social Factors
- = Age
- = Region
- = Type of Residence

Socio-Economic Factors
- = Education Level
- = Wealth Status
- = Working Status

Women Empowerment Factors
- = Violence Experience
- = Decisional Autonomy
- = Access to Media

Dependent Variable

Attitude of Women towards Spousal Violence

5.1. Dependent Variable

The attitude of women towards the spousal violence is assessed in PDHS (2012-2013) by asking them "whether they think husband is justified in hitting or beating his wife in following six situations;

      i)   If she goes out without telling him.

      ii)   If she neglects the child.

      iii)   If she argues with him.

      iv)   If she burns the food.

      v)   If she neglects the in laws.

      vi)   If she refuses to have sex with him."

Each of these questions has further three response categories for the nature of women's attitude. The dependent variable of the study is computed by formulating an index and dividing the respondent in three categories of views. The respondents who have negated the justification of wife beating in all six situations are categorized as having ''modern views'', the respondents who have justified beating in three or less than three situations are termed as having ''mixed views'' and the respondents who have justified beating in more than three situations are categorized as holding '' traditional views''. These categories of views are supported by the literature as Oyedokun (2007) and Sheraz (2016) used such categories to determine the attitude of men towards spousal violence.

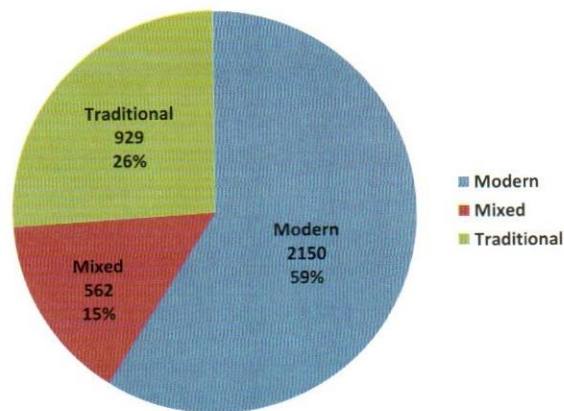**Figure 4: Frequency distribution of the nature of women's attitude towards spousal violence**

Figure 1 shows the frequency distribution of the index of women's attitude towards SV. Out of all the respondents (3164), majority of the women (59 percent) have modern views, 15 percent have mixed views and 26 percent have traditional views. Hence, the factors molding the views are important to determine in order to improve the situation further.

5.2. Independent Variables

The independent variables selected for the study are classified into three main categories; demographic characteristics, socio-economic status and women empowerment indicators.

Demographic characteristics include 'age of the respondent', taken as a categorical variable where 15-24 years is taken as young age, 25-34 as middle age and 35-49 as old age. Furthermore, 'Type of residence' constitutes urban and rural residence and 'region' includes Punjab, Sindh, KPK, Balochistan, GB and Islamabad.

Socio-Economic status of the women includes three variables. First is 'Educational level' that is classified into four categories i.e. higher, secondary, primary and no education. Secondly, economic status is assessed by 'wealth status' (forming three categories as rich, middle and poor class) and 'working status' (whether the women is working or not).

Women empowerment is further assessed by two indicators. First is domestic decisions autonomy, assessed through an index formed by asking women whether they are able to take decisions regarding 'large household purchases', 'health care matters' and 'relative visits'. Those women who can take decision alone or with their husbands are considered as having decision autonomy, otherwise not. Secondly, women empowerment is assessed through exposure to media. Women who have access to all or any one of the media mean are considered as women having access to it otherwise not.

Finally, the ' women's past experience of violence' is measured by an index of six questions, asking her whether she has even been pushed, slapped, punched with fist or hit by something harmful kicked or dragged, strangled or burnt, threatened with knife/gun or other weapon and arm twisted or hair pulled by husband. The women who have responded 'never' in all the situations are categorised as not having any experience of spousal violence. However, the women who have responded 'sometimes' or 'often' in any one or more situations are categorized as 'having experience of spousal violence'. The correlation among all independent variables is shown in Annex 1.

6.   RESULTS OF THE BI-VARIATE ANALYSIS

Table 1 shows the percent distribution of women's attitude towards spousal violence according to the demographic, socio-economic and empowerment indicators. The results illustrate that provinces of Pakistan along with their variant cultures and development factors are also influencing the women's attitude. The capital of Pakistan, Islamabad has the highest number (78 percent) of women having modern views followed by Punjab with 66 percent. On the other hand, most of the women living in Khyber Pakhtunkhwa (KPK) have traditional views (49 percent).

Table 1: Percent distribution of women's attitude towards spousal violence according to the demographic, socio-economic and empowerment indicators

Categories		Total (N)	Modern Views	Mixed Views	Traditional Views	Total Percentage	Chi-Square
			Percent	Percent	Percent		
	Total	3641	59.1	15.4	25.5		
Region	Punjab	1038	65.8	15.2	19.0	100	0.000
	Sindh	809	62.4	14.2	23.4	100	
	KPK	659	31.4	19.9	48.7	100	
	Balochistan	464	48.3	27.8	23.9	100	
	Giligit Baltistan	324	30.9	21.9	47.2	100	
	Islamabad	251	77.7	17.9	9.6	100	
Residence	Urban	1667	63.4	18.3	18.3	100	0.000
	Rural	1878	45.6	17.6	28.1	100	
Age	15-24	589	50.6	17.1	32.3	100	0.000
	25-34	2034	54.5	18.5	26.9	100	
	35-49	922	55.0	17.1	27.9	100	
WealthQuintile	Poor	1343	38.6	18.6	42.8	100	
	Middle	648	47.4	21.3	31.3	100	
	Rich	1554	70.1	16.0	14.0	100	
Educational Level	Higher	364	89	5.2	5.8	100	0.000
	Secondary	628	74.5	13.1	12.4	100	
	Primary	573	59.9	20.8	19.4	100	
	No Education	2076	48.9	16.5	34.6	100	
Ever Experienced Spousal Violence	No	2551	59.0	17.1	24.0	100	0.000
	Yes	993	41.2	20.2	38.6	100	
Working Status	No	2769	53.6	18.1	28.3	100	0.000
	Yes	776	55.4	17.4	27.1	100	
Decisional Autonomy	Others	1214	52	15.6	36.4	100	0.000
	Herself	2426	64.6	15.4	20.0	100	
Access to Media	No	1007	48.0	17.0	35.1	100	0.000
	Yes	2634	63.3	14.8	21.8		

The women's residence is also found significantly associated with the attitude of women since; the number of women holding modern views in urban areas is more as compared to women of rural areas. Sixty three percent of the women residing in urban areas have modern views and merely 18 percent have traditional views. However, the number of women holding traditional views is more in rural areas where it is 28 percent.

The results further imply that woman's views changes with the increase in age. Mature women with older age (35-49) have more modern views as compared to the women of younger age (15-24). Consequently, the number of women holding tradition views is more in the young age bracket (33 percent) as compared to the women of older age (28 percent).

Wealth status is significantly associated with the women's attitude towards spousal violence. The women belonging to economically rich background have modern views; since, 70 percent of the women belonging to the rich class have modern views and merely 14 percent have traditional views. However, the poor class constitute majority of the women having traditional views since; 43 percent of the women with poor wealth status hold traditional views.

The results of the bi-variate analysis also second the general perception that education brings exposure to the outside world and mold the attitude of the women. The results show that with the education attainment, views of women shifted from being traditional to modern; since, the number of the women having modern views increase with the increase in the level of education. Eighty nine percent of the women with higher education have modern views and merely 6 percent have traditional ones.

The result further indicates that 78 percent of the total women are non-working. Surprisingly, working status does not bring a large difference among the women's views since 54 percent of the non-working women have modern views and the number of women with such views from working class increase only by one percent.

The bi-variate analysis shows that almost 28 percent of all the women have ever experienced physical spousal violence. Moreover, the percentage of the women having modern views is high among the women who have not ever experienced S V (i.e. 59 percent) as compared to the women who have been the victim of such S V (i.e. 42 percent).

Approximately, two-third of the women possess some decisional autonomy and can take their decision themselves. The results depict that the women having decisional autonomy are more likely to hold modern views (62 percent). On the other hand, women who do not take their decisions themselves are more of the traditional views (41 percent).

The results further show that the percentage of women having access to media is quite high (72 percent) and majority of the women having access to media hold modern views (60percent). On the other hand, a large number of women without any access to media hold traditional views (43 percent).

7.   RESULTS OF THE MULTIVARIATE ANALYSIS

Multinomial logistic regression is applied to analyse the net effect of the demographic, socio-economic and women empowerment indicators on the women's attitude towards SV. Four different models are employed to get the net impact of various predictors on the dependent variable. Model-1 includes the past experience of SV only. Model-2 further adds the women empowerment indictors in order to get the net effect. Women empowerment indicators include decision making autonomy and access to media. In addition to these variables, Model-3 includes economic indicators namely wealth status, workings status and education level. Finally, in order to analyse the net effect of all the predictors, Model-4 includes demographic indicators i.e. age, region and residence.

Table 2: Model 1: Logistic regression coefficients and odd ratios for past experience of spousal violence in determining women's attitude towards SV.

| | Equation 1 | | Equation 2 | |
| | Modern Attitudes relative to Traditional Attitude | | Mixed Attitude relative to Traditional Attitude | |
Predicator Variables	Coefficient	Odd Ratios	Coefficient	Odd Ratios
Constant	.163*		-.786**	
Ever Experienced Violence				
No	.957***	2.604	.433***	1.542
Yes[b]				

[b] *Reference Category*

*** *Significance at p<0.01 level,* ** *Significance at p<0.05 level,* * *Significance at p<0.1 level*

7.1.   Past Experience of Spousal Violence

Table 2 shows the result of Model 1 aimed at analysing how women's past experience of any SV molds their attitude towards SV. The Equation 1 of Model 1 indicates that there exist a direct relationship between not having any past experience of SV and modern views. The odd ratio shows that women without any past experience of spousal violence are 2.6 times more likely to have modern views as compared to the traditional views. Same is the case for the equation 2, since women who had never been the victim of SV are 1.5 times more likely to have modern views. It is important to note that the inclusion of other variables in the next models (Model-2, Model-3 and Model-4) does not affect the significance level and odd ratios do not vary to a large difference. The results are supported by the evidence that women who experience any physical violence are more supportive towards wife beating (Khwaja et al. 2007).

Table 3: Model 2: Logistic regression coefficients and odd ratios for past experience of spousal violence and empowerment predictors in determining women's attitude towards SV.

Predicator Variables	Equation 1 Modern Attitudes relative to Traditional Attitude		Equation 2 Mixed Attitude relative to Traditional Attitude	
	Coefficient	Odd Ratios	Coefficient	Odd Ratios
Constant	-.828***		-1.306***	
Ever Experienced Violence				
No	.954***	2.596	.438***	1.237
Yes[b]				
Decision Making Autonomy				
Yes	.796***	2.374	.573***	1.425
No[b]				
Access to Media				
Yes	.006***	1.894	.268**	1.307
No[b]				

[b] Reference Category

*** Significance at p<0.01 level,** Significance at p<0.05 level, * Significance at p<0.1 level

Table 4: Model 3: Logistic regression coefficients and odd ratios for past experience of spousal violence, empowerment and socio-economic predictors in determining women's attitude towards SV.

Predicator Variables	Equation 1 Modern Attitudes relative to Traditional Attitude		Equation 2 Mixed Attitude relative to Traditional Attitude	
	Coefficient	Odd Ratios	Coefficient	Odd Ratios
Constant	-.276*		-.783***	
Ever Experienced Violence				
Yes	.784***	2.190	.367**	1.443
No[b]				
Decisional Making Autonomy				
Yes	.796***	2.218	.543***	1.721
Nob				
Access to Media				
Yes	.006**	1.006	-.113	.893
Nob				
Working Status				
Currently Work	.111	1.118	-.034	.966
Not Workingb				
Wealth Status				
Poor Class	-.594***	.552	-.602***	.548
Middle Class	-.394**	.674	-.331**	.718
Rich Classb				
Education Level				
Higher	.592	5.860	.638*	1.892
Secondary	1.034	2.813	.439*	1.551
Primary	1.768	1.807	.148***	1.159
No Education				

[b] Reference Category

*** Significance at p<0.01 level,** Significance at p<0.05 level, * Significance at p<0.1 level

Table 5: Model 4: Logistic regression coefficients and odd ratios for past experience of spousal violence, empowerment, socio-economic and demographic predictors in determining women's attitude towards SV.

Predicator Variables	Equation 1 Modern Attitudes relative to Traditional Attitude		Equation 2 Mixed Attitude relative to Traditional Attitude	
	Coefficient	Odd Ratios	Coefficient	Odd Ratios
Constant	.552		-.570	
Ever Experienced Violence				
Yes	.583***	1.792	.325**	1.384
Nob				
Decisional Making Autonomy				
Yes				
Nob	.652***	1.919	.521***	1.684
Access to Media				
Yes	.260*	1.015	.227**	1.002
Nob				
Working Status				
Currently Work	.231	1.241	.196	1.037
Not Workingb				
Wealth Status				
Poor Class	-.150*	.861	-.284**	.752
Middle Class	-.038**	.962	-.084*	.920
Rich Classb				
Education				
Higher Education	2.049***	7.762	.649**	1.285
Secondary	1.158***	3.183	.468**	1.596
Primary	.639***	1.895	.251***	1.914
No Educationb				
Region				
Punjab	-.351	.704	-.353	.703
Sindh	-.456	.634	-.583	.558
KPK	-2.085*	.124	-.912	.402
Balochistan	-.492	.611	.194	1.1215
Giligit Baltistan	-2.496*	.082	-1.015	.362
Islamabadb				
Locality				
Urban	.521***	1.683	.530**	1.256
Ruralb				
Age				
15-24	-.351*	.704	-.091	.913
25-34	-.082	.921	.224	1.251
35-49				

[b] *Reference Category*

*** *Significance at p<0.01 level,* ** *Significance at p<0.05 level,* * *Significance at p<0.1 level*

7.2.   Women Empowerment Indictors

In order to analyse the impact of women empowerment indicators including decision making autonomy and media access on attitude toward SV, is added in model 2 in employed and the net effect of the variables is presented in Table 3.

7.2.1. Decision Making Autonomy

Equation 1 and Equation 2 in Model 2 indicate that decision making power has direct and significant relationship with modern and mixed views. In Equation 1, odd ratio suggests that the women who are able to take decision themselves are 2.4 times more likely to have modern views than the women having traditional views. However, in equation 2, decision making power diverts the attitude of women 1.4 times towards mixed views. Interestingly, the inclusion of other control variables in the next models (Model-3 and Model-4) does not affect the significance of the variable and odd ratios do not change with a large difference.

7.2.2. Access to Media

The findings of the bi-variate analysis point out access to media as a significant factor affecting the women's attitude. The results of the multi-variate analysis in model-2 also support these findings. Access to media is found to be a positive and significant predictor influencing the dependent variable. In Equation 1 of Model -2 women with the access to media are 1.894 times more likely to have modern views as compared to the ones having traditional views. In equation 2, access to media makes women 1.307 times more likely to hold mixed view relative to those having traditional views.

With the inclusion of socio- economic indicators in Model-3 the net effect of the variable decreased since the odd ratio decreased from 1.9 to 1 in equation 1. Moreover, the variable becomes insignificant in Equation 2 and the net effect of the predictor decreased to less than 1. However, with the inclusion of all the predictors in Model-4, the net effect of access to media again becomes positive and significant in both the equation-1 and equation-2.

7.3.   Socio-Economic Status of the Women

Socio-Economic status of the women is assessed by adding educational level, working status and wealth status of the women in Model-3. The net effect of the variables with the inclusion of further indicators is depicted shown in Table 3.

7.3.1. Education Level

Model-3 depicts that women's education is not found significant in explaining the women's attitude toward SV in equation-1. However, the variable is found significant in equation-2 and the odd ratio suggests that women with higher education are 1.9 times, with secondary education 1.5 times and with primary education 1.6 times more likely to have mixed as compared to women with no education.

Interestingly, the net effect of the women's education level becomes positive and significant in both equation-1 and equation-2 of the Model-4 and with the increase in the level of education odd ratios goes up.

7.3.2. Working Status of the Women

Model-3 shows that working status of the women is not found significant in explaining the women's attitude towards SV in both equation 1 and equation 2. Furthermore, the inclusion of other predictors in Model-4 also provides the same results.

According to the PDHS 2012-2013, almost 50 percent of the working women work in informal sector of the economy in the form of providing agriculture, domestic or unskilled labour. This type of work is traditional in nature. Furthermore,merely 7. 7 percent of the total working women are providing professional, technical or managerial services and 31.8 percent are engaged in other skilled, clerical or sales related services. It can be inferred from these figures that women belonging to informal sector generally do not have more exposure and knowledge, and their views are more or less same as that of women engaged in domestic chores. It can be concluded that work status of such women does not actually empower them and they do not pertain decision power over the earned income which in most instances remain uncertain. This might be the reason that current working status of the women is not putting any significant impact on the attitude of women toward SV in the study.

7.3.3. Wealth Status

Wealth status of the women is found a significant predictor explaining the women's attitude towards SV as shown in Table 4. The odd ratios being less than 1 in Equation-1 and Equation-2 depicts that women with poor and middle class background are more likely to have traditional views. Moreover, with the inclusion of the all the control variables in model-4, the results do not vary and net effect of the 'wealth status' remain significant in explaining the women's attitude.

7.4. Demographic Variables

As mentioned earlier, the entire set of variables including age, region and residence areincluded in Model 4 and the results are displayed in Table 5.

7.4.1. Age of the Women's Respondent

Equation 1 of Model 4 shows that the women of young age group (15-24) are found more likely to have traditional views as compared to those of the older age (35-49) given that the odd ratio is 0.704. However, other age categories are not found significant in explaining the women's attitude towards SV.

7.4.2. Type of Residence

Among the demographic characteristics, type of residence is found to be the most significant in explaining women's attitude. Equation 1 in Model-5 suggests that women residing in urban areas are 1.683 times more likely to have modern views as compared to women living in rural areas. Similarly, Equation 2 shows that women are 1.256 times more likely to hold mixed views as opposed to the traditional ones. These results supports the general perception that women residing in urban areas are usually more liberal as customs of urban areas are not that much rigid.

7.4.3. Region of the Women Respondent

In Equation 1, only KPK and GB region are found significant and the odd ratios being less than 1 implies that the women living in KPK and GB are more likely to hold traditional views as compared to women living in Islamabad. However, other provinces are not found significant in explaining the women's attitude in equation 1 and equation 2.

8.   DISCUSSION AND CONCLUSION

This study examines the factor influencing the attitude of women's towards spousal violence (SV). The analysis is conducted using the national representative sample of 3,614 currently married women from the Pakistan Demographic and Health Survey (PDHS) 2012-2013. Bi-variate analysis is conducted to analyse the percentage distribution and significance of the variables. Furthermore, Multinomial Logistic technique is employed to observe the net effect of women's various demographic, socio-economic and empowerment indictors on their attitude towards SV.

The frequency distribution depicts that 59 percent of the women hold modern views, 16 percent hold mixed views and 25 percent women hold traditional views. The chi-square for the all the variables is found significant and entire set of independent variables is included further in the multinomial logistic regression analysis

The results of the multivariate analysis revealed that the women who have ever been the victim of spousal violence are more likely to hold traditional views. It indicates that the women psyche is highly affected by facing such violence and they start believing it as the normal course of married life. Women, sometimes in order to save their marriages do not resist such practices and allow their husbands to treat them the way they want.

Women with some decision making power in the household matters and with access to media are more empowered and have modern views. They have more exposure and knowledge about their rights and they don't justify wife beating in any situation. Women with high education and better wealth status are also found against the justification of spousal violence.

However, the result of study indicates that the women's working status, age and region are not found to have much influential role in molding women's thinking.

Women constitutes more than half of the human capital in our country, if efforts are directed towards their facilitation, rights and mental satisfaction, effective positive outcomes can be achieved at various level. Not only the women participating in the work force can play their part but those at home can also help to build a better nation only if they are secure, liberal, empowered and satisfied.

In order to inhibit women from being progressive, they are sometimes suppressed by physical violence by their husband. Such women start believing spousal violence as the integral part of male supremacy in order to survive in the society. The society further transfers these thoughts and beliefs over generations and the woman remains bound by following these customs and beliefs. Hence, government, policy makers and human rights organization should take proper actions and laws should be enforced in order to make women secure and empowered. Moreover, women themselves are required to be aware of their legal and religious rights. They, themselves should make them respectable in the society and undoubtedly, better education, exposure to media and empowerment can help women in this regard.

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Annex 1: Inter-correlation among independent variables

Variables		1	2	3	4	5	6	7	8	9
1.	RespondentAge	1								
2.	Region	-.012	1							
3.	Residence	.064	.051	1						
4.	Ever Experienced SV	0.044	.146	-.086	1					
5.	Education Level	-.109	-.090	-.398	-.156	1				
6.	Working Status	.055	-.147	.128	.058	-.137	1			
7.	Wealth Status	.096	-.191	-.479	-.151	.567	-.233	1		
8.	Acess to Media	-.020	-.198	-.312	-.065	.387	-.102	.479	1	
9.	Decisional Making Autonomy	.249	-.209	-.121	-.012	.089	.097	.137	.105	1

7

KNOWLEDGE ABOUT THE CORRECT MODE OF TRANSMISSION OF TUBERCULOSIS IN PAKISTAN

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KNOWLEDGE ABOUT THE CORRECT MODE OF TRANSMISSION OF TUBERCULOSIS IN PAKISTAN

ABSTRACT

Tuberculosis (TB) is an important public health problem that is preventable and curable. About one-third of world's population is infected with this disease. (Tuberculosis control in Pakistan 2010) If these cases are left untreated, each active TB (sputum positive) case can infects 10 to 15 people in one year. The data of PDHS 2012-13 is used for this research paper. The main objective of this study is to assess the knowledge of men and women about the correct mode of transmission of tuberculosis.

The logistic binary regression was applied to test the net impact of selected variables on having knowledge of correct mode of transmission of TB. The findings of the study show that gender has no significant impact on the knowledge of correct mode of TB transmission. While region has shown statistically significant effect on knowledge about correct mode of TB transmission in case of Sindh, Khyber Pakhtunkhwa and Balochistan. Knowledge about correct mode of transmission is found significantly higher among urban residents. The knowledge of people regarding the correct mode of transmission of TB shows an ascending trend with the increase beyond primary education. The analysis of economic status through wealth quintile establishes that persons living in the richest households have more correct knowledge than all subsequent quintiles. Working status has shown significant results as the currently working persons are more likely to have knowledge of correct mode of TB transmission. It is also found that people having media exposure are more likely to have knowledge about correct mode of transmission of TB. The findings indicate that there is a need to improve management between health officials, media persons and all segments of society in the struggle against TB. Changes in the current National Tuberculosis Programme may also be required in view of the findings of this study.

1. INTRODUCTION

Tuberculosis (TB) is an important public health problem that is preventable and curable. About one-third of world's population is infected with this disease. If these cases are left untreated, each active TB (sputum positive) case can infects 10 to 15 people in one year. TB was a global emergency in 1993 after which it adopted Directly Observed Treatment Short-course (DOTS) strategy. After the implementation of DOTS, more than 20 million patients have been treated and more than 16 million cured by 2004. Therefore, the mortality and

incidence of TB also reduced. Nevertheless, progress in this regards is slow in Sub-Saharan Africa as well as the Eastern-Europe and Asia continues to bear two-third of the burden of TB (Tuberculosis control in Pakistan 2010) Despite the use of different DOTS modalities in the study "Community Survey of Knowledge and Attitude of Tuberculosis among Tuberculosis Patients and their Attendants in a Rural Setup", Ashraf et al (2015) found that the knowledge about the disease in the patients and relatives is satisfactory.

Temesgen et al (2014) concluded that though the majority of the respondents had good TBIC (Tuberculosis Infection Control) knowledge and practice, a considerable proportion of health care professionals were not trained on TBIC. Respondents trained on TBIC were found to be more knowledgeable than those not trained. Similarly, respondents with good TBIC knowledge were 10 times more likely to have good TBIC practice compared to those with poor TBIC knowledge.

According to Cramm et al (2010), the lay experts' perception suggests that stigma appears to have effect case holding and case finding. Future interventions should be directed at improving attitudes and perceptions to potentially remove stigma. This requires a patient-centered approach to empower TB patients and active involvement in the development and implementation of stigma reduction programs. Obuku et al (2012) in the study "Socio-demographic Determinants and Prevalence of Tuberculosis Knowledge in Three Slum Populations of Uganda" revealed deficiencies in the public health knowledge about TB symptoms, diagnosis and treatment among urban-slum dwellers in Uganda. He proposed that Tuberculosis control programmes in similar settings should consider innovative strategies for TB education, advocacy, communication and social mobilisation to reach the youth, unemployed and less-educated; as well as those who have never tested for HIV.

In a study based on Brazilian data, Freitas et al (2015) found that women were more likely to have low knowledge regarding tuberculosis. Nevertheless, there are evidences that social inequity is associated to the tuberculosis knowledge of patient relatives. As expected, education played a vital role to have correct knowledge of TB. According to Ahmad et al (2009), a significant differential has been observed between educated women and their husbands to uneducated ones regarding correct knowledge of TB disease. He also observed

that Tuberculosis kills one person in every 20 seconds and 98 percent of deaths occur in poor countries due to tuberculosis.

In a study, Anjum et al (2009) observed that Poor knowledge and misconceptions concerning tuberculosis are rampant in Pakistani patients. Poor knowledge of TB patients concerning their disease may contribute to the high burden of TB disease in the country. According to Pakistan Economic Survey 2015-16, Pakistan is ranked 6th amongst 22 high disease burden countries of the world with a total number of 211,500 notified TB patients and the treatment success rate of TB remained 91 percent. Incidence of TB stands at 231/100,000 population and prevalence of about 300 cases per 100,000 population. TB Control Program has achieved over 80 percent coverage of Directly Observed Treatment System (DOTS) in public sector and in the last five years the programme has provided care to more than half a million TB patients in Pakistan. The programme is moving steadily to achieve the global targets of 70 percent case detection. There are areas where National Tuberculosis Programme (NTP) has to improve suspect management, contact management, quality bacteriology services, engaging all care providers through public private partnership, inter-sectoral collaboration, monitoring and supervision, research for evidence based planning and advocacy communication and social mobilization (ASCM) (Government of Pakistan 2016).

According to a report on TB, the total TB cases have increased by 6.9 percent in 2011 over the year 2010, which shows an increase of 1.8 percent in 2012, 9.7 percent in 2013 and 1.5 percent in 2014 (Pakistan Bureau of Statistics 2015). The current paper finds out and assesses the knowledge of men and women about the correct mode of transmission of TB.

2. OBJECTIVE

It is said that the knowledge about the health conditions about various diseases helps the patients to recover themselves from the diseases very easily. The same case is with the tuberculosis. It is assumed that media that now a days, the media plays an important role in increasing the knowledge about health. The main objective of this study is to examine the net effect of background variables on the knowledge of men and women about the correct mode of transmission of tuberculosis.
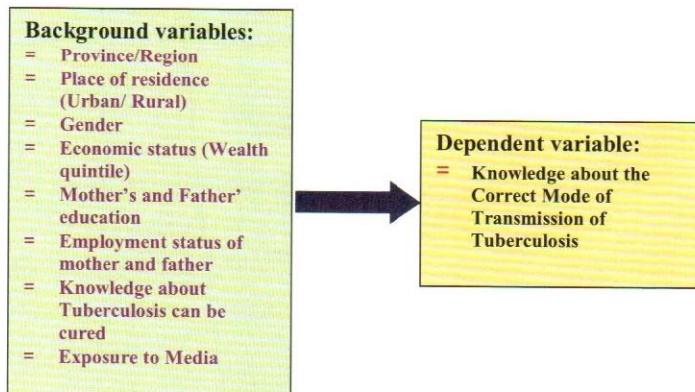
Previously conducted studies analyzed the knowledge of spread of TB among women age 15-49 years by using women data set of PDHS 2006-07 while the current study covers both genders. Therefore, the results achieved by using data set of women and men of PDHS 2012-13.

3. CONCEPTUAL FRAMEWORK

A conceptual framework is an analytical tool with several variations and contexts. It is used to make *conceptual* distinctions and organize ideas. Strong *conceptual frameworks* capture something real and do this in a way that is easy to remember and apply (Wikimedia Foundation 2016).

In the backdrop of the above discussion and literature, it is important to conduct an indepth analysis of the factors that affect the knowledge about correct mode of transmission of TB. There are 8 variables that may highlight the variation in different categories of those variables about knowledge of correct mode of TB transmission. The respondents were asked their knowledge about spread of TB through different means such as 'through the air when coughing and sneezing', 'by sharing utensils', 'by touching a person with TB', 'through sharing food', 'through sexual contact',' through mosquito bites' and 'others'. In this analysis the first two options i.e. 'TB spreads through air when coughing or sneezing' and 'sharing utensils' both were taken as correct mode of transmission for spread of TB which is a dependent variable. The variable is dichotomous in nature, value "1" is assigned to knowledge about the correct mode of transmission of TB and others are coded as "zero" for no knowledge of correct mode of TB transmission.

CONCEPTUAL FRAMEWORK

Background variables:
= Province/Region
= Place of residence (Urban/ Rural)
= Gender
= Economic status (Wealth quintile)
= Mother's and Father' education
= Employment status of mother and father
= Knowledge about Tuberculosis can be cured
= Exposure to Media

Dependent variable:
= Knowledge about the Correct Mode of Transmission of Tuberculosis

4. METHODOLOGY

For the current study, the data of PDHS 2012-13 is used. A nationally representative sample of 16,692 persons which includes 13,558 women and 3,134 men is taken into account. In this study the correct knowledge about the mode of transmission of TB is used as dependent variable. SPSS software version 22 has been used to carry out the analysis based on for cross tabulation, chi-square and logistic regression techniques. The dichotomous nature of dependent variable is used for the logistic regression for in-depth analysis. The main purpose of logistic regression is to reach at the conditional probability of occurrence of dependent variable with respect to predictors.

The regression model consists of background variables i.e. (1) Gender, (2) Region, (3) Place of Residence, (4) Education, (5) Working Status and (6) Economic status (Wealth Index) (7) Knowledge about Tuberculosis can be cured and (8) Exposure to media. It is said that the knowledge about the health conditions as well to various diseases helps the patients to recover themselves from the diseases very easily. The same case is with the tuberculosis. It is assumed that now a day, the media plays an important role in increasing the knowledge about health.

Here the exposure to media is derived from the questions asked about the frequency of reading newspapers, listening radio and watching TV. It is supposed that the person reading newspaper, listening radio or watching TV may pass-through the topics of health or diseases like TB. Therefore, keeping in view this reason these variables have been modified as exposure to media.

5. RESULTS

5.1 Bi-Variate Analysis Results

5.1.1 Selected variables and Correct Mode of Transmission of TB

TB is primarily an airborne disease. The bacteria are spread from person to person in tiny microscopic droplets when a TB sufferer coughs, sneezes, speaks, sings or laughs. People with active TB only can spread the disease to others. The analysis of knowledge of transmission of TB is analyzed in view of gender, region, place of residence, education, economic status, working status, knowledge about its curability, and exposure to media (Table 1). The table highlights that there are overall 68 percent men and women have knowledge of correct mode of transmission of TB. The gender wise analysis regarding the knowledge about correct mode of transmission of TB, depicts that more men (73 percent) are

aware as compared to women (67 percent) (Table 1). However, according to PDHS 2012-13 report, 96 percent of men and 95 percent of women have ever heard about tuberculosis.

Analysis by region (Figure 1) shows that the over whelming number of people living in Islamabad (81 percent) was aware of the correct mode of transmission of TB. The region of Khyber Pakhtunkhwa comes on 2nd ranking position where 70 percent people were aware followed by Punjab (69 percent), Balochistan (67 percent), Sindh (66 percent) and Gilgit Baltistan (49 percent).

Figure 1: Region wise knowledge of correct mode of transmission of TB
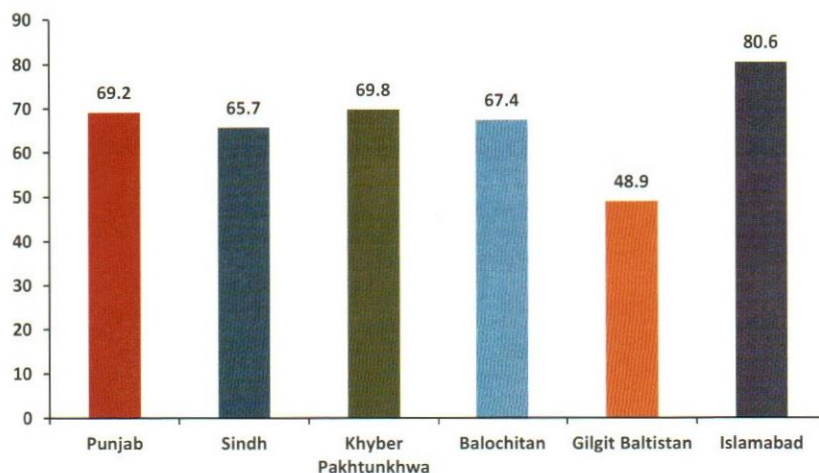
The people residing in urban localities were more aware (74 percent) about correct mode of transmission of TB as compared to the people of rural localities (65 percent)(Table 1).

The knowledge of people regarding the correct mode of transmission of TB shows an increasing trend with the increase in education (Figure 2). Eighty six percent of people with higher education have the knowledge about correct mode of transmission of TB. While 62 percent men and women with no education have this knowledge.

Figure 2: Knowledge of correct mode of transmission of TB by education
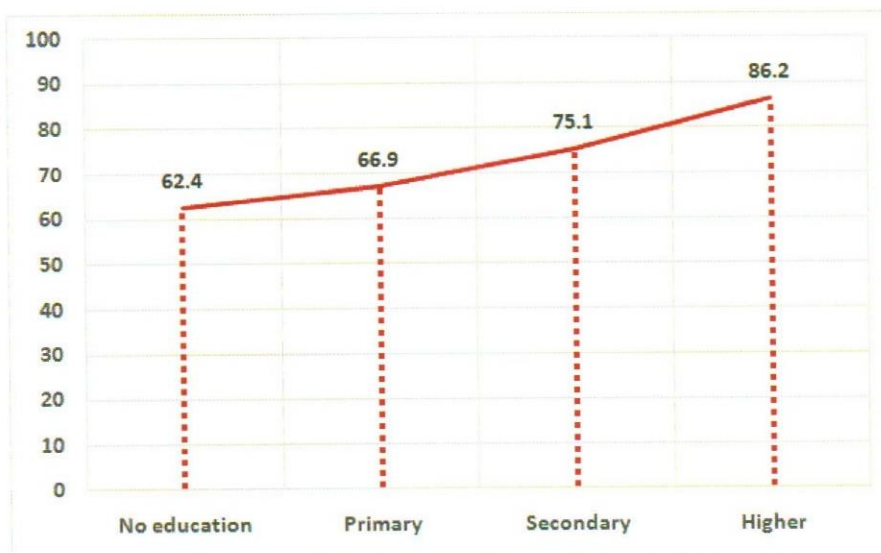
The analysis of economic status through wealth quintiles (Figure 3) shows that persons living in the richest households have more knowledge (78 percent) than all subsequent quintiles. In case of lowest quintile i.e. poorest, only 58 percent people have the knowledge about correct mode of transmission of TB.

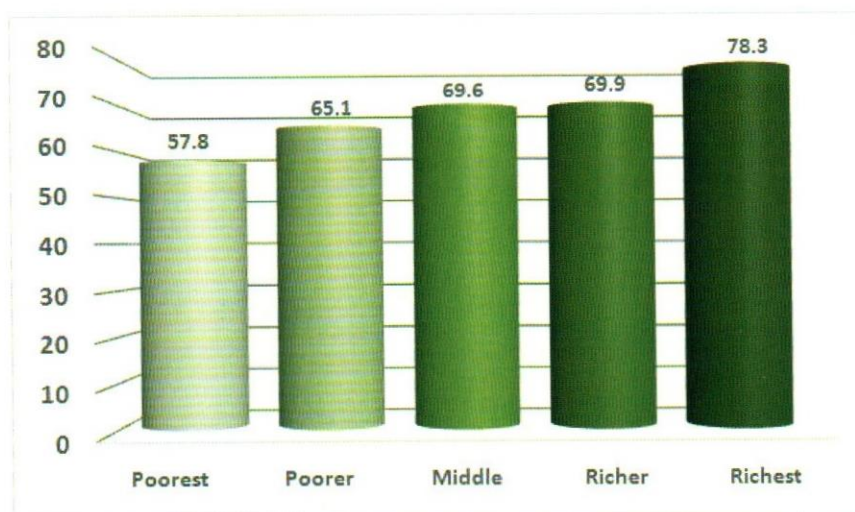**Figure 3: Knowledge of correct mode of transmission of TB**

Table 1: Percent distribution of knowledge about correct mode of transmission of TB by socio-demographic, economic and background variables

Independent Variables		Knowledge about correct mode of transmission of TB				Chi-sqaure Test
		No knowledge	Yes, have knowledge	Total	N	
Gender	Men	27.2	72.8	100.0	3134	0.000*
	Women	32.7	67.3	100.0	13558	
Region	Punjab	30.8	69.2	100.0	9594	0.000*
	Sindh	34.3	65.7	100.0	3930	
	KPK	30.2	69.8	100.0	2255	
	Balochistan	32.6	67.4	100.0	719	
	Gilgit Baltistan	51.1	48.9	100.0	112	
	Islamabad (ICT)	19.4	80.6	100.0	82	
Place of residence	Urban	25.6	74.4	100.0	5643	0.000*
	Rural	34.8	65.2	100.0	11049	
Educational Level	No education	37.6	62.4	100.0	8641	0.000*
	Primary	33.1	66.9	100.0	2813	
	Secondary	24.9	75.1	100.0	3487	
	Higher	13.8	86.2	100.0	1751	
Wealth Index	Poorest	42.2	57.8	100.0	3196	0.000*
	Poorer	34.9	65.1	100.0	3250	
	Middle	30.4	69.6	100.0	3267	
	Richer	30.1	69.9	100.0	3502	
	Richest	21.7	78.3	100.0	3478	
Respondent's currently working status	No	32.4	67.6	100.0	10127	0.015*
	Yes	30.6	69.4	100.0	6565	
Tuberculosis can be cured	No	80.0	20.0	100.0	1827	0.000*
	Yes	25.7	74.3	100.0	14865	
Exposure to Media	No	43.3	56.7	100.0	4122	0.000*
	Yes	27.9	72.1	100.0	12570	
Total		31.7	68.3	100.0	16692	

The analysis of data regarding working status shows more or less the same results. Sixty nine percent of working persons have the knowledge about the correct mode of transmission of TB and about the same proportion (68 percent) of not working men and women have this knowledge. The analysis transpires that of the total persons, having the view that TB is curable, 74 percent have the knowledge of correct mode of transmission of TB.

In the current era, media is most powerful source of knowledge. The data reflects that out of total persons listening radio or watching TV or reading newspaper, 72 percent have reported that they have the knowledge of correct mode of transmission of TB against 57 percent who have not exposed to media in any form.

6.   MULTIVARIATE ANALYSIS RESULTS

In the previous section, using cross tabulation, association between various factors and knowledge about the correct mode of transmission of TB is observed. However, it is not necessary that the observed association between the two variables reflects the true relationship. Therefore, a multivariate approach was adopted to determine the factors, responsible for having knowledge about the correct mode of transmission of TB. The logistic binary regression was applied to test the net impact of variables on having knowledge of correct mode of transmission of TB.

Symbolically logistic regression technique is expressed as:

$$\ln \frac{p}{1-p} = \alpha - \sum \beta_i x_i - u_i$$

Where p is the probability of correct knowledge about the mode of transmission of TB; α is the intercept; β are the estimated regression coefficients; x_i are the characteristics of factors help in increasing the correct knowledge about the transmission of TB, and u_i is the error term. The odds ratios are used in logistic regression which explains the possibility of occurrence or effect of independent variables on dependent variable. The odd ratio can be calculated by taking the exponential of coefficients i.e. β the odd ratio is denoted as e^{β}.

The independent dichotomous variables include gender men[1], women; region i.e. Punjab[4], Sindh, Khyber Pakhtunkhwa, Balochistan, Gilgit Baltistan and Islamabad; place of residence i.e. urban[1], rural; education i.e. no education[1], primary, secondary and higher; wealth index i.e. poorest[1], poorer, middle, richer and richest; working status i.e. working, not working;[1], TB can be cured, TB cannot be cured[1] and Exposed to media, not exposed to media[1].

The findings from logistic regression analysis show that some of the relationship between predictors and dependent variable (Knowledge about correct mode of transmission of TB) were not significant. These factors are discussed one by one as follows:

6.1   Gender

The impact of being a woman with knowledge about the correct mode of transmission of TB is statistically not significant, with odd ratio of 0.924. It means that awareness about the correct mode of transmission of TB reflects no difference by gender.

---

[4] Reference category

6.2 Region

Region of residence has shown statistical significance with having the knowledge of correct mode of transmission of TB in case of Sindh, Khyber Pakhtunkhwa and Balochistan with Odd ratios 0.723, 1.318 and 1.950 respectively. While there is no statistical significance in case of Gilgit Baltistan and Islamabad with Odd ratios 0.845 and 1.116 respectively.

6.3 Place of Residence

The urban areas of Pakistan are relatively developed where availability of socio-economic facilities are more as compared to rural areas. In the study, 'urban residence' is the reference category. The negative regression coefficient and estimated odd ratio 0.808 indicate that the knowledge of people regarding the correct mode of transmission of TB, residing in urban areas is significantly higher than the residents of rural areas.

Table 2: Logistic regression coefficients and effects (odd ratios) of selected predictor variables on knowledge about correct mode of transmission of TB

Independent Variables		Coefficients	p-value	Odd Ratios
Constant		-1.502	0.000	0.223
Gender	Men*			
	Women	-.079	0.185	0.924
Region	Punjab*			
	Sindh	-.324	0.000	0.723
	KPK	.276	0.000	1.318
	Balochistan	.668	0.000	1.950
	Gilgit Baltistan	-.168	0.469	0.845
	Islamabad (ICT)	.110	0.714	1.116
Place of residence	Urban*			
	Rural	-.213	0.000	0.808
Education	No education*			
	Primary	-.026	0.618	0.974
	Secondary	.242	0.000	1.274
	Higher	.883	0.000	2.418
Wealth Index	Poorest*			
	Poorer	.052	0.382	1.053
	Middle	.068	0.293	1.070
	Richer	-.110	0.118	0.896
	Richest	.073	0.389	1.075
Respondent currently working	No*			
	Yes	.125	0.008	1.134
TB can be cured	No*			
	Yes	2.392	0.000	10.940
Exposure to Media	No*			
	Yes	.281	0.000	1.324

Reference Category

6.4   Education

Education plays an important role in the development of any society. The study reveals that persons with Primary level Education indicate statistically not significant effect on the knowledge about correct mode of transmission of TB. However, the analysis depicts that relative to those with no education, the people with secondary and higher education are well aware about correct mode of transmission of TB with odd ratios 1.274 and 2.418 respectively.

6.5   Wealth Quintile

The poorest category of wealth quintile is used as a reference category. The analysis has shown no statistical significance in case of all of the categories of wealth quintile with odd ratios 1.053, 1.070, 0.896 and 1.075 for the categories poorer, middle, richer and richest respectively. That means being poorer or richer makes no difference viz-a-viz the knowledge about correct mode of transmission of TB.

6.6   Working Status

The regression analysis reveals that working status has shown significant results, which indicates that in case of working persons there are more chances of having the knowledge about the correct mode of transmission of TB. That may result in minimum chances of contracting TB by working persons.

6.7   Knowledge of Curability

Whether TB is curable or not, in this regard significant results have been observed and the ratios are 11 times more for those who have the knowledge that TB is curable compared to ones who do not have the knowledge that TB is curable. It indicates that someone can easily avoid this disease having knowledge that TB is curable.

6.8   Exposure to Media

In the current era media is powerful source of knowledge almost in every field of life. The regression results indicates that all those who are exposed to media are 32 percent more likely to have knowledge about correct mode of transmission of TB as compared to those who are not exposed to media. The effect is also statistically significant. It transpires that media may also play an important role in minimizing the prevalence of TB in a society.

7.   CONCLUSION

The association of education with the correct knowledge about the transmission of TB transpires that it increases in case of those respondents with more educational qualification. It also witnesses through regression analysis as it gives the significant results with higher educational level. The working status shows significant and positive result in case of working respondents. This study reveals that the respondents having views that TB can be cured are more likely to have knowledge about correct mode of transmission of TB. It is found that people having media exposure are more likely to have this knowledge and the effect is statistically significant.

A strong role of media has been observed through this study. There is a need to launch campaign through print and electronic media to create awareness among the masses about knowledge of correct mode of transmission of TB. This awareness will certainly bring down the incidence of TB in Pakistan.

8.   POLICY IMPLICATIONS

In the light of above findings there is a need to take further steps in the improvement of these indicators that bring about a positive change in the knowledge about correct mode of transmission of TB. This improvement will enables public to avoid TB. Majority of the results cited in the PDHS 2012-13 will shape the base line for making of upcoming health related strategies so as to enhance correct knowledge about the spread of TB among public in general but particularly among those segments of society that have shown relatively less correct knowledge about mode of transmission of Tuberculosis in this study. Success of TB awareness programme is the solution to lower the incidence of TB in the country. It is also proposed to increase management between health officials, media persons and contribution of all segments of society in the struggle against this menace. National TB Control Programme (NTP) may commence a countrywide movement in the print and electronic media to generate awareness among the people based on correct knowledge of the spread of TB. Modification in the current NTP may be needed in view of the findings of this study.

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8

CORRELATES OF DROPOUTS FROM PRIMARY AND SECONDARY LEVELS OF EDUCATION IN PAKISTAN

Ali Anwar Buriro

CORRELATES OF DROPOUTS FROM PRIMARY AND SECONDARY LEVELS OF EDUCATION IN PAKISTAN

ABSTRACT

Education is one of the important factors in everyone's life which transforms a better lifestyle, individual's mind and spirit. By the year 2015, Pakistan has highest primary level dropout rate (34.4 percent) compared to the south Asian neighboring countries [(Bangladesh (16.2 percent) and India (6.4 percent)] (UNICEF 2014; p.5). The main objective of this in-depth research is to find-out the correlates of dropouts at primary and secondary educational levels. The dropout is a term used for the children who for any reason other than death, discontinued schooling and left their education incomplete. The paper is based on the data of 2012-13 Pakistan Demographic and Health Survey (PDHS), a national level survey carried out by National Institute of Population Studies (NIPS). The dropout at both the levels are higher in rural areas, students of richest households dropped less than the ones from poorest economic status, boy students have dropped more than girl students. Forty-nine percent students from primary level and sixty-seven percent from secondary educational level droppedout whose heads of households are uneducated. The households headed by females have positive impact on their children's education where primary and secondary level dropouts are less as compared to dropouts of children in male headed households. It is recommended that efforts should be made to reduce dropouts at primary and secondary level education by effective policy making especially for under previllaged segment of population.

1.   INTRODUCTION

Education plays key role in everyone's life because education transforms a better lifestyle of person, personal growth and social well being. Education is one of the important factors in constructing future of individual's mind and spirit. It gives knowledge on many subjects, issues as well. The more knowledge you have, more you grow. Education enhances the ability of individuals to achieve demographic and health goals; Being an educated individual and having a degree (professional or any) prepares a person to be a part of reputed organizations and institutions. To determine good or bad, education will help a person who gets quality education and he/she will become good citizen, right thinker and correct decision-maker. Education is an important factor that has multifaceted effects on an individual's attitudes and behavior and contributes to promoting economic growth and employment of women. (NIPS/ICF International 2013)

Various researchers defined the phenomenon of 'dropout' differently. According to Jamil et.al (2010), dropout is **a term used for the children, who for any reason other than death, discontinue schooling and leave their education uncompleted**(Imtiaz 2014:11). This is quite broad definition and includes all those students discontinuing their studies without completing their studies for any reason other than the death of the student. This definition includes students at all levels of studies. This also covers those students who are expelled from the educational institution due to weak performance or failure in studies. Some of the students discontinue studies due to their illness, will also be included in the above definition of drop out. According to Malik (2002) drop out can be defined as "**a student who left school before completing a course of study**"(Imtiaz 2014:12). This definition does not cover any complexity of the phenomenon and is not clear in substance. This is much generalized definition covering all students quitting their schools prior to completing their courses. Umoh (1986) defines dropout as, "**student who left school before the completion of the program for which they are enrolled, for unseen reasons**" (Imtiaz 2014:12). This is a flexible definition covering all those students leaving their planned study program for any reason before completion. Hence, this definition of drop out is quite comprehensive and focused. The UNICEF and Government of Pakistan define dropout as "**withdrawal of children from school at any stage before completion of primary education**" (Imtiaz 2014: 12). Imtiaz has further explain that drop out is a "**terminology used for the student who left his/her education incomplete, before the completion of the specific program/ level of education for which he/she was enrolled in the school, for any reason, and he/she is no more enrolled in the same level or in any equivalent qualification**" (Imtiaz 2014:12). The question about dropouts from education in 2012-13 PDHS is placed in the household questionnaire considering the above stated definitions of dropout.

Pakistan has achieved substantial progress in raising level of education since independence 1947 (Imtiaz 2014). Pakistan with its literacy rate of 58 percent is placed in developing countries. Currently, education delivery system is not meeting the needs and aspirations of the nation (Government of Pakistan 2015). Therefore, to enhance the level of education, it is important that Pakistan increase level like other developing regional countries i.e; Iran 85 percent, Sri Lanka 91 percent, and India 63 percent (CIA-WorldFactbook 2014). 'The majority of developing countries need to redesign educational policies on the lines of developed nations' (Government of Pakistan 2015).

The earlier research show that the dropout from the primary education in Asia regions were highest in Malaysia, India, China, Viet Nam, Sri Lanka and Thailand (Khan 2014). Globally, about 130 million children in developing world have been dropped from schools. In China, 40 percent dropouts in rural areas, in India it is even higher and reason of dropout has been reported as 'financial reasons'. In Bangladesh, out of 1.7 million enrolled children in secondary level, 0.7 million dropout without completing their education (Latif 2015).

In Pakistan, 18 million students (10 million boys and 8.1 million girls) are enrolled at primary stage whereas 3.3 million (18 percent) of the students were dropped before completing their particular cycle or next higher stage (Choudhary 2016). The 2012-13 PDHS report shows that 22 percent females completed primary school, 9 percent middle and 16 percent secondary or higher level whereas 26 percent males have completed their primary educational level followed by middle (15 percent), secondary (13 percent) and higher level (12 percent). The country is considered the 2nd lowest among those countries whose students completed primary education. A fairly large number of enrolled students at primary education do not complete the cycle of their education' (Naseer 2015). Of the 24 million out-of-school children, 18.6 million have never attended school (Choudhary 2016).

Another study 'regarding the academic failure at primary level' shows that family/parents, school/teachers are equally responsible in academic failure of the student. Moreover, the majority of students themselves and their family are responsible in discontinuing the primary education (Chohan 2013).

The previous research on reasons of high dropouts rate of students in primary level shows that the prime reason of dropouts is lack of interest of parents in the studies of their children. (Zarif 2012)

2.   OBJECTIVES

The main objectives of the in-depth research are as under:-

(i)   To find out level of dropouts and the major factors affecting educational dropouts at Primary (I-V classes) and Secondary (VI-X classes) levels in Pakistan.

(ii)   To find out the gender disparities in educational dropouts.

(iii) To present research-based suggestions to the policy-makers in education sector.

3.   HYPOTHESIS

The student's dropouts at primary and secondary levels of education is not affected by socio-economic and demographic factors.
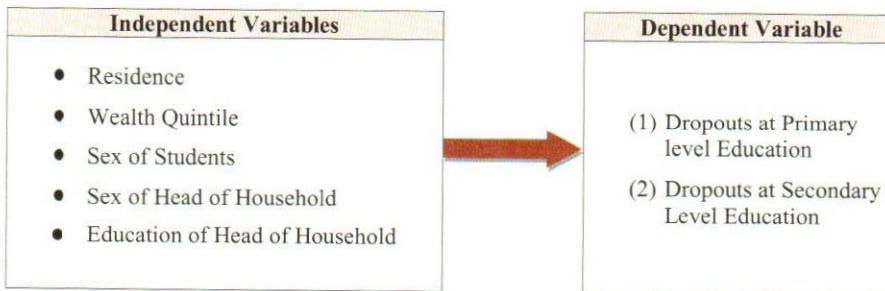
4.   STATEMENT OF THE PROBLEM

The millions of school-going-age children are out-of-school and they have discontinued schools before completing primary or secondary cycle of education without seeking life skills. The education system in Pakistan is riddled with problems but one of the most pressing of these is the high rate of dropout (Khan 2011).

5.   CONCEPTUAL FRAMEWORK

In this in-depth paper, the simple frequencies, bi-variate technique (crosstabs) along with chi-square test have been applied to observe the association of all independent variables to dependent variables. In the analysis two dependent variables are (i) primary school dropouts and (ii) secondary school dropouts. Then, the relationship of selected independent variables with the dependent variables has been estimated by applying the logistic regression statistical technique.

The analytical framework is as under:-

Independent Variables	Dependent Variable
• Residence • Wealth Quintile • Sex of Students • Sex of Head of Household • Education of Head of Household	(1) Dropouts at Primary level Education (2) Dropouts at Secondary Level Education

6.   METHODOLOGY, DATA SOURCE AND LIMITATIONS

The analysis is based on 2012-13 Pakistan Demographic and Health Survey data which is a nationally representative survey. A sub sample of household population of age 5-24 was taken and it is further divided into two groups (i) persons who have completed any class at primary level (0-5 classes) and (ii) persons who completed any class of secondary level 6-10 classes. Furthermore, in 2012-13 PDHS, each person was asked about the number of classes passed. A person is considered to be a dropout if he/she has not attended school during year

2012. Therefore, a total of 3,723 persons have been selected for primary level and 3,880 persons for secondary level education.

Additionally, to examine the current education system of Pakistan, other relevant information about the problem has been gathered from different Government's Departments/ Ministries/ educational institutions so that subject under investigation could be explained for readers.

7. RESULTS OF BI-VARIATE ANALYSIS

Dropouts at primary & secondary levels as dependent variables are analyzed with reference to independent / background characteristics variables i.e; type of residence (urban and rural), wealth quintile, sex of students and sex of head of household and their educational levels.

7.1 Primary Level Dropouts

The association between the status of primary educational level dropouts and socio-economic and demographic characteristics of the households is observed. The results are as under:-

7.1.1 Primary Level Dropouts by Type of Residence

It is interesting to note that there is no visible difference in urban and rural areas (Table-1). Forty six percent students dropped from primary educational level in rural areas compared to about 44 percent in urban areas. It is found that the association is not significant (P value = 0.141).

7.1.2 Primary Level Dropouts by Wealth Quintile

Table (1) gives percent distribution of dropouts by the wealth quintile of households. Data shows that more than half (54 percent) students dropped at primary level belonged to poorest households, whereas, minimum proportion of dropout children (31 percent) belong to richer households. It is also found in previous research that about 45 percent of children enrolled in class-1 dropped before completing their primary cycle (Amoeba 2005). The majority of the parents viewed that poverty is the main reason for dropouts (Naseer 2015). The association between the status of primary level dropouts and wealth quintile is found highly significant (P value= 0.000).

Figure-1: Percent distribution of non-dropouts and dropouts by wealth quintile
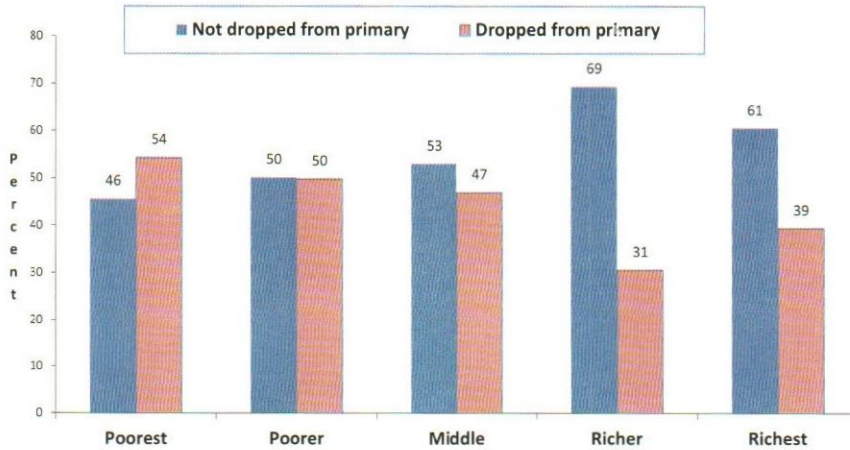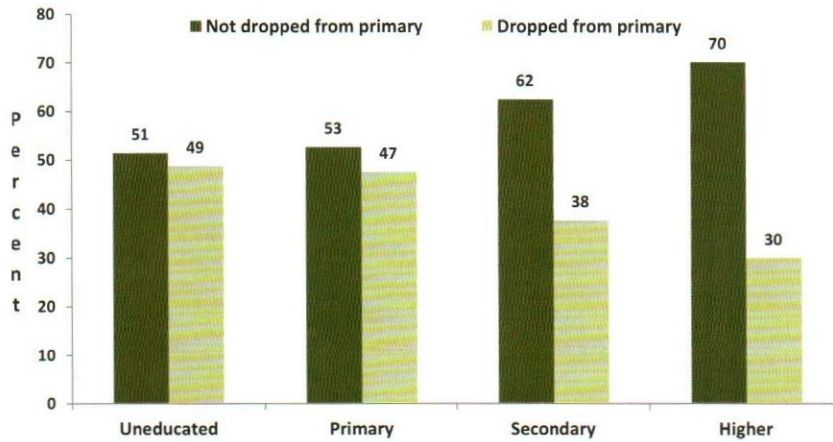

7.1.3 Primary Level Dropouts by Sex of the Students

The previous research conducted by Khan (2011) shows 56 percent of girls have dropped from primary educational level as compared to 44 percent boys. The results of this in-depth analysis show a contrary picture; fifty-one percent male students have left primary education in the country as compared to 40 percent girls. The Chi-square test shows statistically significant association (P value = 0.000).

7.1.4 Primary Level Dropouts by Educational Level of Head of Household

Education is a tool which brings a positive change in the behavior of an individual and it is a basic right. Table-1 describes that almost half (49 percent) of the students have dropped from the primary level of education where the head of household is uneducated as compared to 30 percent in the households where the head has higher education. Figure-2 also gives clear picture of declining trend of children's dropouts by education of head of the household. Statistically, it is proved that the association between two variables is also significant (P value= 0.000).

Figure-2: Percent distribution of non-dropouts and dropouts at primary educational level by education of head of household

7.1.5 Primary Level Dropouts by Sex of Head of Household

The head of household plays an important role in order to make routine decisions within household. In any case, he or she has to fix priorities relating to carryout activities of the household. The decision about education of school-going children is also one of the main responsibilities of head of household.

The dropout rate at primary level is higher (46 percent) where males are the head of the household as compared to households where females are heads (42 percent). It could be due to the fact that female heads are more focused than male heads of household with regard to education of children. However, statistically, the association between understudy variables is not significant (P value= 0.094).

Table 1: Percent distribution of primary educational level dropouts by background characteristics and factors of dropouts

Background characteristics	Categories	Not dropped from primary	Dropped from primary	Total		Chi-square test
				Percent	N	
Type of place of residence	Urban	56.4	43.6	100.0	947	0.141
	Rural	53.7	46.3	100.0	2776	
Wealth quintile	Poorest	45.7	54.3	100.0	807	0.000
	Poorer	50.1	49.9	100.0	935	
	Middle	53.0	47.0	100.0	1005	
	Richer	69.4	30.6	100.0	722	
	Richest	60.5	39.5	100.0	254	
Sex of student	Male	48.7	51.3	100.0	1780	0.000
	Female	59.6	40.4	100.0	1943	
Education of Head of household	No education, preschool	51.3	48.7	100.0	1916	0.000
	Primary	52.6	47.4	100.0	1001	
	Secondary	62.4	37.6	100.0	646	
	Higher	69.9	30.1	100.0	160	
Sex of head of household	Male	53.9	46.1	100.0	3320	0.094
	Female	58.2	41.8	100.0	403	
Total		54.3	45.6	100.0	3723	

Note; (1) Original data file of PDHS (2012-13) has been used.

(2) Chi-square statistic is significant at the .05 level.

7.2   Secondary Level Dropouts

The association between the status of secondary educational level dropouts and socio-economic and demographic characteristics of the households is analyzed. The results are as under:-

7.2.1   Secondary Level Dropouts by Type of Residence

The rural based students are being dropped more (63 percent) as compared to urban based students (57 percent). This high rate of dropouts in both rural and urban areas requires concerted efforts of the policy makers to reduce the both level of dropouts. The association between secondary educational level students and the type of residence of the students is significant (P value= 0.000).

7.2.2   Secondary Level Dropouts by Wealth Quintile

Wealth quintile is an important determinant of economic status of members of the household. Data describes that three-fourth (76 percent) students of the poorest households have dropped

from secondary educational level as compared to 50 percent students of the richest households. Pakistan is one of the top 10 countries facing poverty where 59 million people live under the poverty line. (Munaj 2016)

The percentage shown in table (2) and figure (3) clearly indicate the dropouts from secondary educational level are higher among poorest households. The association is statistically significant (P value=0.000).

Figure-3 : Percent distribution of dropouts and non dropouts at secondary educational level by wealth quintile

Legend: ■ Not dropped from secondary   ■ Dropped from secondary
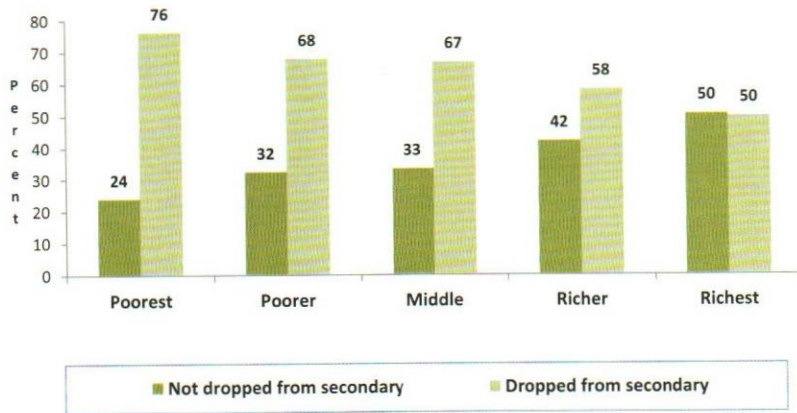
7.2.3 Secondary Level Dropouts by Sex of the Students

The research of Choudhary (2016) reveals "gender disparity is in school enrollment rates, with over half of girls out-of-school as compared to 43 percent of boys". The findings of this in-depth paper shows that 64 percent of boy students have left their secondary education as compared to 57 percent girl students which might be due to the reason that now focus of the parents has been shifted towards girl's education in Pakistan which is encouraging. The association is statistically significant (P value= 0.000). (Table-2)

7.2.4 Secondary Level Dropouts by Educational Level of Head of Household

The involvement of the parent in the educational process of their kids should be given a high priority because parents are the first care givers (Farooq 2013). To observe the impact of educational level of the heads of households on the education of their children, this important variable is included in the analysis. Table (2) and Figure (4) show that two-third majority (67 percent) of students have left their secondary education where heads of households are un-educated as compared to 47 percent student of households where the head have higher education. Applying chi-square test, it is proved that the association between the two variables is significant (P value= 0.000).

Table (2): Percent distribution of secondary educational level dropouts by background characteristics and factors of dropouts

Background characteristics	Categories	Not dropped from secondary	Dropped from secondary	Total		Chi-square test
				Percent	N	
Type of place of residence	Urban	43.0	57.0	100.0	1461	0.000
	Rural	36.7	63.3	100.0	2419	
Wealth quintile	Poorest	24.1	75.9	100.0	261	0.000
	Poorer	32.5	67.5	100.0	578	
	Middle	33.4	66.6	100.0	991	
	Richer	41.9	58.1	100.0	1182	
	Richest	50.4	49.6	100.0	867	
Sex of student	Male	36.1	63.9	100.0	2126	0.000
	Female	42.6	57.4	100.0	1753	
Education of Head of household	No education, preschool	33.1	66.9	100.0	1431	0.000
	Primary	35.6	64.4	100.0	824	
	Secondary	44.7	55.3	100.0	1386	
	Higher	53.2	46.8	100.0	238	
Sex of head of household	Male	38.7	61.3	100.0	3453	0.275
	Female	41.5	58.5	100.0	427	
Total		39.0	61.0	100.0	3880	

Note; (1) Original data file of PDHS (2012-13) has been used.

   (2) Chi-square statistic is significant at the .05 level.

Figure-4: Percent distribution of dropouts and non dropouts at secondary educational level by education of head of household
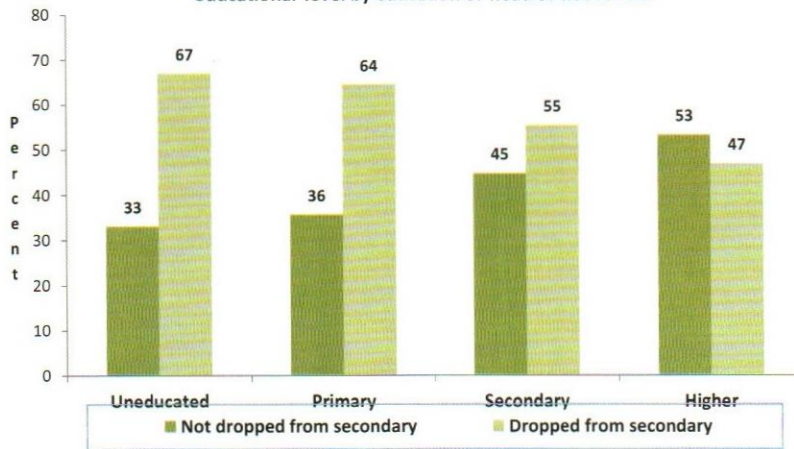
7.2.5 Secondary Level Dropouts by Sex of Head of Household

The relationship between sex of head of household and secondary level educational dropouts of children has been analyzed and findings show that secondary level dropouts are higher (61 percent) in those households where head of households are males as compared females (58 percent). It is interesting to note that female heads of the households are comparatively serious about their children's education than males. However, the association between the two variables is found not significant (P value= 0.275).

8. LOGISTIC REGRESSION RESULTS

Two models for logistic regression have been applied to find out net effect of predictor variables on dependent variable. In Model-1, the dependent variable is primary level dropouts and recoded as 0=not dropout from primary level and 1=dropout from primary level) and for Model-2, the dependent variable is recoded into 0=not dropout from secondary level education and 1=dropout from secondary level. Both the above models have been analyzed and the results are as under:-

8.1 Logistic Regression for Primary Level Dropouts

The logistic regression results (Table-3) describe the net effect of independent variables (type of residence, wealth index, gender of students, educational level and sex of head of household) on primary level dropouts (dependent variable).

Table-3: Logistic regression coefficients and effects (odd ratios) of selected predictor variables on primary level dropouts (model-1)

Variable	Category	B	Sig.	Exp(B)
Type of Residence	Urban (Ref.)			
	Rural	-.380	.000	.684
Wealth Quintile	Poorest (Ref.)			
	Poorer	-.117	.233	.890
	Middle	-.279	.005	.757
	Richer	-1.106	.000	.331
	Richest	-.700	.000	.497
Sex of Student	Boy (Ref.)			
	Girl	-.348	.000	.706
Education level of Head of household	No education (Ref.)			
	Primary	.015	.855	1.015
	Secondary	-.257	.010	.773
	Higher	-.616	.001	.540
Sex of head of household	Male head (Ref.)			
	Female head	-.191	.087	.826
Constant		.730	.000	2.076

Note: Original dataset of PDHS (2012-13) is used.

As compared to urban areas of the country, there is less likelihood (OR=0.684) of dropouts at primary educational level in rural areas. The relationship is statistically significant (P value=0.000).

Analysis clearly indicates less likelihood of primary level educational dropouts from the richer wealth quintile households as compared to poorest (reference category) households. The net effect of wealth quintile on dependent variable is statistically significant. It is proved that students of the wealthy household's dropout less at primary level education.

The important finding of the paper is that there is less likelihood (OR=0.706) of the girl students dropouts at primary educational level as compared to the boys. The relationship between the variables is statistically significant (P value=0.000).

Generally, the education of head of household may have positive impact on the children's education. The study's results show that where heads of households have passed only primary classes, the likelihood of children's primary educational level dropouts is more (OR==1.015)

as compared to uneducated heads but when the level of education of head of households increases dropouts of children from primary level decreases.

There is less likelihood (OR= 0.826) of primary educational level dropouts of children where female is the head of household which shows that female heads of households are more focused about the studies of the children in the household as compared to the children in male headed households.

8.2   Logistic Regression for Secondary Level Dropouts

The Model-2 describes net effect of background characteristics of students (predictors) on secondary educational level dropouts. Evidence from Model-2 shows that dropout at secondary level education have been influenced by type of the residence of students. Results shows that compared to urban areas, there is less likelihood of dropouts at secondary educational level in rural areas (OR=.875). This relationship is not significant (P value=0.111).

Table-4: Logistic regression coefficients and effects (odd ratios) of selected predictor variables on secondary level dropouts (model-2)

Variable	Category	B	Sig.	Exp(B)
Type of Residence	Urban (Ref.)			
	Rural	-.034	.111	.875
Wealth Quintile	Poorest (Ref.)			
	Poorer	-.356	.037	.700
	Middle	-.359	.026	.698
	Richer	-.713	.000	.490
	Richest	-1.054	.000	.348
Sex of Student	Boy (Ref.)			
	Girl	-.182	.008	.834
Education level of Head of household	No education (Ref.)			
	Primary	-.045	.641	.956
	Secondary	-.378	.000	.685
	Higher	-.647	.000	.524
Sex of head of household	Male head (Ref.)			
	Female head	-.329	.003	.720
Constant		1.447	.000	4.251

Note: Original dataset of PDHS (2012-13) is used.

As mentioned earlier, the poverty is one of many factors responsible for children to dropout (Gul 2013). The in-depth research also shows that as compared to 'poorest households', there is less likelihood of dropouts at secondary educational level among the students who belong to wealthy households.

The important finding of paper emerged here is that there is less likelihood (OR=0.834) of girl's dropouts from secondary level education as compared to boys. In other words, girls are more focused to continue secondary level education than the boys. It might be due to parent's awareness about importance of girl's education in Pakistan which is encouraging.

In this research paper, the education of head of household has been included to see the impact of head's education on children's education in their household. The finding shows that there is less likelihood (OR= 0.956) of secondary educational dropouts where heads of household have primary education as compared to the uneducated heads of household. However, this relationship between two variables is statistically not significant (Pvalue=0.641). The dropout of the children decreases further as the educational level of head of the household increases and the relationship also becomes statistically significant.

It is further proved through this in-depth research that the likelihood of dropout from secondary level of students is less (OR=0.720) where females are the head of households as compared the male headed households. This shows that females are more focused about the studies of their children in the household.

9.   SUMMARY AND CONCLUSION:

As compared to urban areas of the country, there is less likelihood of dropouts at primary and secondary educational levels in rural areas. Analysis clearly indicates less likelihood of primary and secondary levels educational dropouts as the wealth status increases from poorest (reference category) to richest.

There is less likelihood of the girl student's dropouts at both the educational levels (primary and secondary) as compared to the boy students which indicates the parent's priority regarding the girl's education in Pakistan. It might be due to parent's awareness about the importance of girl's education in Pakistan which is encouraging.

The results show that where heads of households have primary education, the likelihood of dropouts at primary level do not indicate significance difference relative to households headed by uneducated persons. But the real difference in terms of decreased level of dropouts appears with the increase in the educational level of head of the household.

For the dropout at secondary educational level, research proves that increase in the education of head of household decreases the dropouts. The education of head of the household definitely has positive impact on their children's education. There is less likelihood of primary and secondary educational level dropouts of the children where female is the head of household which shows that female heads of households are more focused and serious about the studies of the children of the household as compared to male headed households.

It is concluded that policy-makers should make efforts to reduce the dropouts at all levels of education by providing equitable opportunities, to all segments of population in the country so that the menace of dropouts at all levels of education is eliminated. This way the proportion of educated population in the country will also improve to quite an extent.

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9

ROLE OF MIGRATION IN HEALTH CARE UTILIZATION IN PAKISTAN

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Dr. Mukhtar Ahmad

ROLE OF MIGRATION ON
HEALTH CARE UTILIZATION
IN PAKISTAN

ABSTRACT

This paper analyzes the role of internal migration, socio- demographic factors along with media exposure on Reproductive Health (RH) care utilization, with a view to ascertaining its importance when formulating policies. The analysis is based on 2012-13 PDHS data. The dependent variable has internal dichotomous response; "RH care utilization" or "No RH care utilization" and independent variables are "migration", "demographic", "socio-economic","decision making of women" and "ethnicity" and "exposure to media". The Logistic regression model has been used to identify the important predictor of RH care utilization. The findings of this study show that the migration, socioeconomics and demographic factors such as age, education, work status and exposure to media play a significant role in taking decision of RH care utilization in Pakistan. However, it is also found that decisions relating to 'health seeking', 'household purchases' and 'visit to family or relatives' are not significantly related to the utilization of RH care proving that when net effect of migration is observed there is no impact of women empowerment. Findings are supported by various studies at global and regional level. Despite success in key areas, challenges remain especially surrounding implementation. Furthermore, there is often a gap between the stated aims of policy measures and their application on the ground.

1.   INTRODUCTION

Every human being has an urge to achieve a higher standard in life. Migration[1] is an attempt on the part of human being to settle themselves to the physical and social set-up in such a way that it leads to the optimum satisfaction. It is the most complex interplay of the population dynamics i.e. fertility, mortality and migration. In the less developed regions of the world, the major problem faced by governments is excessive internal migration[2] from rural areas to the already crowded, large urban centers. Generally people migrate from rural to urban areas as a rational human capital investment decision to reap economic rewards in the form of better economic opportunities and benefits.

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[1] Migration is defined as any permanent change in residence; it involves the "detachment from the organization of activities at one place and the total round of activities to another" (ICF international, NIPS 2013).

[2] Internal Migration means movement of people from one administrative district to another administrative district at any time of their lives. It excludes movement of population within the current district (ICF international, NIPS 2013).

It is found that the Push factors[3] and Pull factors[4] for migration are important to influence attitudes and behavior of a person. The rate of migration is increasing gradually all over the world. In developing countries, people migrate from one place to another to acquire education and employment to fulfill the subsistence need. Rural communities consider migration as a process through which they will be free from the vicious cycle of poverty (Islam et al. 2009) In 1990, the United Nations created Millennium Development Goal 5 (MDG-5) to prioritize the health and well-being of all women (UN 2015). In 1994 International Conference on Population and Development (ICPD), the issue of international migration and its relation to development has been placed on the agenda of the international community (ICPD 1994). Now the 2030 Agenda for Sustainable Development Goals (SDGS) not only includes several health and migration-related targets, but also encourages countries to disaggregate targets by, inter alia, migratory status (UN 2015).

While researchers have studied the influence of rural-urban migration on fertility and health (Brockerhoff and Yang 1993; Chattopadhyay et al. 2006; White et al. 2005) and mortality (Islam and Azad 2008; Stephenson et al. 2003), barring a few exceptions, there is a dearth of literature exploring the relationship between internal migration and reproductive health care use, therefore it is the need of the day.

2. GLOBAL PERSPECTIVE

The number of international migrants worldwide has continued to grow rapidly over the past fifteen years reaching 244 million in 2015, up from 222 million in 2010 and 173 million in 2000. Nearly two thirds of all international migrants live in Europe (76 million) and Asia (75 million). Northern America hosted the third largest number of international migrants (54 million), followed by Africa (21 million), Latin America and the Caribbean (9 million) and Oceania (8 million) (UN 2015).

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[3] are inadequate economic opportunities, inadequate conditions, desertification, famine or drought, political fear or persecution, slavery or forced labor, poor medical care, loss of wealth, natural disasters, death threats, desire for more political or religious freedom, pollution, poor housing, landlord/tenant issues, bullying, discrimination, poor chances of marrying, condemned housing, war.

[4] are better job opportunities, better living conditions, the feeling of having more political and/or religious freedom, enjoyment, education, better medical care, attractive climates, security, family links, Industry, better chances of marrying.

Human Development Report estimated that the number of internal migrants is about four times the total number of international migrants (UNDP 2009). Internal migration, especially in large countries such as India and China, can be across long distances.

It is found that when supported by appropriate policies, migration can contribute to inclusive and sustainable economic growth and development in both home and host communities. Women comprise slightly less than half of all international migrants. The share of female migrants fell from 49 per cent in 2000 to 48 per cent in 2015 (UN 2015).

Studies from South Africa show that internal migrants are more likely to have less income and have more chances of depending on informal, survivalist livelihood strategies. Furthermore, they also experience food insecurity (Vearey et al. 2010). Similar results were found in Hanoi city where the employment differentials between migrants and non-migrants were significant, and the difference reduced, but not eliminated, when other factors (i.e., demographic and socio-economic factors) were controlled. In spite of the many benefits of migration, migrants themselves remain among the most vulnerable members of society. They are often the first to lose their job in the event of an economic downturn, often working for less pay, for longer hours, and in worse conditions than national workers (UN 2015).

Literature on gender and migration presents that autonomous female migrants often originate from poor economic and socially powerless positions (INSTRAW/IOM 2000). However, few studies compare the impacts of such migration on poverty levels of migrant women, and their families' potential to climb out of poverty, with non-migrant families from similar socioeconomic backgrounds.

One of the greatest challenges posed by migration concerns the provision of universal and equitable healthcare, core accessibility and quality of services, regardless of gender, ethnicity or country of origin - healthcare as a universal right (2013). Keeping in view the importance of reproductive health in the perspective of migration, the focus of the study is to observe the RH care and migration linkages and effects.

3.   REGIONAL PERSPECTIVE:

In India most poor internal migrants live in urban slums facing unhygienic conditions leading to RH problems and diseases. The informal or temporary labour sectors in India, do not provide maternity leave arrangements, which results in all kinds of RH problems (Subaiya 2007).

Pakistan is a developing country and more than half of its people live in rural areas (Government of Pakistan, 2016). Currently due to increase in population, unemployment as well as scarcity of land and other resources are increasing rapidly. The socio-economic conditions of rural areas are getting worse. As a result of such situation, an overwhelming number of people struggle to seek greater opportunities for their livelihood in urban areas. Especially migration is occurring for better opportunities and for better jobs. Poverty is a social curse which resists the development of a society. Yet, by migration strategy, poor people can get better opportunities to minimize poverty and enhance their socio-economic condition and in turn improve health status (Menon 2005). Thus, migration plays a greater role in poverty reduction. Migrants socio-economic mobility is considered as a necessary condition for sustainable development and poverty alleviation (Rakib et al. 2009). Numerous studies have indicated that socio-economic factors are important determinants of mobility and internal migration in Pakistan especially age, education and occupation. (Imran et al. 2013; Farah et al. 2012). In Pakistan overall, 4 percent of household members have migrated to their current place of residence in the past 10 years in which 3 percent are males and 5 percent are females. (NIPS ICF international, 2014).

4.   SIGNIFICANCE OF THE STUDY

Migration has acquired increasing importance globally in recent years. Pakistan is a developing country and more than half of its people live in rural areas. Day by day unemployment as well as scarcity of land and other resources are increasing rapidly. As a result, the socio-economic condition of the people is worsening and poverty prevails. Due to detoriating situation, an overwhelming number of people seek greater opportunities for their livelihood. In recent time, internal migration has also increased. People can migrate within a same socio-political area or to the outside of the area. Therefore, it is important to know the condition of socio-economic and health status of migrants so that development initiatives can be taken properly.

However, there has remained a paucity of adequate data and research on the numbers and characteristics of migrants. Indeed, it has been widely acknowledged that improving the availability and the quality of data is essential in order to develop well-informed and well-designed migration policies (Castaldo, et al. 2009). The population census is an important source of migration data, which was analyzed to observe inter provincial and inter district patterns (Karim & Nasir 2003), however with the delay in Census we have to rely on sample surveys. As eighteen years has passed since last census, for the first time PDHS 2012 13 has

collected information on migration and is an important source of migration data. In view of emerging trends in migratory movements within Pakistan, questions on the status of in-migrants and out-migrants were included to assess the magnitude and characteristics of the migrant population. This provided an opportunity to capture the latest migration status of household members, thereby filling an information gap caused by the lack of availability of recent census data on the issue. The availability of migration data in the back drop of the precarious condition of migrant population observed in various studies pertaining to developing countries data, prompted us to study the status of reproductive health care utilization of migrant women.

5.   HYPOTHESIS

It is hypothesized that less the migration higher the likelihood of RH care utilization.

6.   OBJECTIVES

Objectives of the study are:

1. To examine the migration status of married women in the household.
2. To observe RH care utilization by migration, demographic and socio-economic factors.
3. To scrutinize the net effect of migration, demographic and socio- economic factors, exposure to media on RH care utilization.
4. Recommendations for future research and policy making.

7.   RESEARCH APPROACH

7.1   Data

The data used for this study came from the 2012-13 Pakistan Demographic and Health Survey (PDHS) conducted under the ICF. International using the standard questionnaire. Demographic and Health Surveys (DHS) are nationally representative, population-based surveys of women of reproductive age. In this nationally representative survey among usual members of the household a total of 3303 household members have migrated to their current place of residence in the past 10 years. The question includes "Was name born in this city?" for analysis women date is used who had ever given birth to a child.

7.2   Methodology

The statistical analysis of data was done using IBM SPSS Data Editor. The analysis is carried out on the weighted sample. Two approaches are adopted. Initially simple frequencies of currently married women are observed to select the dependent and independent variables. Then correlation matrices are created to drop variables with very strong correlation among predictor variables. Chi-square test is applied to test the significance of the association between migrant status and the dependent variables. Simple cross tabulations are done to observe the RH care utilization and migration, demographic and socio-economic characteristics. Tam also observed the association of migration on delivery and RH care utilization and contraceptive use (Tam 1994)

Logistic Regression is applied to test the net impact of migration controlling for demographic and socio economic variables which may influence the RH care utilization. After using various combinations of the selected variables in the regressions equations, two basic models were selected to show the effects of the theorized variables on RH care utilization. There are two separate equations. In first equation for Model 1, effect of migration on the Health care Utilization is observed. In model 2 demographic, socio economic, decision making and media exposure variables were included in the model 1.

The Logistic Regression is mathematically defined as:

$l_n p/1-p = \alpha + \beta_i X_i + \mu_i$

Where p is the probability of RH Care Utilization;

α is the intercept;

β i are the estimated regression coefficients;

X i are the characteristics of women, and

μ_i is the error term.

7.3   Dependent Variable

The dependent variable named RH care utilization was formed from the answer to the questions ie. "Whether women seek health care from an institution or not" "women's four visits for antenatal care for their most recent birth" and "post natal care received in forty days after birth" based on the World Health Organization's recommendation (WHO, 1994).

7.4   Independent Variables are:

Migration (Not migrated, Migrated) , Region (Punjab, Sindh , Khyber pakhtunkhwa, Balochistan, Gilgit Baltistan , Islamabad (ICT)) , Age (15 -24, 25 -34, 35+)   Educational level (No education, Primary, Secondary, Higher) Work status (Poor, Middles, Rich) Decisions about visit to relatives; household Purchases; Seeking Health Care (Not participated, Participated), Grouped ethnicity (Urdu, Punjabi, Sindhi, Pushto, Balochi, Saraiki, others) Media exposure (No exposure, Exposure to media).

7.5   Limitations of the Study:

The following limitations are identified: First, secondary data are used for the analysis in this paper. Secondly analyses in this paper rest on a cross-sectional data[5] , therefore, to infer causal relationship is affected due to the fact that the data is not a longitudinal one[6] .

The unavailability of health services data constrained the author to include this variable in the analysis. This shortcoming may not present the true picture of the results in this paper.

Some of the predictor variables may not correspond the timing of the occurrence of outcome variable. Nevertheless, these predictor variables have been included in the analysis on account of their importance in this study.

7.6   Analytical Framework

The analytical framework will explain the relationship between variables as follows:
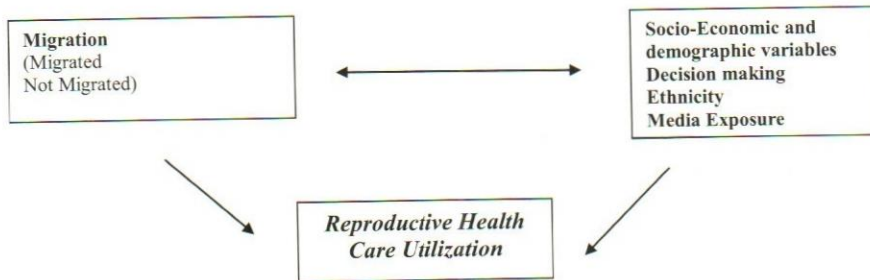
Before embarking on the analysis it is necessary to describe migration status of the household population. Fig. 1 provides information on the place of origin of in-migrating population. The majority have migrated from rural areas within Pakistan (56 percent), followed by those

[5]Survey

[6] Time series long surveys

migrating from cities and urban areas (43 percent); the proportion of individuals in migrating from overseas is quite small (1 percent).
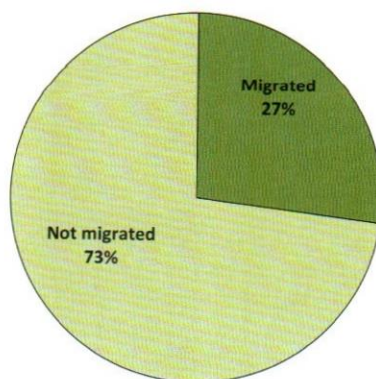
Figure 1: Status of in-migration of the household population
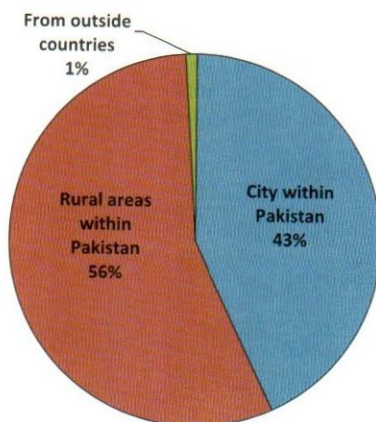
8. FINDINGS AND RESULTS:

8.1 Migration Status:

Figure 2: Percent distribution of migrant women

The analysis of the paper is carried out on the currently married women from PDHS. As exhibited in figure 2 that more than one fourth of the women (27 percent) are migrants and remaining 73 percent are native residents.

8.2   Background Characteristics and Reproductive Health care Use

Following section presents the findings of study based on secondary analysis. Some of the variables are re-coded and categories are merged to run the analysis. Table 1, displays RH care utilization of women by socio-economic and demographic characteristics. As table revealed that nearly three fourth (73 percent) of not migrated women, while two third (66 percent) of migrated women have received RH care. RH care utilization is highest (94 percent) in the capital city of Islamabad, followed by Sindh (78 percent) and Punjab (69 percent), KP and GB (57 percent) and lowest percentage is in Balochistan (27 percent).

Table 1: Percentage of women by reproductive health care use according to socio-economic and demographic characteristics. Pakistan 2012-13

		Received Health Care %	Numbers	Total
Migration	Not migrated	72.5	1399	100
	Migrated	65.5	5640	100
Region	Punjab	69.0	4180	100
	Sindh	77.7	1714	100
	Khyber Pakhunkhwa	57.6	1118	100
	Balochistan	27.0	348	100
	Gilgit Baltistan	57.1	56	100
	Islamabad (ICT)	93.8	32	100
Age	15 -24	71.3	1749	100
	25 -34	69.1	4038	100
	35+	58.9	1660	100
Highest educational level	No education	53.1	4155	100
	Primary	77.0	1230	100
	Secondary	87.4	1379	100
	Higher	96.0	682	100
Work status	Working	70.1	5570	100
	Not working	59.1	1957	100
Wealth Status	Poor	50.5	3242	100
	Middle Class	67.5	1454	100
	Rich	87.2	2740	100
Visit to Family Relatives	No participation	65.9	4070	100
	Participated	68.9	3269	100
Household Purchases	No	66.2	4263	100
Purchase	Participation	68.7	3074	100
Health	No participation	65.0	3826	100
	Participated in Decision making	69.6	3511	100
Grouped ethnicity	Urdu	86.3	630	100
	Punjab	72.4	2688	100
	Sindhi	73.0	712	100
	Pushto	59.2	1060	100
	Baloch	41.8	533	100
	Saraiki	63.3	1206	100
	Other	63.2	617	100
Media exposure	No exposure	49.1	2194	100
	Exposure to media	75.0	3935	100
Total		67.3	7448	100

The RH care utilization status declined with the increase in age from 71 percent to 59 percent. Younger women (15-19 years) as compared to older women (35+ years) are more likely to use RH care proving young women are more conscious to receive RH care.

Education is an important indicator of socio economic status (Ali 2010). Only half (53 percent) of the women with no education have received RH care. The RH care increased with the increase in education level of the women from 77 percent with primary education, 87 percent with secondary education and 96 percent with higher education. The data reveals that women's education brings positive changes in the RH care utilization.

Strong association between RH care utilization and work status of woman is observed. The working women are more likely to receive reproductive health care (70 percent) as compared to non working women (59 percent).

The family's wealth status has an impact on utilization of RH care, showing a steady increase from 51 percent in the lowest quintile to 87 percent in the highest quintile. RH care utilization increased with the increase in the wealth.

Not much variation has been found in the RH care utilization of women who have participated in the HH decision making regarding visit to family or relatives, HH purchases and seeking health care for themselves.

Ethnic background of women seems to affect RH care utilization, showing distinct variations from 86 percent health care utilization among women of Urdu speaking families to lowest (42 percent) in Balochi speaking families. It is interesting to note that nearly two third (63 percent) of Saraiki speaking women have received RH care. This finding is understandable in cultural context as different people from different ethnic groups behave differently.

Exposure of media has a great impact on RH Care utilization as the data support that three-fourth (75 percent) of women having media exposure received RH Care.

9.   MULTIVARIATE ANALYSIS

Two models of logistic regression were run for women who utilized RH care. In the first model 'Migration' variable for women was included with dependent as described earlier. In the second model demographic socio-economic characteristics, decision making and exposure to media and ethnicity variables were added in the model 1. The results depicting Adjusted Odds Ratio (AOR) and their 95% confidence limits reflecting the likelihood of use of RH care by women are presented in Table 2 (model 1 and 2).

Table 2: Logistic regression coefficients and effects of migration, demographic and socio-economic factors on having reproductive health care.

	Sig.	Exp(B)	95% C.I.for EXP(B)		Sig.	Exp(B)	95% C.I.for EXP(B)	
			Lower	Upper			Lower	Upper
Migration Status								
Migrated [a]		.722	.634	.822	.007	1.236	1.059	1.443
Not Migrated	000							
Region								
Punjab [a]					.000			
Sindh					.000	1.896	1.556	2.311
Khyber Pakhtunkhwa					.002	.635	.474	.851
Balochistan					.000	.228	.164	.317
Gilgit Baltistan					.619	1.175	.623	2.213
Islamabad (ICT)					.185	3.092	.582	16.423
Age								
15-24 [a]					.000			
25-34					.022	.844	.730	.976
35+					.000	.711	.601	.841
Educational Level								
No Education [a]					.000			
Primary					.000	2.007	1.694	2.377
Secondary					.000	3.050	2.483	3.747
Higher					.000	9.508	6.104	14.811
Work Status								
Not Currently Working [a]					.022	.853	.745	.977
Currently Working								
Wealth Status								
Poor [a]					.000			
Middle					.000	1.645	1.409	1.922
Rich					.000	3.313	2.766	3.968
Participation in Decisions								
No Participated [a]								
Particiapted in Health Seeking Decision					.506	.945	.801	1.116
No Participated [a]								
Participated Household Purchases Decision					.892	1.014	.832	1.236
No Participated [a]								
Participated Visit of Family or Relatives decision					.220	1.122	.933	1.349
Ethnicity								
Urdu [a]					.000			
Punabi					.804	1.039	.769	1.402
Sindhi					.011	1.602	1.115	2.302
Pushto					.010	1.676	1.130	2.486
Balochi					.992	1.002	.694	1.446
Saraiki					.161	1.255	.913	1.725
Other					.934	.985	.687	1.411
Media exposure								
No Media Exposure [a]					.000			
Media Exposure						1.289	1.130	1.470

a   = Reference Category

9.1 Socioeconomic Characteristics of Women

Demographic and Socio-economic factors also affect reproductive health seeking behaviour. Evidence from maternal morbidity and mortality studies in developing countries show that inadequate RH care system characterized by misplaced priorities contributes to high maternal mortality rates. Inaccessibility of essential health information to the women affected the physical as well as economic and socio-cultural well being (Tinker 2005). There are a number of gaps between the law and reality on the ground that contribute to systematically poorer health indicators and integration among the immigrant population (Almeida, Caldas 2013).

9.1.1 Migration Status

Table 2 exhibits positive impact of migration on RH care utilization implying that not migrated women are 0.722 times less likely to use RH care as compared to migrated women and the effect is highly significant. The addition of demographic, socio-economic and decision making variables (model 2) the effect is reversed and it shows negative impact of migration on RH care use. Therefore, when effect of other variables is controlled it is found that not migrated women are 1.236 times more likely to use RH care and results remain significant. This finding is also supported by Tum (1994) who observed that natives use more health care services than the migrants. This proves that the demographic, socio economic status and exposure to media affect the behavior of Pakistani women in obtaining RH care. The magnitude of coefficients is also changed.

9.1.2 Region and Place of Residence.

As compared to Punjab, women from ICT Islamabad and GB are more likely to use RH care (odd Ratios 3.092 and 1.175 respectively). However, the impact is not significant, while women from Sindh are also more likely to receive RH care and the impact is statistically significant. Women living in KP (odds= 0.635) and Balochistan (odds= 0.228) were significantly less likely to use RH care.

9.1.3 Age of Mother

A pattern noted earlier in the bivariate analysis remains intact in the multivariate analysis, that is, older women in the age-group 35+ years are less likely to use RH care compared to the reference category (15-24 years). The adjusted odds of RH use are lower for older and middle age group (odds=0.711 and 0.844 respectively) and this relationship is statistically

significant. Hence the relationship between age and use of RH care is established with certainty.

9.1.4 Women's education

The women's education has been established as one of the strongest and important predictor of socio economic and demographic behavior in Pakistan. (Mahmud 1996; Ali 2000). It plays an important role in changing behavior of population. Initially the odds ratio of having RH care is much higher for highly educated women than those with no education and the results are highly significant. It is concluded that likelyhood of having RH care is maximum among women with higher education and increases with the level of education, also implying that secondary and higher education brings rationality in women's attitude (Ali 2000) and hence educated mothers get more RH care during and after pregnancy.

9.1.5 Women's working status

By doing work women attain better status and decision making power and also have more worldly knowledge to deal with health issues. As expected, there is a positive association showing that non working women are 0.853 times less likely to utilize RH care relative to working women in model 2. This implies that work status of women has good effect on persuasion of women to adopt RH care. The odds ratios are highly significant.

9.1.6 Wealth Quintile

Wealth status is another variable, which may bring differentials in the use of RH care. As anticipated the effect of the wealth quintile on utilization of RH care is found positive and highly significant. According to the odds shown in table 2, utilization of RH care by rich women is 3.313 times and by women in middle wealth quintile it is 1.645 times more likely to adopt than poor women. This shows that with increase in household wealth, opportunities of RH care facilities increases.

9.1.7 Decision Making

Decision making variables are related to empowerment of women. But in the multivariate analysis it was found that decisions relating to 'health seeking', 'household purchases' and 'visit to family or relatives' are not significantly related to the utilization of RH care. This clearly shows that decision making power has no impact on women's use of RH care.

9.1.8 Ethnicity

Kishor and Johnson (2004, 2006) observed that cultural practices vary by context and method of measurement. In Pakistan, the ethnic background of only Sindhi and Pushto women has a significant impact on RH care utilization and these women are more likely (odd Ratios=1.602 and 1.676 respectively) to utilize RH care facilities relative to Urdu speaking women.

9.1.9 Media Exposure

This is an age of information and technology. The means of mass communication influence the views of people. In model 2 media exposure variables was also added. It is found that media exposure is strong predictor of RH care use. As predicted media exposure has positive and statistically significant impact on RH care utilization. The odds ratio of RH care utilization by women who are exposed to media is higher (1.289) than women who are never exposed to radio, TV and Newspapers. It means that the likelihood of RH care use is more for women who are exposed to media than the women having no exposure.

10.   DISCUSSIONS AND CONCLUSIONS

Migration is a multidimensional phenomenon, which can have many positive effects because it expands the opportunities for productive work and leads to a wider perspective on many social issues, among migrants and among the host population. But it can also have negative aspects, dominantly in the nature of work and work conditions and possibilities for abuse of migrant workers by employers and others. Migration has a complex and multi-layered relationship with human development: while conditions of human development in the home country determine both the need for and the nature of economic migration, the process itself generates many and often differing human development effects upon the people left behind and the host population (Ghosh 2009).

Human nature responds to incentives which ultimately improve economic and social well-being. Migration is one of the incentives which yield multidimensional well-being through remittances both in short and long term. The short-term effects include increase in consumption and reduction in poverty and inequality, while the long term effect is socio-economic development i.e. higher earnings, human capital formation including education and health and creation of assets and durable goods (Vidal 1998). PDHS Nepal supported this idea that women who reported that they had at least some say on decisions about their own health care were significantly more likely to report RH care use (ICF, International Nepal 2010).

The delivery care including ANC PNC and Birth by skilled health professional has been advocated as a main factor in reducing the risk of maternal death, therefore it is essential to provide all of them in one package as RH care which ensure the health of the mother.

In our in-depth analysis paper using data from the 2012-13 Pakistan Demographic and Health Survey, we have applied a scope of RH care utilization by women of reproductive ages and examined the levels of service use. Two logistic regression models are fitted to identify factor(s) that influence women's utilization of RH care i.e. birth by Skilled Health Provider (SHP) after receiving antenatal care (ANC), and postnatal care (PNC) both

The results from bivariate analysis indicate that RH care use by mothers for pregnancy and childbirth is associated with their middle age, higher level of education, better wealth status, low birth order, and, to a lesser extent place and region of residence. The picture emerges that not migrated, educated women in higher socioeconomic strata use RH care.

An intriguing finding is that women already having less age are more likely to use RH care than older women after adjusting for education, socioeconomic status, ethnicity and residence. A visible nexus also prevails between migration, education and RH care utilization as less educated women have less orientation in maternal health needs, including active and informed involvement in maternity, childbirth and childcare. Generally women of various ethnic background are not properly equipped to understand the needs, risks of MH complications to support women, thus a need was felt to involve women of all culture and languages in orientation sessions of RH care utilization. Thus it is concluded, in urban areas complementary services can also help to create an environment where the practice of RH care is perceived as a social norm. The most obvious conclusion from the results is that use of RH care depends upon a combination of awareness about and access to maternal health services through media exposure. From findings it can be deduced that improving access to maternal health services, as well as providing women with awareness about the importance of antenatal care, SHP and postnatal care would increase the proper utilization of health services by pregnant women.

Socio-economic and demographic are major determinants of RH care utilization. Successful program implementation to improve the RH care relies on a better understanding of where the gaps are in seeking care along the pathway and what factors contribute to the gaps (Wang and Hong 2015). Rural to urban migrants are relatively lower in knowledge and use of reproductive health care services compared to urban natives.

Strategies that aim improving maternal health service utilization should target migrants so as to improve their women's reproductive health care utilization. The women decision making and ethnicity variables show differences in use of services thus efforts are required to bring about changes to mitigate these differentials. Programmatic efforts should also target the most vulnerable groups identified in our study. To achieve the sustainable development goal of improving health of all includes especially RH of women, for which reduction in maternal mortality is paramount; concerted action is urgently needed promoting increased access to, and utilization of, skilled care for pregnancy, especially for childbirth and the immediate postnatal period.

The present paper has shown that social risk is widely associated with socio-material deprivation and this tends to be reflected in social exclusion from goods and services, including health and education. As migrants with lower social-economic status tend to require more healthcare services. Public health policies must compensate for these inequalities by providing opportunities for good health for all.

11. POLICY IMPLICATIONS

The United Nations Millennium Development Goal 5 (MDG-5) prioritized the health and well-being of all women. Later in 2015 MDGs were further incorporated into an Agenda for Sustainable Development, which not only includes several migration-related targets, but also encourages countries to disaggregate targets by, inter alia, migratory status (UN 2015). This in-depth research provides useful information to identify effect of migration and socio-economic characteristic on RH care utilization. The research findings identified evidence based policies at house hold level.

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