Women Empowerment, Men's Attitude and Modern Contraceptives Use in Pakistan

Abstract

Introduction: Contraception utilization is at a plateau of less than 30% prevalence in Pakistan despite availability of services. It is imperative to understand the social determinants of contraceptive use in Pakistan. The study examines the association of women's socio-economic empowerment and men's attitude towards contraception with modern contraceptive use in Pakistan.

Methods: Male and female data was merged from the Pakistan Demographic Health Survey (2012-13) by their household (n=3182). Bivariate and multivariable logit regression were used to examine the odds ratio of women empowerment and men's attitude on contraceptive use.

Results: Women with greater empowerment were 17% more likely to utilize modern contraceptive methods and the difference was significant (aOR=XXX; %95 CI:1.09, 1.25). Conversely, women living the household of men who reported thinking that women who use contraception become promiscuous were 38% less likely to use modern contraceptive methods (aOR=xxx; %95 CI: 0.42, 0.90).

Conclusion: Women empowerment is positively associated with contraceptive use while men's attitude is negatively associated. Future interventions should target both men and women to improve contraceptive use.

Keywords: Contraceptive, Family Planning, Women Empowerment, Men's Attitude

Introduction

The Pakistan Demographic and Health Survey (PDHS) of 2012-13 reported main indicators of maternal health, that is, maternal mortality ratio of Pakistan is 178 per 100,000 live births, compared to global MMR being 216 per 100,000 live births. The infant mortality rate of Pakistan is 55 per 1,000 live births compared to global being 64.8 per 1,000 live births. ("National Institute of Population Studies (NIPS) [Pakistan] and ICF International. Pakistan Demographic and Health Survey 2012–13. Islamabad: NIPS and ICF International; 2013.,"). The World Bank has reported the total fertility rate of Pakistan to be 3.55 births per woman in 2015 which is still much higher than the world average that is 2.45 births per woman. Comparing to the SDGs targets, Pakistan is far away from achieving the targets.

Most of the modern contraceptive methods allow a good control over birth spacing. Traditionally, there are practices which affect fertility like prolonging breast feeding, sexual abstinence and withdrawal. However, these methods can delay pregnancy but do not give a good control to limiting family size. Modern methods include oral contraceptives (OCPs), intrauterine devices (IUDs), injectable contraceptives, condom and diaphragm. The permanent modern contraceptive practices include tubal ligation and vasectomy. According to 2015 United Nations report, the use of modern contraceptives has somewhat increased from 54% (1990) to 57.4% (2014) ("United Nations (2015). Trends in Contraceptive Use Worldwide, (ST/ESA/SER. A/349),"). Pakistan's Lady Health Worker program in 1990s revived through public-private partnership LHW program and lead to a surge in the contraceptive prevalence rate from 9% (1990) to 32% (2000). Since then the overall contraceptive rate has been at a plateau, being 35%. However, the modern contraceptive utilization is only 26.10% ("National Institute of Population Studies (NIPS) [Pakistan] and ICF International. Pakistan Demographic and Health Survey 2012–13. Islamabad: NIPS and ICF International; 2013.,").

Modern contraceptives are effective method of birth control and preventing a pregnancy. decrease the maternal morbidity and mortality (S. Singh, Darroch, Ashford, & Vlassoff, 2009), resulting in improved national targets of healthy mother and child population. Condom use has dual benefits – it also helps in preventing transmission of HIV (S. Singh, Darroch, & Ashford, 2014). Birth spacing controls population growth, therefore it can impact the environment, food security, poverty, and sustainable development. Compared to the global population growth rate of 1.09, Pakistan's rate of 2.0 could have serious implications.

Acceptability is a major factor affecting contraception use (Jacobs, Bigdeli, Annear, & Van Damme, 2011). Acceptability can be affecting by the concept of masculinity (Brown, Gul, Abbas, Nasar, & Balal, 2017), peer pressure, influence of opiniated leaders, religious beliefs, family acceptance (Belda, Haile, Melku, & Tololu, 2017). Patriarchy being one of the reasons of acceptance for modern contraceptives in many developing countries (Rono, 1998), it is believed that women empowerment and men's acceptance leads to increased healthcare use.

Women's empowerment is defined as 'the expansion of people's ability to make strategic life choices in a context where this ability was previously denied to them' (Kabeer, 2017). Economic empowerment programs for women report an improvement in sexual and reproductive health outcomes at the structural level (Reed, West, Salazar, & Monroy, 2018). It is now being considered to be a significantly associated with contraceptives use ("Blanc, A. K. (2001) The effect of power in sexual relationships on sexual and reproductive health: an examination of the evidence. Studies in Family Planning 32(3), 189–213.,"). A national survey in Pakistan in 2000 found decision autonomy to be significantly associated with contraception use (Saleem & Bobak, 2005). Women's decision autonomy is significantly associated with contraceptive use (Saleem & Bobak, 2005). A literature review article of 46 articles reported

mixed results, majority being from South Asia. Fewer than half of the articles reviewed found significantly positive results between empowerment and current use of contraception. However, only two variables used to measure empowerment were house-hold decision making and mobility (Prata et al., 2017).

A study reported husband and society to be an important factor influencing women's' behavior (Casterline, Sathar, & Haque, 2001). Another study in Indian reported that men do not accept contraception to be their responsibility (Sharma, 2003). Another study in Bangladesh concluded that men who think that contraception makes women promiscuous are less likely to be involved in childcare (Murshid, 2016). A couple counseling intervention for contraception use in India reported to increase equitable attitudes towards household decision making (Fleming et al., 2018). Another intervention study in reported improvement in men's involvement and support towards modern contraceptive use (Stern, Pascoe, Shand, & Richmond, 2015).

A review article suggests that if men are helped to abandon the strict gender stereotyping, it can help women empower and increase their use of health services (Raju, 2001). There is a need to see the association of women empowerment and contraceptive use mediated by men's attitude towards contraception. This is important since most of the health research and programs have previously emphasized on isolated models which have failed due to limited need assessment of clients.

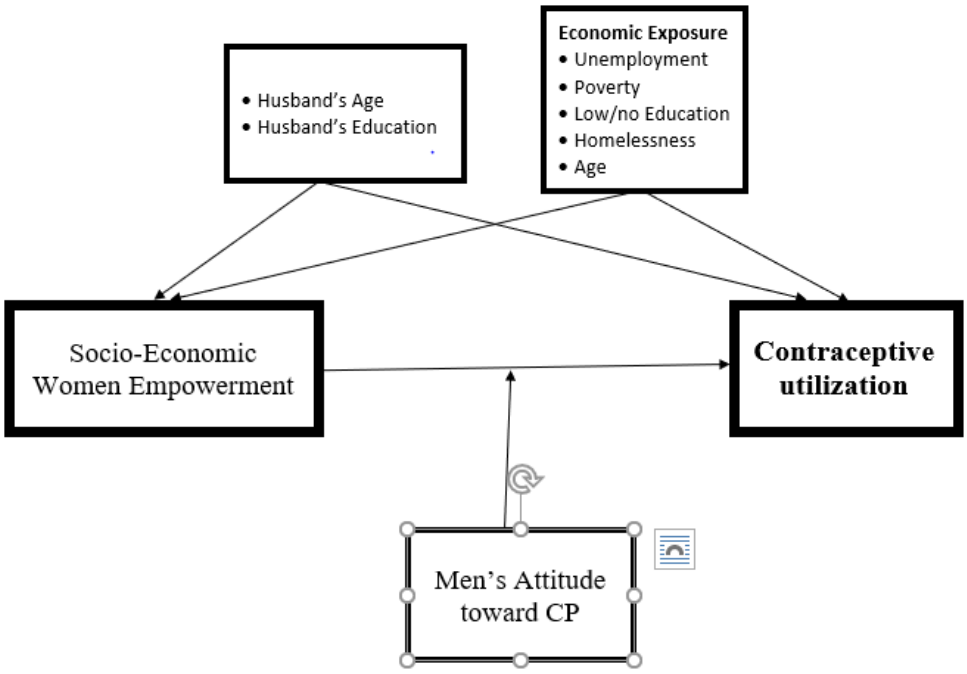
It is now pressingly required to understand the social determinants such as issues around women's empowerment which define the contraceptive use in Pakistan. It is imperative to identify the effect of this gap on women's health and address it accordingly. Most studies have focused on specific models, rather than understanding a wholesome economic landscape

of contraceptive use. This study will identify the social determinants of contraceptives use in Pakistan. This information is important to redirect the focus of healthcare programs. The future health programs targeting maternal and child health should benefit from the recommendations of this research to focus on more pressing determinants. Future interventions should target the couple or men specifically instead of just targeting women.

Conceptual Model

The conceptual model is based on the Theory of Gender and Power by Robert Connell (Connell, 1987). The theory states that financial opportunities result in economic gender equity. This leads to dependence on the husband for her needs including contraceptive purchase. Similarly, decision making control in a woman leads to gender equity in power. Biases pertaining to the expression of sexuality produce cultural norms and firm gender roles. A woman is therefore dependent on her husband's wish to use or not use contraceptive methods. These factors can also affect a woman's mobility, thus, a hinder to her access contraceptive methods. Therefore, lack of these components affects the healthcare use patterns for women.

A woman who is empowered socially and economically at the household level will be more likely to have a better access and affordability of modern contraceptives and therefore more likely to use contraception. However, considering Pakistan is a patriarchal society, if men have negative attitude towards contraception, the women will be less likely to use modern contraception. Economic exposures can be confounders for both women empowerment as well as contraceptive use.



Hypothesis

- Women's empowerment is positively related to contraceptive use.
- Men's attitude towards contraception mediates the effect of women empowerment and contraceptive use

Methods

Setting

Pakistan is a lower to middle income country, being sixth most populous country in the world. The survey was conducted in both urban and rural areas of Pakistan in 2012-13. The survey was implemented by ICF International, funded by United States Agency for International Development (USAID).

Data Sampling

Sampling design was two-stage stratified design. In the first stage, 500 primary sampling units were selected in urban and rural areas. Then 28 households were chosen at each sampling unit through systemic random sampling. Some regions were excluded due to adverse law and order situations.

Sample Selection

The sample size of actual data set was 13558 while the data used for this analysis consisted of 3634 units. The data for individual women and men was merged by their household numbers and unmatched women are not included in the final analysis. Pregnant women were also excluded from the final analysis. The final sample size for analysis was 3182 women.

Measures

Married women aged between 15-49 years were included in the analysis. Men's attitude towards contraception was reported by men aged between 15-59 years in the same household.

Dependent Variable

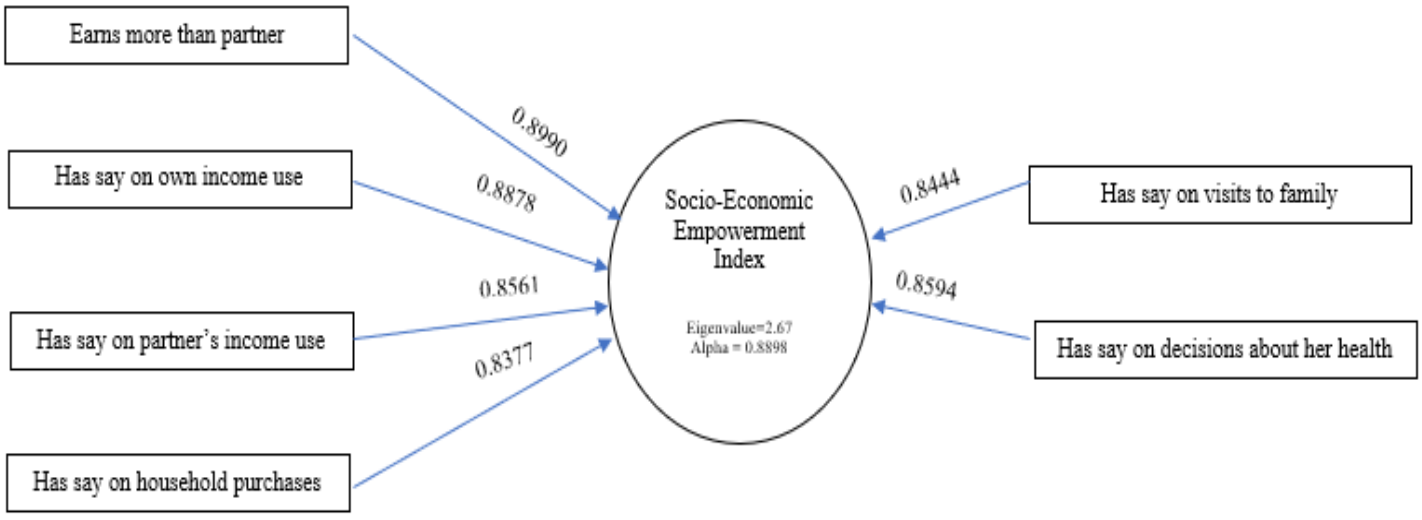
The outcome was current modern contraceptive use. All individual methods listed were recoded to included condoms, OCPs, IUD, injectable contraceptives and sterilization as 'yes=1' and the rest including traditional and folkloric methods as 'no=0'.

Explanatory Variables

Socio-economic Empowerment:

It was measured as a composite scale, ranging from 0 being no empowerment to 6 being highly empowered. The index had two components, the economic and the social components. Using the concepts by Malhotra (Malhotra & Schuler, 2005), economic empowerment is defined as the access to economic resources and participation in economic decisions. The economic aspect was measured by four questions including comparison of her salary with her partner's (recoded=1 if more or equal) and decisions on her income, partner's income and household purchases (recoded=1 if she decided alone or jointly). The social empowerment is defined as the women's freedom of mobility and power balance. Three questions including decisions on visits to family and her own healthcare (recoded=1 if she decided alone or jointly).

All binary questions loaded well on a single factor with an Eigenvalue of 2.67 and Alpha Cronbach of 0.8898 and therefore, all items were added on one index. The similar index was used in a multi-country study which also included perceptions about interpersonal violence (Jennings et al., 2014). However, interpersonal violence was not allowed in this study as the items for interpersonal violence did not load well. It is analyzed on a continuous scale



Men's attitude towards Contraception:

It is measured by two questions that is, if the contraception is women's business only and if the women who use contraception become promiscuous. Both questions were recoded=1 if the men agreed to the statements or were not sure of their opinion and =0 if the men did not agree to the statement.

Men's knowledge of Contraceptive Methods:

Men's knowledge of any contraceptive method is recoded as 1=knowledge of any modern method.

Socio-Demographic Variables

Education, employment, economic involvement, number of living children (Woldemicael, 2010) wealth index (Jejeebhoy, 2000) are associated with women empowerment. Age, education, employment, number of living children (Thapa & Niehof, 2013), and partner's age and education (Ditekemena et al., 2012; Kalembo, Zgambo, Mulaga, Yukai, & Ahmed, 2013; A. Singh & Ram, 2009) are associated with maternal health indicators. The potential confounders included in the multivariate analysis were: age, education, residence, employment status, wealth, property ownership and number of living children. Husband's age and education were also included in the analysis.

Analysis

Data was analyzed using STATA version 12.0. First, the socio-demographic characteristics were reported for the sample. Bivariate analysis by Independent t-Test and Chi-Square test was run by their use of modern contraceptives. The distribution of all items loaded on the socio-economic empowerment index were described and reported by the sample's

contraceptive use. The socio-economic empowerment index was developed after they all loaded well on Factor Analysis with an Alpha-Cronbach of 0.8898. All exposure variables are also reported by the modern contraceptive use by bivariate analysis using Independent t-Test. Bivariate and Multivariate Logistic Regression analysis was carried out on all significant variables. Then an interaction was conducted for the significant exposure variables on the second model. All analysis was weighted, adjusted for differences in the probability of selection from the survey design to correct the variance estimations. All coefficients were considered significant at $p<0.05$.

Direct Effects Model:

$$\textbf{Contraception}=\beta_0+\beta_1\textbf{Socio-economic empowerment}+\beta_2\textbf{Men's attitude I}+\beta_3\textbf{Men's attitude II}+\beta_4\textbf{Men's knowledge}+\beta_5\textbf{Age}+\beta_6\textbf{Education}+\beta_7\textbf{Wealth}+\beta_8\textbf{Living children}+\beta_9\textbf{Partner's education}+\mu$$

Interaction Effects Model:

$$\textbf{Contraception}=\beta_0+\beta_1\textbf{Socio-economic empowerment}+\beta_2\textbf{Men's attitude I}+\beta_3\textbf{Men's attitude II}+\beta_4\textbf{Men's knowledge}+\beta_5\textbf{Age}+\beta_6\textbf{Education}+\beta_7\textbf{Wealth}+\beta_8\textbf{Living children}+\beta_9\textbf{Partner's education}+\beta_{10}\textbf{Socio-economic empowerment*Men's attitude II}+\mu$$

Results

Demographic Characteristics

Table 1 presents the sample socio-demographic characteristics of the sample. There are 3182 women who matched with men in the same household. 27.8% of women use modern

contraceptives in the sample. The sample consists of married women of age between 15 and 49. The mean age is 32.2 (± 8.2) years while the mean age of the husband is 37.0 (±9.7) years. Almost half (46.4%) women lived in urban settings. Almost 60% were not educated at all, while only 30% of the men did not go to school at all. More than a third of women were in the poor quintiles and nearly 30% were working. The mean number of living children per woman is 3.3 (±2.4). The table also shows the socio-demographic characteristics by the modern contraceptive use. On bivariate analysis, the modern contraceptive use was significantly associated with socio-demographic characteristics as well as husband's age and education.

Table 1: Socio-Demographic Characteristics of Respondents			
		Modern Contraceptive Use	
Variable	N = 3182 (%)	No (n=2296)(%)	Yes (n=886)(%)
Modern Contraceptive Use	27.8		
‡ Age (in years)*** (Mean(SD))	2.2 (8.2)	31.3(8.4)	34.0 (7.3)
% Primary Education or Higher ***	40.7	36.2	52.3
% Urban Residence ***	46.4	43.2	55.5
% Working ***	29.4	23.4	31.7
Wealth Quintiles (%)***			
Poorest	17.9	21.0	10.5
Poor	18.4	19.2	16.4
Middle	18.4	18.2	18.8
Rich	21.0	19.8	23.9
Richest	24.3	21.7	30.4
% Property Ownership*** (Mean (SD))	21.2	23.2	15.9
‡ Number of Living Children***	3.3 (2.4)	2.9 (2.5)	4.1 (2.0)
‡ Husband's Age (in years)*** (n=2904) (Mean (SD))	37.0 (9.7)	36.0 (9.8)	39.3 (9.0)
Husband's Education: %Primary or higher (n=1956)	69.8	73.6	68.1
p-value based on chi-square test			
‡ p-value based on t-test			
**p<0.05; ***p<0.01			

Empowerment Characteristics

Table 2 shows the descriptive statistics for the women empowerment indicators by the contraceptive use. Mean for almost all indicators for empowerment is significantly more for contraceptive users than non-users. The weighted mean score of the Socio-economic Empowerment Index is 1.52 ±1.80 for non-users while 2.36(± 1.88) for users, being significantly different for users vs non-users (p-value<0.01).

Table 2: Socio-Economic Determinants of Empowerment among Respondents			
		Modern Contraceptive Use	
Variable	N = 3182 (%)	No (n=2296)(%)	Yes (n=886)(%)
Economic Empowerment Indic ators			
Earns more than partner (n=574)	17.8	16.7	20.1
Has say on own income use (n=573)	82.6	80.71	86.6
Has say on partner's income use (n=2852)	39.4	35.5	48.3
Has say on household purchase (n=2903)	40.9	36.1	51.9
Social Empowerment Indicators			
Has say on visits to family (n=2903)	45.7	57.4	40.6
Has say on decisions about her health (n=2902)	46.8	42.0	57.5
Socio-Economic Empowerment Index – (Out of score of 6) Mean (SD)* **	1.75(1.86)	1.52(1.80)	2.36(1.88)
p-value based on t-test			
*p<0.1; **p<0.05; ***p<0.01			

Men's Attitudes towards Modern Contraceptives

Table 3 presents the description characteristics of male respondents' attitudes towards contraception and the difference by the contraceptive use. 94.3% of men had knowledge about any contraceptive method. 19.4% of men thought that contraception is only woman's business. 11.3% of men thought that women who use contraception became promiscuous. If men had knowledge about contraceptives, 97.2% of women in the household were using contraceptives.

However, if men thought that contraception is only woman's business, 19.4% women in the household were using contraceptives. Only11.3% women in the household were using contraceptives, if men thought that women who use contraception became promiscuous. The proportions were significantly difference (p-value<0.01) for all items.

Table 3: Male Respondents' Attitude Towards Contraception

		Modern Contraceptive Use	
Variables	**N = 3182 (%)**	**No (n=2296)(%)**	**Yes (n=886)(%)**
Men's Knowledge about Contraceptives**	94.3	93.1%	97.2%
Men's attitude towards contraception			
Contraception is woman's business, man should not worry***	24.9	27.1	19.4
Women who use contraception become promiscuous***	17.7	20.1	11.3
p-value based on t-test			
*p<0.1; **p<0.05; ***p<0.01			

Empowerment, Men's Attitude and Modern Contraceptive Use

Table 4 presents the regression models between the exposure and the outcomes. Model I is a crude logistic regression model including all exposure and socio-demographic variables on the contraceptive prevalence in the model. Model II is an adjusted logistic regression model including all exposure and significant socio-demographic variables on the contraceptive prevalence in the model. Model III includes Model II plus an interaction of the significant exposure variables on the contraceptive use.

Socio-economic empowerment index is significantly associated with modern contraceptive use in all models. An empowered woman is significantly 17% more likely to utilize modern contraceptive methods. (%95 CI:1.09, 1.25). If men think that women who use

contraception become promiscuous, the women in the household are significantly 38% less likely to use modern contraceptive methods. (%95 CI: 0.42, 0.90). However, the interaction between both variables is non-significant (OR: 0.99 %95 CI: 0.83,1.19). Men's knowledge about contraceptives and men's attitude that contraception is woman's business are not significantly associated with modern contraceptive use when adjusted for covariates.

Table 4: Regression Model of Modern Contraceptive Utilization (compared to non-utilization)

	Contraceptive Prevalence		
Variables	Model 0 OR (%95 CI)	Model I OR (%95 CI)	Model II OR (%95 CI)
Socio-Economic Empowerment	1.24 (1.18,1.32)***	1.17 (1.09,1.25)***	1.17(1.10,1.26)***
Men's Knowledge about Contraceptives	2.17 (1.21,3.89)***	1.48 (0.74,2.95)	1.48(0.74,2.95)
Men's attitude toward contraceptive practices			
Contraception is woman's business, man should not worry (I)	0.62 (0.48,0.79)***	0.86 (0.62,1.19)	0.86(0.62,1.19)
Women who use contraception become promiscuous (II)	0.48(0.36,0.65) **	0.62 (0.42, 0.90)**	0.62(0.36,1.06)*
Interaction between Socio-Economic Empowerment & Men's Attitude (II)	___	___	0.99 (0.83,1.19)

*p<0.1; **p<0.05; ***p<0.01

p-values, based on logistic regression

Model 0 =

Model 1 = Outcome + Age, Education, Residence, Employment Status, Wealth, Property ownership, number of living children, partner's age and education.

Model II = Model I + Interaction between Socio-economic Empowerment and Men's Attitude Item (II)

OR: Odds Ratio

Discussion

Our study indicates that elder women with more children are likely to use modern contraceptives. This is probably due to family completion in increasing age. Poorer and economically disadvantaged women are less likely to use contraceptives. Less than a third of the women use modern contraceptives in the sample, which is almost the national statistics. However, the modern contraceptive prevalence is 62% for Asia (Alkema, Kantorova, Menozzi,

& Biddlecom, 2013). Those women who use contraceptives are 17% more likely to be empowered than women who don't use contraceptives. This is quite similar to some of the countries reported by a multi-country study seeing the relationship between men's involvement in antenatal care, which is also an indicator of maternal and child health (Jennings et al., 2014).

Key findings indicate that women empowerment is the most important factor in contraceptive use. Studies using similar index is reported to see a positive relation of women empowerment with men's involvement in antenatal care (Jennings et al., 2014). This serves as a good proxy for contraceptive use because of its benefits for the health of mother and the child. A woman is less likely to use contraceptives if men in the household think that using contraception makes a woman promiscuous. Men's attitude towards contraception has been previously reported to be negatively associated with contraceptive use (Brown et al., 2017; Ditekemena et al., 2012). However, there is no interaction between these two factors. This could be due to the fact that the data is merged on the level of the household. Further research involving the couple is recommended.

This is the first study studying the relationship between men's attitude and contraceptive use by a national survey in Pakistan. The study is a national survey and representative of the target population. The results can be generalized. The empowerment index covers the multiple dimensions of women empowerment contributing to economic and social dimensions. However, the study is cross-sectional and does not establish causality. The data is analyzed at the household level, merging the men and women in the same household. It gives a fair idea of how men's attitude in the same household affect the women's use of contraception. However, a couple data would have been a more precise measure of the interpersonal communication and the husband's attitude towards contraception. Women who did not match

with a male member in the same household were excluded from the study. They might have different characteristics than women who were included in the study.

New policies should be formulated and implemented to increase women's economic and social autonomy. Programs targeting economic independence for women and increasing their mobility should be developed. There is an increased need of clearing the myths among men regarding contraceptive use. Health educators should focus on couple counseling as well as peer sessions for male audiences as well. The community health workers program targets only the women at present. It should broaden its target population to involve men. The health education material for family planning should be redesigned to target men. Further research should look deeply into factors underlying men's attitude toward contraception so those could be addressed.

Conclusion

There is a significant positive association between women empowerment and contraceptive use. Men's attitude toward contraception is negatively associated with its use. However, there is no indirect effect of men's attitude on the relationship between women empowerment and contraceptive use. Policy implications should target women empowerment. There is an increased need of clearing the myths among men regarding contraceptive use. Further research should look deeply into factors associated with men's attitude.

References:

Alkema, L., Kantorova, V., Menozzi, C., & Biddlecom, A. (2013). National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis. *The Lancet, 381*(9878), 1642-1652.

Belda, S. S., Haile, M. T., Melku, A. T., & Tololu, A. K. (2017). Modern contraceptive utilization and associated factors among married pastoralist women in Bale eco-region, Bale Zone, South East Ethiopia. *BMC health services research*, *17*(1), 194.

Blanc, A. K. (2001) The effect of power in sexual relationships on sexual and reproductive health: an examination of the evidence. Studies in Family Planning 32(3), 189–213.

Brown, E., Gul, X., Abbas, A., Nasar, A., & Balal, A. (2017). Men's perceptions of child-bearing and fertility control in Pakistan: insights from a PEER project. *Culture, health & sexuality*, *19*(11), 1225-1238.

Casterline, J. B., Sathar, Z. A., & Haque, M. (2001). Obstacles to contraceptive use in Pakistan: A study in Punjab. *Studies in family planning*, *32*(2), 95-110.

Connell, R. W. (1987). Gender and power. Palo Alto. *CA: Stanford University Press Connell, RW (1993): The big picture: Masculinities in recent world history. Theory and Society*, *22*, 597-623.

Ditekemena, J., Koole, O., Engmann, C., Matendo, R., Tshefu, A., Ryder, R., & Colebunders, R. (2012). Determinants of male involvement in maternal and child health services in sub-Saharan Africa: a review. *Reproductive health*, *9*(1), 32.

Fleming, P. J., Silverman, J., Ghule, M., Ritter, J., Battala, M., Velhal, G., . . . Saggurti, N. (2018). Can a Gender Equity and Family Planning Intervention for Men Change Their Gender Ideology? Results from the CHARM Intervention in Rural India. *Studies in family planning*, *49*(1), 41-56.

Jacobs, B., Bigdeli, M., Annear, P. L., & Van Damme, W. (2011). Addressing access barriers to health services: an analytical framework for selecting appropriate interventions in low-income Asian countries. *Health policy and planning*, *27*(4), 288-300.

Jejeebhoy, S. J. (2000). *Women's autonomy in rural India: Its dimensions, determinants, and the influence of context*: na.

Jennings, L., Na, M., Cherewick, M., Hindin, M., Mullany, B., & Ahmed, S. (2014). Women's empowerment and male involvement in antenatal care: analyses of Demographic and Health Surveys (DHS) in selected African countries. *BMC pregnancy and childbirth*, *14*(1), 297.

Kabeer, N. (2017). Economic pathways to women's empowerment and active citizenship: what does the evidence from Bangladesh tell us? *The Journal of Development Studies*, *53*(5), 649-663.

Kalembo, F. W., Zgambo, M., Mulaga, A. N., Yukai, D., & Ahmed, N. I. (2013). Association between male partner involvement and the uptake of prevention of mother-to-child transmission of HIV (PMTCT) interventions in Mwanza district, Malawi: a retrospective cohort study. *PloS one*, *8*(6), e66517.

Malhotra, A., & Schuler, S. R. (2005). Women's empowerment as a variable in international development. *Measuring empowerment: Cross-disciplinary perspectives*, 71-88.

Murshid, N. S. (2016). Mothers' empowerment and father involvement in child health care in Bangladesh. *Children and Youth Services Review*, *68*, 17-23.

National Institute of Population Studies (NIPS) [Pakistan] and ICF International. Pakistan Demographic and Health Survey 2012–13. Islamabad: NIPS and ICF International; 2013.

Prata, N., Fraser, A., Huchko, M. J., Gipson, J. D., Withers, M., Lewis, S., . . . Upadhyay, U. D. (2017). Women's empowerment and family planning: A review of the literature. *Journal of biosocial science*, *49*(6), 713-743.

Raju, S. (2001). Negotiating with patriarchy: addressing men in reproductive and child health. *Economic and Political Weekly*, 4589-4592.

Reed, E., West, B. S., Salazar, M., & Monroy, R. V. (2018). Economic Empowerment to Improve Sexual and Reproductive Health Among Women and Girls *Global Perspectives on Women's Sexual and Reproductive Health Across the Lifecourse* (pp. 297-315): Springer.

Rono, P. K. (1998). Family size preferences and attitudes towards contraceptive use among men: the case of Kaptumo community in Nandi district of Kenya. An analysis of patriarchal implications on fertility regulation.

Saleem, S., & Bobak, M. (2005). Women's autonomy, education and contraception use in Pakistan: a national study. *Reproductive health*, *2*(1), 8.

Sharma, A. (2003). Male Involvement in Reproductive Health: Women's Perspective. *Journal of family welfare*, *49*, 1-9.

Singh, A., & Ram, F. (2009). Men's Involvement during Pregnancy and Childbirth: Evidence from Rural Ahmadnagar, India. *Population review*, *48*(1).

Singh, S., Darroch, J. E., & Ashford, L. S. (2014). Adding it up: The costs and benefits of investing in sexual and reproductive health 2014.

Singh, S., Darroch, J. E., Ashford, L. S., & Vlassoff, M. (2009). Adding It Up: The costs and Benefits of Investing in family Planning and maternal and new born health: Guttmacher Institute.

Stern, E., Pascoe, L., Shand, T., & Richmond, S. (2015). Lessons learned from engaging men in sexual and reproductive health as clients, partners and advocates of change in the Hoima district of Uganda. *Culture, health & sexuality, 17*(sup2), 190-205.

Thapa, D. K., & Niehof, A. (2013). Women's autonomy and husbands' involvement in maternal health care in Nepal. *Social science & medicine, 93*, 1-10.

United Nations (2015). Trends in Contraceptive Use Worldwide, (ST/ESA/SER. A/349).

Woldemicael, G. (2010). Do women with higher autonomy seek more maternal health care? Evidence from Eritrea and Ethiopia. *Health Care for Women International, 31*(7), 599-620.