ORIGINAL ARTICLE

LEVEL OF MALES' PARTICIPATION DURING PERINATAL PERIOD IN RURAL AREAS OF DISTRICT LAYYAH

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Background: Although pregnancy is not a disease but life partner and other family members must realize distress and fatigue caused by the pregnancy to pregnant women. Husbands play a very important role in ensuring healthy pregnancy outcomes. Males are mainly responsible in taking decision regarding health seeking of pregnant women in rural areas of Pakistan. This study aimed to explore the level of males' participation during perinatal period and to assess their knowledge about danger signs of perinatal period in rural areas of District Layyah, South Punjab. **Methods:** A community based cross sectional study on pregnant women and their husbands was undertaken in one union council (UC) of district Layyah. 369 couples were selected using proportionate simple random sampling technique. Three hundred and thirty-five agreed and filled the complete questionnaire. Couples having pregnancy or delivery during last one year were included in the study. Women who were divorced, separated or living away from their spouses were excluded. Structured interviewer administered questionnaire adopted from a Nigerian study was translated into Urdu and used to collect data via home visiting. Ethical approval was taken from IRB and written informed consent from the participants. Data was entered and analysed in SPSS V.16. **Results:** Males' level of participation in domestic chores was 326 out of 335 (97.31%) and their overall level of knowledge regarding danger signs of pregnancy was 135 out of 335 (40.30%).Economic status (Chi square 6.23, *p*-value 0.045) and husband educated more than wife (Chi square 10.20, *p*-value 0.006) were significantly associated with level of knowledge regarding danger signs of pregnancy. Whereas, parity was (Fisher exact test 8.07, *p*-value 0.017) significantly associated with level of males' participation in domestic chores. **Conclusion:** Husbands have high level of participation in domestic chores but moderate level of knowledge regarding danger signs of perinatal period. Males must be educated about danger signs of perinatal period as their active participation can lead to healthy outcome of pregnancy.

Keywords: Perinatal Care, Spouse, Participation, Knowledge

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INTRODUCTION

Although pregnancy is not a disorder, it causes a lot of physical and emotional distress on pregnant women. Life partner and other family members must realize this distress and fatigue. The awareness among husband about this distress can improve the support and assistance during perinatal period.[1]

Husbands play an important role in ensuring better pregnancy outcomes and maternal survival.[2] It is less common to see a male accompanying his wife in antenatal clinic in many African and Asian societies and very unlikely to go with women in labour room during delivery.[3–5] A study found that women's access and utilization of mother and child health services mainly depends on their life partners.[5]

The first person, whom the women tell about conception, is husband or mother in-law in some cases; and these two family members are at centre of healthy pregnancy and its healthy outcome[6] because they are mainly responsible for decision making in the family. Males make most of the decisions regarding any family issue in developing countries like Nigeria, Tanzania, Afghanistan and Pakistan so their participation in safe motherhood related issues can strengthen the relationship of husband and wife and add to mother and child wellbeing.[7–10] Patriarchy put in males with the power to decide about women's utilization of mother and child health services and often determine what is better for their wives.[11]

In different parts of the world, especially in developed countries such as UK and Denmark, spousal participation is common practice during labour and delivery with about 95% attendance.[12] Studies conducted in these developed countries show that women who had continuous spousal labour support are reassured, comforted and emotionally encouraged to overcome pain associated with labour and delivery.[12,13]

A study in Nigeria found that husbands having high educational status seek more advanced medical care for their wives, have more knowledge about danger signs and are more cooperative during the entire pregnancy.[14] A cross-sectional

community based study of Western Kenya revealed that males have limited knowledge about danger signs of delivery and post-natal period.[15] Another study stated that if men were aware of pregnancy's dangerous signs and its management, they could play a vital role in saving mother and child's life.[16] As males are gate-keeper to women health so it is vital for males to be knowledgeable about danger signs of pregnancy, delivery and postnatal period.[17]

A study of Salvadorans reported that 90% fathers participated in either pregnancy, delivery or postnatal period but one third of them participated in all three perinatal sub periods.[2] A cross-sectional study of Western Uganda describes that 97.4% husbands facilitated their spouses for antenatal care, 96.5% paid services bills, 94.6% made arrangements of transport and 72.5% accompanied their wives during last delivery.[18]

Males as a caring father and partner can help to increase maternal health care utilization and improve maternal health outcome through; facilitating in attaining antenatal and postnatal care timely, identification of danger signs of pregnancy, preparing the birth plan, arranging skilled birth attendant, ensuring healthy nutrition and enough rest for their wives during the whole pregnancy and delivery, even during postnatal period, supporting contraceptive use by women.[5,19,20]

Males not only as husbands but also as policy makers, program planners and implementers have great influence not only on the health of their spouses and children but also on the success of any mother and child health program.[21]

Pakistan has third highest burden of mother and child mortality due to haemorrhage, hypertension and infection in perinatal period.[22] Although the antenatal coverage is improved in Pakistan but home deliveries are still more than 50%, among those 60% are in rural areas[23] which required complete family support especially husband of the pregnant lady. There are many reasons for this high percentage of home deliveries; women afraid of going alone to health care professional/unit, less family support especially from husbands, women holding no autonomy of decision making and financial dependency on males.[24] An interventional study carried out in Baluchistan from 1998-2002 concluded that couples who participated in safe motherhood education campaign had high coverage rate of antenatal and postnatal care.[25]

In rural areas of Pakistan males are not allowed to emotionally attach with his wife during pregnancy due to many cultural believes like masculinity, shameful act to sit with wife and cultural norms.[25] Women perform many tasks to contribute in family development. These tasks include fetching of water, child rearing and doing all the domestic work. Additionally, females are expected to share burden of animal and field work with their husbands. When it's time for males to join hands in domestic chores they usually respond to it as a feminine task. Previous studies have documented that male involvement during perinatal period leads to improved maternal health outcomes. However, little is known about male involvement during perinatal period in the rural areas of Pakistan, especially district Layyah, which has a low skilled birth attendance and antenatal coverage rate. Therefore, this study was undertaken to explore the level of males' participation during perinatal period and to assess the knowledge of males about danger signs of perinatal period in rural areas of District Layyah, South Punjab. Here, level of male participation meant assisting wife in perinatal health activities like ensuring TT vaccination and also helping her in domestic chores and paying bills etc.

MATERIAL AND METHODS

A community based cross-sectional study was carried out in Union Council 90-ML of District Layyah from August to December 2014. Women who were pregnant or had delivery in last one year were interviewed along with their husbands. Women who were divorced, separated or whose husbands lived away from home for work purposes were excluded.

Union Council 90-ML was selected conveniently because it had the minimum distance from any perinatal services providing health facility, i.e., 10 kilometres. A list of 20 villages and 4582 pregnant women was obtained from basic health unit and lady health workers of UC.

According to three years rolling plan 2010-2013 of District Layyah married child bearing age women were 16%. One union council has maximum population 30,000. 16% of the 30,000 population of UC was estimated to be 4800 pregnant women. Investigator used the Yamane (1967) simplified formula to calculate sample size for this study. Sample size of 369 couples was estimated by using following parameters; confidence level 95%, level of precision 0.05, i.e., 5%.

Proportionate simple random sampling technique (lottery method) was used to select participants village-wise. Proportions were calculated according to number of pregnant women taken from basic health unit. This sampling technique was used to randomly select the participants to ensure true representation of population and complete coverage of the area.

Table: Proportions of sample from each village according to pregnant women population in each village

Name of Village	Target women population	Sample women
Chak # 80-A/ML	195	16
Chak # 88/ML	226	18
Chak # 87/ML	198	16
Chak # 79/TDA	223	18
Chak # 82/ML	220	18
Chak # 83/ML	262	21
Chak # 84/ML	251	20
Chak # 86/ML	180	14
Chak # 86 Alaf	200	16
Chak # 75/TDA	250	20
Chak # 76/TDA	254	20
Chak # 90 ML	450	36
Chak # 91/ML	246	20
Chak # 92/ML	256	21
Chak # 96/ML	298	24
Chak # 94/ML	185	15
Chak # 80-B/ML	180	14
Chak # 85/ML	201	16
Chak # 77/TDA	182	15
Chak # 95/ML	125	10
	4582	**369**

Pre-structured interviewer administered questionnaire was adapted from Nwakwuo, G. C. and Oshonwoh, F. E. (2013) with some modification. Permission was sought via email prior to use of modified questionnaire. Questionnaire consisted of three main sections. Section one was about demographic information of study participants. Section two had some open ended questions about males' knowledge of danger signs. Section three had questions related to participation in domestic chores and ensuring seeking health care during perinatal period which was asked from pregnant women to avoid information bias. (Males' participation in domestic chores were asked from wives and other questions were asked from husbands).

The changes made in questionnaire were; local ethnic groups names were added, income status was customized in local currency and section of knowledge about danger signs was divided into three sub sections (pregnancy, delivery and post-natal). Questionnaire was translated from English to Urdu. It was pilot tested on 10% of sample size in adjacent Union Council (UC) Chak No. 93/ML. As there were no major changes in the customized questionnaire so it was not tested statistically for construct and content validity. Only language testing was done through expert review and back translation.

Data was collected by investigator by visiting houses of selected pregnant women with the help of lady health workers. Data was entered in SPSS version-16. Age as continuous variable was summarized as mean and standard deviation while the categorical variables were analysed using Chi Square and Fisher Exact test. Data was displayed in the form of pie and bar graphs, frequency tables and percentages. The level of knowledge was classified as good if male knew >3 danger signs, fair if he had knowledge of 2–3 danger signs and poor if had knowledge of 0–1 danger signs. Level of participation was given a score of 0–1 for not at all, 2–3 for not often and 4–5 for often participation. Classification of level of participation was categorized as person achieving score 0-8 (Unsatisfactory), 9–16 (Satisfactory) and 17–25 (highly satisfactory) in five core domestic chores.

Educational status, economic status and parity were reorganized into smaller categories for application of chi square. Education status was dichotomized into less and equal to primary level and more than primary level, economic status into less and equal to 15000 PKR and more than 15000 PKR. Parity was merged into; primipara and primigravid = primipara & gravid, multipara and grand multipara = multi & grand multipara. By merging above mentioned categories numbers of respondents in each category were increased to minimize type-II error.

Proposal was presented in and approved by Institutional Review Board (IRB) of Health Services Academy. A written consent was taken from the participants after explaining the purpose of study, potential benefit and harms. Participation in the study was on voluntary basis and participants had full right to withdraw anytime. Autonomy and confidentiality was highly ensured.

RESULTS

Out of 369 couples, 23 refused to participate and data from 11 couples was incomplete thus final analysis was done on 335 questionnaires. Response rate was (346) 93.76%. Demographic results indicate that mean age of the male participants was 30.31±6.51 years. Majority of the participants were uneducated 89 (26.57%), Muslim 323 (96.42%), Gujjar 128 (38.21%), Farmer 145 (43.28%), belonging to income category 5,001–10,000 PKR 119 (35.52%) and spouses were Primipara 133 (39.70%).

Overall 97.31% (326) males have satisfactory level of participation in five core domestic chores. Female partner was asked to list assistance provided in domestic chores which is presented in figure.1 and 218 (65.07%) males assisted in other chores as well like accompanying spouses to hospital, ensuring adequate nutrition, pay medical bills and ensure necessary treatment. The responses of wives are indicated in figure 2. Males who did not participated in other chores were 34.93% (117). The reasons for not providing any

assistance are presented in figure-3. The knowledge of males regarding danger signs during the three perinatal periods was found to be 102 (30%) in pregnancy, during delivery 100 (30%) and during postnatal period 79 (23%). Common danger sign reported in three periods was bleeding.

Among 102 males 26.47% (36) knew bleeding, 20.59% (28) knew high grade fever and 16.18% (22) swollen hand and face and 36.76% (50) stated abdominal pain, blurred vision, severe headache and convulsion as danger signs of pregnancy. Study indicated 100 males had knowledge of danger signs during delivery; 26% (26) prolonged labour, 25% (25) bleeding, 17% (17) high grade fever, 15% (15) mal-presentation and 17% (17) loss of consciousness, severe headache and convulsion. 79 males had knowledge about danger signs of postnatal period. The known danger signs were; 32.91% (26) severe weakness, 18.99% (15) severe bleeding, 17.72% (14) severe headache, 12.66% (10) malodorous vaginal discharge and 17.72% (14) swollen hand and face, loss of consciousness and uterine prolapsed.

Over all 47.46% (159) participants had fair, 40.30% (135) good and 12.24% (41) poor level of knowledge. Level of knowledge of participants was associated with males being educated more than their spouse (Chi Square = 10.2, df = 2, p-value = 0.006) and their economic status (Chi Square = 6.23, df = 2, *p*-value = 0.045). (Table-1) Level of participation was highly satisfactory 157 (72.02%), satisfactory 55 (25.23%) and unsatisfactory 6 (2.75%). Results showed that parity (Fisher exact test 8.07, *p*-value 0.017) was significantly associated with high level of participation in domestic chores. (Table-2)

Table-1: Respondents level of knowledge regarding danger signs by demographic variables

Variable Name	Category	Level of knowledge			Total	Chi Square	Df	*p*-Value
		Good	Fair	Poor				
Educational status	Less & equal to primary	95 (41.67%)	107 (46.93%)	26 (11.4%)	228	0.781	2	0.677
	More than primary	40 (37.38%)	52 (48.60%)	15 (14.02%)	107			
Economic status	less & equal to 15000	118 (43.54%)	122 (45.02%)	31 (11.44%)	271	6.23	2	0.045
	more than 15000	17 (26.56%)	37 (57.81%)	10 (15.63%)	64			
Parity	Primipara & Gravida	74 (40.00%)	88 (47.57%)	23 (12.43%)	185	0.23	2	0.989
	Multi & Grandmultipara	61 (40.67%)	71 (47.33%)	18 (12.00%)	150			
More educated than spouse (wife)	Yes	53 (31.74%)	90 (53.89%)	24 (14.37%)	167	10.2	2	0.006
	No	82 (48.81%)	69 (41.07%)	17 (10.12%)	168			
Occupational Status	Government Employee	20 (35.09%)	28 (49.12%)	9 (5.79%)	57	11.26	8	0.187
	Private Employee	24 (41.38%)	24 (41.38%)	10 (17.24%)	58			
	Farmer	56 (38.62%)	73 (50.34%)	16 (11.03%)	145			
	Own Business	23 (60.53%)	13 (34.21%)	2 (526%)	38			
	Not Working	12 (32.43%)	21 (56.76%)	4 (10.81%)	37			

Table-2: Respondents level of participation in domestic chores by demographic variables.

Variable Name	Category	Level of participation			Total	Fisher Exact Test Value	df	*p*-Value
		Highly Satisfactory	Satisfactory	Unsatisfactory				
Educational status	Less & equal to primary	170 (74.56%)	50 (21.93%)	8 (3.51%)	228	4.85	2	0.09
	More than primary	72 (67.29%)	34 (31.78%)	1 (0.93%)	107			
Economic status	less & equal to 15000	192 (70.85%)	71 (26.20%)	8 (2.95%)	271	1.17	2	0.59
	more than 15000	50 (78.13%)	13 (20.13%)	1 (1.56%)	64			
Parity	Primipara & Gravida	145 (78.38%)	37 (20.00%)	3 (1.62%)	271	8.07	2	0.017
	Multi & Grandmultipara	97 (64.67%)	47 (31.33%)	6 (4.00%)	64			
More educated than spouse (wife)	Yes	114 (68.26%)	47 (28.14%)	6 (3.59%)	167	2.96	2	0.231
	No	128 (76.19%)	37 (22.02%)	3 (1.79%)	168			
Occupational Status	Government Employee	42 (73.68%)	13 (22.81%)	2 (3.51%)	57	9.93	8	0.209
	Private Employee	40 (68.97%)	16 (27.69%)	2 (3.45%)	58			
	Farmer	101 (69.66%)	40 (27.59%)	4 (2.76%)	145			
	Own Business	25 (65.79%)	12 (31.58%)	1 (2.63%)	38			
	Not Working	34 (91.89%)	3 (8.11%)	0 (0.00%)	37			

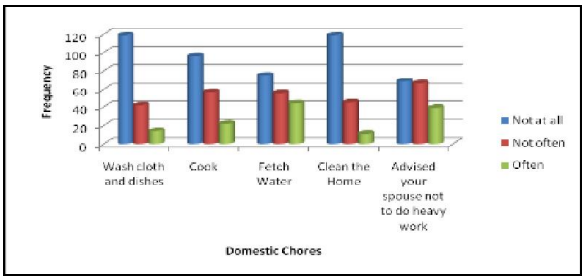

Figure-1: Frequency of males' participation in domestic chores during perinatal period

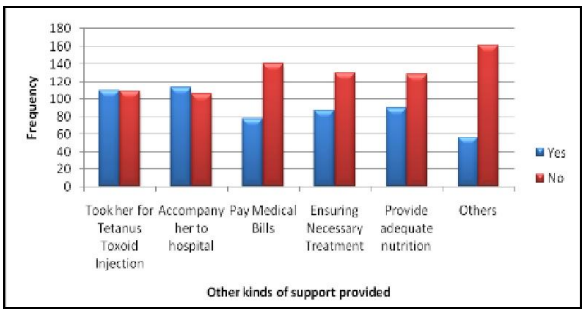

Figure-2: Support provided by males during perinatal period as reported by spouses

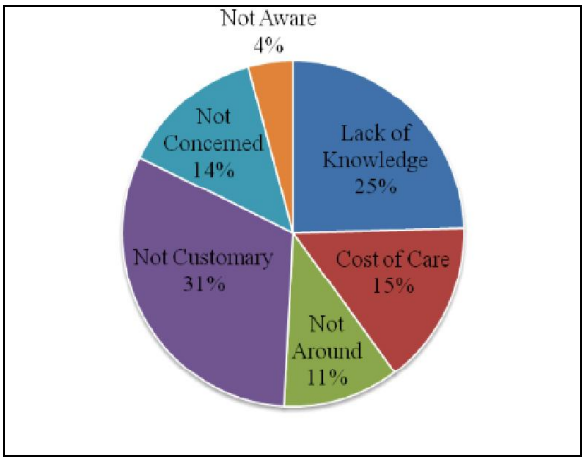

Figure-3: Reasons identified by males' for not providing support during perinatal period

DISCUSSION

The study results indicated majority of the participants mean age was 30.31±6.51 years. They were uneducated 89 (26.57%), Muslim 323 (96.42%), Gujjar 128 (38.21%), Farmer 145 (43.28%), belonging to income category 5,001-10,000 PKR 119 (35.52%) and spouses were Primipara 133 (39.70%). Overall 47.46% (159) participants had fair, 40.30% (135) good and 12.24% (41) poor level of knowledge about danger signs of perinatal period. Common danger sing reported was bleeding. Overall 97.31% (326) males have satisfactory level of participation in five core domestic chores. Reasons for not participating were not customary and lack of knowledge.

This study was planned to explore the males' participation in perinatal period in a rural areas of Punjab. As mentioned in study setting, this area has no health facility in 10 KM diameter except a basic health unit so it was expected that males might participate more in women care. So the assumption became true that 97.25% males have at least satisfactory level of participation. This result might be having some confounding factors which need to be considered.

Age of the participants does not have significant impact on level of knowledge and participation. It was assumed as the age progress, knowledge level might be increased due to life experiences. No other study has described the effect of age on level of knowledge and participation of males in perinatal period.

Although ethnicity and religion was studied to explore the religious believes and cultural norms of particular group but no significant findings were identified in this study regarding these two variables. There were two main religions Islam and Christianity. Only 4% Christian were sample according to their population. Participant belonging to both religions has 30–33% knowledge of danger signs in perinatal period. Other similar studies of Nigeria, Uganda and Nepal did not report any significance of religion with level of knowledge and participation of male.[9,19,20]

This study results revealed that knowledge level of males was good (40.30%) during pregnancy, which was less than the study in Nigeria (54%) and study in Uganda (47%). Similar studies, done in India, Salvador and Nepal indicated limited knowledge of males about danger signs of perinatal period.[2,20,26,28]

Study found level of males' participation during perinatal period (97%) is similar to the findings of studies done in Nigeria (91.7%), Salvador (90.0%), India (98.2%), Osun State (93.9%) and higher than results of Oyo study (72.5%).[2,12,20]

In the present study husbands more educated than their spouse is statistically significant (*p*-value 0.006) with level of knowledge about danger signs. In this study educational status is not significantly associated with level of knowledge and participation but study of Salvador, India and Nigeria found educated husbands having high level of knowledge about danger signs of pregnancy.[2,28,21] Nigerian study described highly educated husbands are more cooperative and supportive to their wives during pregnancy.[21] This might be due to exposure and experience of problem faced by the wives during pregnancies.

Economic status was statistically significant with level of knowledge. It might be due to high economic status husbands got more opportunity to learn about danger signs. Economic status was not statistically associated with level of participation of males in helping

their wives during perinatal period. Satisfactory level of participation was found in participants with economic status more than 15000 PKR. This might be due to husbands having more free time and flexible working schedules.

Occupational status and parity has no effect on husbands' level of knowledge and level of participation in perinatal period. These variables might not be significant due to large number of sub categories which reduces frequencies of each row and cell in contingency table.

Parity level found to have impact on level of participation. This might be because of developing stronger helping relationship among husband and wife.

This study found 35.48% husbands paying medical bills of their spouses which very less than the results of Uganda Study (96.50%) and 51.61% males accompanies their wives to health care facility during perinatal period almost close to the study of Uganda (72.50%).[18] One of the reasons for vary low percentage of paying medical bill could be joint family system. Males directly not have to pay the bills, head of the family; father, mother or brother pays them from family finance.

The reasons for not assisting in domestic chores described in study results are 31% not customary and 25% lack of knowledge. In rural areas males are not supposed to get involved in females matters and this is considered to be totally females' responsibilities. Kenyan study has given this kind of results 45% husbands thought delivery is women's matter and natural process so males have no concern regarding this.[15] Rural culture is a big hindrance in participation of males in care of females during perinatal period.

This study is community-based; its finding can be used as baseline data for further studies. Investigator was familiar with geography and cultural values of the area. Level of participation was asked from wives to avoid information bias.

Due to resources limitation study covers specific population of a Union Council, so the study finding cannot be generalized. There were some recall questions in the questionnaire that is why recall bias may be there.

CONCLUSION

The study indicated that knowledge level is moderate among the participants but high level of participation in domestic chores. Low level of knowledge could be because of lack of awareness about danger signs provided by health care providers and programs. It is suggested that health care providers involve husbands in health education sessions and design material containing messages about danger signs of perinatal period.

AUTHOR'S CONTRIBUTION

MI: Research idea, research designing and conduct and article writing. RK: Intellectual revision and research supervisor

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