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DETERMINANTS OF MALE PARTNER INVOLVEMENT IN ANTENATAL AND POSTNATAL CARE IN BUMULA SUB-COUNTY, KENYA

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Introduction: Men play a significant role in health-seeking behaviour of their families. While determinants of men's involvement in reproductive health matters have been studied, the same are likely to vary on the basis of social context. The objective of this study was to determine socio-demographic, cultural and health facility factors influencing male partner involvement in Antenatal Care (ANC) and Postnatal Care (PNC). Moreover, the study intended to determine perceived benefits of male involvement in ANC and PNC services.

Methods: This was a cross-sectional household survey. Simple random sampling was used to select 398 men and women participants out of 1,716 households in Bumula Sub-County. The men and women interviewed were not necessarily couples. Questionnaires were administered to participants within the households by face-to-face interview. The data collected through the questionnaires were on their sociodemographic, cultural, and health-related factors, and perceived benefits of male involvement in ANC and PNC. Key informant interviews were conducted among 14 health workers.

Results: Participants having college education were more likely to report male involvement (adjusted Odds Ratio (AOR) = 3.25, 95% CI [1.03-10.25], p=0.044) compared to those with no education. Participants who made joint decisions with partners (p<0.0001) and who viewed PNC as necessary (p=0.021) were more likely to report male involvement. Cultural practices were a major impediment to male involvement because of the portrayal of male dominance in roles of financial support and inferiority if a male accompanies a spouse to a clinic.

Conclusion: Education had a favorable influence on male involvement. Cultural practices were a major impediment to male involvement due to its portrayal of male dominance in roles of financial support and inferiority if male accompanies spouse to PNC and ANC. The study recommends intensified health education messaging to increase support for male involvement and a further study to explore specific societal norms and beliefs that undermine male partner participation in ANC and PNC.

Keywords: antenatal care; postnatal care; male partner involvement; socio-demographic, cultural and health facility factors

INTRODUCTION

Male partner involvement in maternal health plays a critical role in women's ability to seek health care, including attending Antenatal Care (ANC) and Postnatal Care (PNC), even though more often than not, they are ill-informed about women's reproductive health needs (Jennings *et al*., 2014). Male involvement in maternal health care is a key determinant of uptake of maternal health care because of the role they play as the final decision makers in their families. (Mangeni *et al*., 2015) Men have a strong influence on women's health and their access to care, the need for male involvement in maternal health services is clear, and male involvement is becoming even more critical in the delivery, and the uptake of maternal health care services (Hounton *et al.*, 2013).

There is low male involvement in ANC and PNC in Kenya. For example, the National Programme Report by the National Aids and STI Control Programme (NASCOP) (2014) estimates that male partner involvement in antenatal clinics in Kenya was 5.1%. In addition, Gathutho (2015) indicated that in Kenyatta National Hospital, only 12% of the women attending ANC and PNC were accompanied by their spouses (Gathutho *et al.,* 2015). To improve men's participation, reasons for their low involvement in ANC and

PNC need to be identified.

There has been increasing attention to men's role in the uptake of maternal health care. Attempts to encourage men to attend ANC and PNC have been made by individual health facilities in Kenya. The attempts to encourage have mixed successes and failures similar to reports from other resource-poor settings (Kululanga, *et al*, 2011). One of the Kenya Ministry of Health (MoH) interventions aimed at increasing the uptake of maternal health services is male involvement in maternal health through reproductive health education interventions targeting MCH clients

There is a need to understand reasons for low male partner involvement. Factors that may be associated with male involvement in ANC and PNC services include socio-demographic, cultural, and health-related factors and perceived benefits to male partner involvement. However, these factors may vary from one context to another. In view of this, it is important to understand what factors are important in a given context. Rural Kenya and specifically in Bumula, where there is a patriarchal society, and where men are the household heads and thus act as providers for their families. Women are expected to take care of their children, and do household chores. In addition, traditional birth attendants provide an important window to local customs, traditions, and perceptions regarding childbirth and newborn care. We conducted a study to determine factors related to male involvement in ANC and PNC in Bumula Sub-County, Kenya.

METHOD

Study design and setting

We conducted a cross-sectional study in July 2016 in Bumula Sub- County, which is in Bungoma County, one of 47 counties of Kenya. Bumula Sub- County is rural and the second most populated sub-county in Bungoma County. Being a rural population, men often migrate to urban areas for economic activities, leaving women and children behind. Approximately, 60% of the population lives below the poverty line, which is higher than the national average of 53% (KNBS, 2009). The main occupation of men and women in Bumula Sub- County is farming. Men are household heads and thus provide for their families. This is from traditional culture intuition. On the contrary, women act as care-givers of their children, and do household chores.

Study subjects and sampling methodology

The inclusion criteria included men and women aged 18 years and above having at least one child aged 2 years or below the age. For a man or woman to be included had to be a resident in Bumula Sub- County, not only that, but also, they had to be willing to participate in the study. Men and women who were sick and not in mental position at the time of the interview were excluded from the study. Sampling

To determine the number of men and women to be included in the study from each ward, population proportioning to size sampling was done. Simple random sampling was used to obtain the households to be included in the study, from which men and women participants were eventually drawn. From the process, 398 participants were drawn from 1716 households across 11 villages. There was no pre-determined number of men and women to be interviewed. This is because interviews were conducted at household level in a home of a participant.

Data collection tools and procedures

Before data collection, a pilot test was conducted in Bumula ward to test the validity and reliability of the research instruments. A structured questionnaire was used in conducting interviews. The tool was used to draw information on socio-demographic variables, cultural variables, health facility variables, perceived benefits and male involvement in ANC and PNC. The Research Assistants (RAs) administered the questionnaires to men and women participants through face-to-face interview in their households.

The key informants consisted of Community Health Extension Workers (CHEWs) based at the health facilities within Bumula Sub- County. We purposively selected 8 male and 6 female CHEWs. Key informant interviews were conducted to complement the quantitative data. Trained in interviews and research ethics, researchers and research assistants collected data through interview guide.

Participant characteristics were analysed descriptive statistics, using of frequencies and percentages. Correlates for male involvement in ANC and PNC among socio-demographic, cultural and health facility factors were done using bivariate analysis. The final multivariate logistic regression analysis was performed by including variables in the bivariate analysis that had a $p < 0.05$. The differences in proportion of male involvement between categorical variables in the health facility, and perceived benefits were compared using chi-square test. Study variables that had a $p < 0.05$ were considered as statistically significant. Data analysis was aided by STATA version 13 for Windows.

Data Analysis

Participant characteristics were analysed using frequencies and percentages. Correlates for male involvement in ANC and PNC among socio-demographic and clinical factors were performed using binary logistic regression. The final multivariate logistic regression analysis was performed by including factors in the binary logistic regression that had a $p < 0.1$. Associations were reported by use of odds ratios for social demographic factors, cultural factors and health facility factors and male involvement in ANC and PNC.

Qualitative data were analysed by thematic analysis. The themes emerged during the analysis. Themes that were analysed under cultural factors included communication among spouses, decision-maker, gender roles, and beliefs. Themes related to perceived benefits included detection of medical complications, confirmation of pregnancy, medical tests, such as HIV, and couple getting faster services.

The cultural variables analysed included culture okays, spouse discussion on number of children, women attending ANC/PNC without permission, men accompanying wives, Men accompanying their wives considered as overpowered,

shameful getting discussed by other men, ANC/PNC was meant for women and children only, the man's role was limited to financial support and to act as the final decision maker.

Variables and measures

The dependent variable was male involvement in ANC and PNC. This variable was measured by asking participants on male involvement. For female participants, they were asked if they had been escorted for ANC and PNC services. For male participants, they were asked if they had accompanied their spouses for ANC and PNC services.

The independent variables were classified as socio-demographic, cultural, Health facility and perceived benefits. The sociodemographic factors included Marital status, Education level, Age, parity and religion. Cultural factors were Planning for the number of children; Permission required to attend ANC and PNC, Gender roles, and Cultural beliefs.

Health factors included Quality of services, Distance to the health facility, Accessibility of health service materials, Attitude of health workers, and Waiting time.

Perceived benefits of male involvement were Provision of financial services, influencing decisions on place of delivery, and HIV testing.

Ethical Considerations

Approval was granted by Maseno University Ethics and Scientific and Review Committee. The researcher respected the privacy and confidentially of the respondents through informed consent process. All respondents read an informed consent form that explained the basic nature of the study and sought the agreement of a respondent to be interviewed.

RESULTS

Background characteristics of study participants

The study included 398 respondents, of whom 52.0% were women and 48.0% were men. Over fifty (50.8%) of participants had primary education, and 114 (28.6%) had secondary education. Two hundred and fourteen (214), over fifty percent (53.8%) of the subjects had children who lived in the same household. Most of the participants (55.8%) had farming as their main occupation (Table 1).

Table 1: Sociodemographic characteristics of study participants (N=398)

Characteristics	Frequency	Percentage
Gender		
Male	191	48.0
Female	207	52.0
Age group		
18-25 years	85	21.4
26-33 years	151	37.9
34-41 years	110	27.6
42-49 years	41	10.3
Above 50 years	11	2.8
Education level		
None	20	5.0
Primary	202	50.8
Secondary	114	28.6
College/higher	62	15.6
Average age of children (years)		
2 and below	154	38.7
3 to 5	148	37.2
above 5	96	24.1
Occupation		
Formally Employed	17	4.3
Businessperson	31	7.8
Casual Labourer	86	21.6
Farmer	222	55.8
None	42	10.6
Religion		
Catholic	136	34.2
Protestant	150	37.7
Muslim	8	2.0
Traditional Church	104	26.1

Of the males interviewed, close to a half, 80 or over forty percent (41.88%) had attended ANC and PNC whereas slightly more than a third, 71(34.30%) of females interviewed were accompanied by their male partners. Participants who were aged 42-49 years, 18(43.90%), and 26-33 years, 62(41.06%) had a higher percentage of male involvement compared to other age groups. Approximately half of the participants who had college education, 31(50.00%) reported male involvement closely followed by participants with secondary education 47(41.23%).

In the adjusted analysis, subjects with college education were more likely to report male involvement in ANC and PNC (AOR = 3.25, 95%CI [1.03-10.25], p=0.044) compared to those with no education. In addition, those with primary and secondary education were also more likely to report male involvement (AOR = 1.67, 95%CI [0.59-4.73]) and (AOR = 2.23, 95%CI [0.77-6.50]) respectively, than participants with no education, but these were not statistically significant. Participants whose average age of children were 2 or below the age were less likely to report male involvement (AOR = 0.60, 95%CI [0.36-0.99], p = 0.048) as compared to those whose children were3 to 5 years (Table 2).

Table 2: Frequencies of cultural variables, including associations with the main outcome

Characteristics	N	Male involvement	UOR (95%CI)	AOR (95%CI)	p-value
Gender					

Male	191	80 (41.9)	*ref.*		
Female	207	71 (34.3)	0.72 (0.48-1.09)		
Age group					
18-25 years	85	24 (28.2)	*ref.*		
26-33 years	151	62 (41.1)	1.77 (0.99-3.14)		
34-41 years	110	42 (38.2)	1.57 (0.85-2.89)		
42-49 years	41	18 (43.9)	1.99 (0.91-4.33)		
Above 50 years	11	5 (45.5)	2.12 (0.59-7.60)		
Education level					
None	20	6 (30.0)	*ref.*		
Primary	202	67 (33.2)	1.16 (0.43-3.15)	1.67 (0.59-4.73)	
Secondary	114	47 (41.2)	1.64 (0.59-4.57)	2.23 (0.77-6.50)	
College/higher	62	31 (50.0)	2.33 (0.79-6.86)	3.25 (1.03-10.25)	**0.044**
Age of children (years)					
2 and below	154	61 (39.6)	*ref.*		
3 to 5	148	43 (29.1)	0.62 (0.39-1.01)	0.6 0(0.36-0.99)	**0.048**
Above 5	96	47 (48.9)	1.46 (0.87-2.45)	1.07 (0.61-1.88)	
Occupation					
Formally	17	11 (64.7)	1.67 (0.48-5.79)		
Employed					
Business person	31	13 (41.9)	0.90 (0.34-2.38)		
Casual	86	24 (27.9)	0.33 (0.34-2.38)		
Labourer					
Farmer	222	87 (39.2)	0.81 (0.40-1.64)		
None	42	16 (44.4)	*ref.*		
Religion					
Catholic	136	53 (38.9)	*ref.*		
Protestant	150	58 (38. 7)	0.98 (0.61-1.59)		
Muslim	8	0 (0.00)	-		
Traditional	104	40 (38.5)	0.98 (0.58-1.65)		
Church					

Cultural factors influencing male involvement in ANC and PNC

Subjects who reported that men should not accompany wives were less likely to report male involvement (UOR = 0.30, 95%CI [0.17-0.53], p <0.0001). Subjects who both were final decision makers were more likely to report male involvement (UOR = 1.85, 95%CI [1.11-3.08], p = 0.019). Participants who were of the view that men should not accompany their wives were less likely to report male involvement (AOR = 0.35, 95%CI [0.19-0.63], p= 0.001). Those who were not sure on whether to accompany their wives were also less likely to report male involvement, but no statistically significant association was observed (AOR = 0.30, 95%CI [0.08-1.07], p = 0.064). Of note, there was no statistically significant association between the final decision maker and male involvement in ANC and PNC (Table 3).

Table 3: Frequencies of cultural variables, including associations with the main outcome

Characteristics	N	Male involvement	UOR (95%CI)	AOR (95%CI)
Culture of spouse to discuss number of children				
Yes	197	81 (41.1)	*ref.*	
No	201	70 (34.8)	0.77 (0.51-1.15)	
Women can attend ANC/PNC without permission				
Yes	282	104 (36.9)	*ref.*	
Not Sure	19	8 (42.1)	1.24 (0.49-3.19)	
No	97	39 (40.2)	1.15 (0.72-1.85)	
Men should accompany wives				
Yes	290	130 (44.8)	*ref.*	*ref.*
Not Sure	16	3 (18.8)	0.28 (0.08-1.02)	0.30 (0.08-1.07)
No	92	18 (19.6)	0.30 (0.17-0.53)	0.35 (0.19-0.63)
Men who accompany wives are considered overpowered				
Yes	83	25 (30.1)	*ref.*	
Not Sure	20	6 (30.0)	0.99 (0.34-2.88)	
No	295	120 (40.7)	1.59 (0.94-2.68)	
Shameful to be discussed by men				
Yes	89	27 (30.3)	*ref.*	
Not sure	22	7 (31.8)	1.07 (0.39-2.93)	
No	287	117 (40.7)	1.58 (0.95-2.63)	
Man's role is financial support				
Yes	199	78 (39.2)	*ref.*	
Not sure	16	6 (37.5)	0.93 (0.33-2.66)	
No	183	67 (36.6)	0.90 (0.59-1.36)	
Meant for *women and children*				
Yes	179	63 (35.2)	*ref.*	
Not sure	20	4 (20.0)	0.46 (0.15-1.44)	
No	199	84 (42.2)	1.34 (0.89-2.04)	
Final decision maker				
Wife	92	27 (29.3)	*ref.*	*ref.*
Husband	40	10 (25.0)	0.80 (0.34-1.87)	0.79 (0.33-1.87)
Both	258	112 (43.4)	1.85 (1.11-3.08)	1.36 (0.79-2.35)
Relatives	8	2 (25.0)	0.80 (0.1-4.23)	0.92 (0.17-5.12)

From the key informant interviews, it was evident that male involvement was also perceived as not culturally acceptable for men in the community. Maternal and Child Health was viewed largely as a woman's responsibility, and it was argued that men who accompany women to MCH would be seen as inferior by the society.

Health facility factors influencing male involvement in ANC and PNC

There was significant association between awareness of interventions in place at health facilities to encourage male participation (p <0.0001). The data also revealed that long waiting times at the health facility coupled with concurrent job demands were the other factors mentioned by key informants as contributing to low male involvement in ANC.

"*Sometimes the woman goes to the health unit for ANC and she ends up spending the whole day at the health facility that is why I cannot attend ANC or accompany her for postnatal care* (KII Male CHEW)

Financial challenges were a major impediment to male participation in ANC and PNC services. It was portrayed that when male partners accompany their wives to a health facility, they were asked by the health care providers to buy most of supplies, and yet they had no money. In the study setting, a male partner is expected to provide financial support to their wife, and inability to do so was perceived as an embarrassment to a male partner. In addition, it was portrayed that men do not escort wives after delivery.

"*When you escort a wife to the health unit, they ask you to buy almost everything, gloves, syringes, yet sometimes we do not have money. That is why I have stopped escorting my wife to avoid embarrassment*" (KII Male CHEW).

"*I have seen few men escort their wives for ANC and delivery but not postnatal care*". (KII Female CHEW).

Perceived benefits of male involvement

The view that men who attend MCH services with wives were given better treatment was expressed by 128(40.63%) compared to those who did not attend as couples 23(27.71%; p = 0.031). Participants who reported joint decision-making on PNC were 151(100.00%) to have male involvement in PNC services (<0.0001). Challenges that hindered male involvement include lacking money for transport 44(50.57%), long waiting time 52 (34.90%), job demand 20(24.10%), long distance 17(43.59%) and cultural taboo 18(45.00% (Table 4).

Table 4: Frequencies of health facility variables, including associations with the main outcome

Characteristics	Male involvement (%)	*p*-value
Aware of Measures that encourage male participation in the nearest health facility		**<0.0001**
Yes	74(49.66)	
No	77(30.92)	
Distance of nearest health facility		0.076
< 5 Km	104(35.37)	
> 5 km	47(45.19)	
Rate accessibility of the health facility		0.773
Friendly	38(39.18)	
Unfriendly	113(37.54)	
Average time spent in facility		0.151
< 30 minutes	139(39.15)	
> 30 minutes	12(27.91)	
ANC necessary to pregnant women		0.33
Yes	149(38.40)	
No	2(20.00)	
Recommended minimum ANC visits		0.063
Twice	0(0.00)	
Thrice	15(28.85)	
Four or more	136(39.88)	
PNC necessary to mothers		**0.021**
Yes	150(39.06)	
No	1(7.14)	
Perceived male benefits		
Men who attend with wives given better treatment		**0.031**
Yes	128(40.63)	
No	23(27.71)	
Made joint decision on PNC		**<0.0001**
Yes	151(100.00)	
No	0(0.00)	
Challenges faced		**0.006**
Lack of money for transport	44(50.57)	
Long waiting time	52(34.90)	
Concurrent job demand	20(24.10)	
Long distance to health facility	17(43.59)	
Cultural taboo	18(45.00)	

DISCUSSION

The objective of this study was to determine the socio-demographic, cultural and health facility factors influencing male partner involvement in ANC and PNC and to determine perceived benefits. We found that male involvement was low as it stood at 37.9% in this rural setting in Kenya. According to the study, education had a favourable influence on male involvement. The Kenya Demographic Health Survey (KDHS) has consistently demonstrated that education is associated with high uptake of services and health

interventions (KNBS & ICF macro, 2014). From this study men and women participants with college education are more likely to report male involvement than participants with no education. Education may influence adopting new values about culture whereby men are likely to be involved in roles traditionally considered for women. We found that tertiary education is likely to have enhanced social communication on matters of ANC and PNC. Therefore, this influences more involvement by men. Other studies have shown that education is associated with higher uptake of services care (Carter & Speizer, 2005). Additionally, a study done to assess male participation in maternity care in a northern Nigeria community found that formal education was an independent predictor of male participation in maternity care (Iliyasu, *et al*, 2010).

Men who hold the view of traditional gender roles are not likely to accompany their partners for ANC and PNC. Traditionally men and women had distinct roles, and childbearing was considered a women's role and not discussed with men. Men who take up female-associated roles are stigmatised in society. From this study, having a positive attitude towards male involvement is likely to increase male participation in ANC and PNC. We found that men who were opposing or not sure of this view were less likely to accompany their wives for ANC and PNC services. This can be argued that having a slight knowledge of why participating in ANC and PNC is necessary as it compels one to be involved. Moreover, if one is subjected to doubt, there will be less or no involvement in ANC and PNC services. The doubt could have arisen due to the nature of the society that is patriarchal. Several studies have reported the negative perception towards involving men in attending ANC and PNC services (Byamugisha, Tumwine, Semiyaga, & Tylleskär, 2010; Reece, Hollub, Nangami, & Lane, 2010; Ditekemena *et al.*, 2012). This is supported by the national male involvement survey that highlights cultural norms and beliefs that do not support male involvement in ANC and PNC, leading to low male involvement (NCPD, 2014).

Awareness of intervention measures have a favourable influence on the uptake of services. Studies have shown that awareness is positively associated with uptake of services (KNBS & ICF macro, 2014). The results reveal that awareness of measures in place in a health facility was associated with male involvement in ANC and PNC services. Similar findings were observed by a cross-sectional study among men in Zambia, which reported that men who were aware of MCH services were more likely to participate (Tshibumbu, 2006). The KII's further supported this by reporting that creating awareness and promotion of services offered when men accompany their wives could lead to more men participating in ANC and PNC services.

The perception that PNC is a necessity for mothers was associated with male involvement in ANC and PNC services in this study. A literature review on maternal health in sub-Saharan Africa reported similar findings (Ditekemena, *et al.*, 2012). The KII's also reported that having health facility workers who are more proactive on male involvement would increase male involvement. Similar findings were observed from a qualitative study conducted in Western Kenya that found that having a male-oriented clinic would increase male involvement (Reece *et al*., 2010).

Knowledge on benefits of male involvement in ANC and PNC is positively associated with male involvement in ANC and PNC. When people know how they and their families can benefit, they are more likely to uptake services. The study indicates that awareness of interventions in place in a health facility increases chances of men participation in ANC and PNC. This was supported by the KII's who had similar views, and further stated that health facilities prioritise patients who come as couples as a way of encouraging male involvement. In-depth interviews collected from health care providers in Malawi suggested that patients who come as couples should be prioritised in getting treatment (Kululanga *et al.*, 2011).

CONCLUSION

Male involvement in ANC and PNC is culturally perceived unacceptable. By-and-large, ANC and PNC services are viewed as purely a responsibility for a woman. It is argued that men who accompany women to MCH would be viewed as inferior in the society. There is significant association between awareness of measures in place at health facility to encourage male participation in ANC and PNC and male participation in ANC and PNC. Long waiting time at the health facility is a factor contributing to low male involvement in ANC. Perceived benefits of male involvement in ANC and PNC include receiving better treatment, and receiving priotised treatment. From accrued benefits of men attending ANC and PNC services, men are likely to participate in ANC and PNC services.

RECOMMENDATIONS

Based on the study results, we recommend intensified health education messaging to increase support for male involvement in MCH services. Health education messaging to address cultural issues that are likely to be barriers to male involvement. The messaging can be on sensitisation on changing gender roles, and encouraging spousal communication on ANC/PNC. Intensified awareness of intervention measures at a health facility to promote male involvement and health promotion awareness forums should market the benefit of male involvement.

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CONFLICT OF INTERESTS

The authors declare that they have no competing interest.

AUTHORS' CONTRIBUTIONS

WIN, LN and BG conceived and designed the study. WIN and FH performed data analysis. WIN took lead on writing the paper. LN and BG critically reviewed the paper.

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