



Determinants Of Male Involvement In Birth Preparedness among Married Men in Two Communities of Rural Northern Nigeria

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KEYWORDS

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ABSTRACT

Background: In rural communities where men have power to determine what their wives do or fail to do, male involvement in birth preparedness reduces the delays that commonly lead to maternal and perinatal deaths. We conducted a cross-sectional study to identify determinants of male involvement in birth preparedness in two rural northern Nigerian communities.

Methodology: A total of 411 married men selected through multi-stage sampling were interviewed using a structured questionnaire. Association between variables was assessed using bivariate and multivariate analyses at $p < 0.05$. Additional information was obtained through focus group discussions (FGDs) and key informant interviews (KIIs).

Results: Male involvement in birth preparedness was low (6.6%). Of the birth preparedness indices, saving money (26.5%) was the commonest while prior arrangement for means of getting safe blood (2.4%) was the least common. On bivariate analysis, male involvement in birth preparedness was significantly associated with the husband's age ($p = 0.016$), number of living children ($p = 0.003$), and husband's income relative to that of wife ($p = 0.004$). On multivariate analysis, male involvement in birth preparedness was independently associated with husband earning less than or equal to his wife (aOR = 2.856, 95% CI = 1.280-6.369). FGDs and KIIs suggested that religious misconception and low economic status of women contributed to low male involvement in birth preparedness.

Conclusion: Level of male involvement in birth preparedness is unacceptably low. It is recommended that efforts to improve male involvement in birth preparedness in such communities need to start empowering women economically and addressing religious misconceptions about birth preparedness.

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INTRODUCTION

Birth preparedness by a couple ensures that appropriate care is received during delivery and reduces the delays that commonly lead to maternal and perinatal deaths. Male involvement (MI) refers to all the care and support that men give to their wives who are pregnant or experiencing the outcome of pregnancy in order to avoid death or

disability from complications of pregnancy and child birth.¹ MI in birth preparedness is indispensable in rural communities where patriarchy prevails. This is because patriarchy invests men with the power to determine what their wives do or fail to do.

Varying levels of men involvement in birth preparedness have been reported in previous

studies. For example, using the data drawn from Nepal Demographic Health Survey of 2006, Vikash and Adhikari showed that more than half of the men in Nepal participated in birth preparedness.² But another study in one Nepalese community showed that up to three-quarters of the couples practiced birth preparedness.³ In both of these studies, a husband was required to have engaged in only one of the listed birth preparedness activities to be regarded as having practiced birth preparedness, which could have caused a spurious increase. The Nigeria Demographic and Health Survey (NDHS) 2008,⁴ did not include birth preparedness to allow for comparison between Nigeria and other countries.

Vikash and Adhikari also studied the determinants of MI in birth preparedness.⁵ They reported that husbands with a minimum of secondary education, those from rich households, and those with more children were all more likely to be involved in birth preparedness. However, wife's autonomy was found to have a negative effect on husband's involvement in birth preparedness. In another study, Mullany et al.³ found that higher women's decision-making power was associated with significantly lower MI in pregnancy care while joint decision-making between a husband and his wife was associated with significantly higher levels of involvement. For each additional decision made jointly with husbands, women were more likely to have experienced a higher level of MI in birth preparedness. This finding was corroborated by a study conducted in Nepal which reported that women who received health education with their husbands were more likely to have reported engaging in birth preparedness activities.⁶

In Nigeria, Recognising the relevance of establishing elements of birth preparedness in the promotion of health seeking behaviour for safe

motherhood, the Federal Ministry of Health of Nigeria launched the birth preparedness plan in 2005.⁷ A number of studies have been conducted to assess the practice of birth preparedness with varied findings. For example, a study done among the men of south-western Nigeria reported that almost three-quarters of married men said they gave prior permission to their pregnant wives to seek care in case of emergencies.⁸ But in the same south-western Nigeria a different study reported that only a quarter of married women studied admitted their husbands did not have to give consent before they would allow any form of intervention to be done on them in emergency obstetric situations.⁹ In northern Nigeria, a study done in a rural community of Kano State reported that only about one-tenth of the men bothered to put in place a decision-making process in case of an obstetric emergency¹⁰

The aim of this study was to assess the level of MI in birth preparedness in two rural northern Nigeria communities, and to identify the factors that influence this practice.

METHODOLOGY

The survey was conducted in Dinya and Garu which are both rural communities with populations of 6206 and 4842 respectively,¹¹ located in Soba and Kudan Local Government Areas, in Kaduna State, north-western Nigeria. They are about 43km apart. Each is governed by a local government council and a traditional institution that commands greater respect from the people. Level of formal education is generally low among the people of the communities, and the main occupation of the men was farming while the women were mostly petty traders. In addition, both men and women engaged in handcrafting, sewing and traditional embroidery. Both communities are typical northern Nigerian communities of the Hausa-Fulani tribe.

Each of the communities has an untarred access road that leads into it. Both are served by patent medicine vendors and their individual Primary Health Care (PHC) centers that were manned by two or three male CHOs, while a female CHO comes once a week to conduct antenatal clinic (ANC). Other maternal health services rendered were occasional normal delivery and patient referral. Their referral health facilities were secondary facilities situated outside the communities.

The survey was the baseline for a dissertation project on male involvement in pregnancy care among married men in rural northern Nigeria. It was done among married men whose wives were pregnant during the survey or less than thirty-six months prior to the survey, and who were permanent residents of the communities. Where an eligible man had more than one wife, only the wife with the most recent history of pregnancy was considered. Any man who had not lived in the same house with his wife three years prior to the survey was excluded.

Both quantitative and qualitative data were collected. The qualitative data were collected to explain the men's practice of birth preparedness in relation to their social and cultural context.¹² For the quantitative component of the study, a multistage sampling technique, as described by Idris et al,¹³ was used to select a representative sample of 411 respondents. They were interviewed using a pretested, structured and coded interviewer-administered questionnaire that was adapted from the questionnaire of the Nepal Demographic and Health Survey.^{5,7} It contained questions on socio-demographics and elements of birth preparedness; to find out whether during their wives' last pregnancy they had engaged in; saving money, decision on place of delivery, arrangement for a

trained birth attendant to take delivery, identification of a specific emergency transportation system or vehicle to use, arrangement for a blood donor or other means of getting safe blood, given prior permission for pregnant wife to seek care in case of emergency. This data collection was done by a team of trained male research assistants; six junior resident doctors and four community health officers.

Data was entered into SPSS Statistics 17.0, cleaned and analyzed. Microsoft Office Excel 2007 was used to construct a barchart. A man was considered to have had good practice of birth preparedness if he answered yes to at least three out of the six practices listed. Associations between practice of birth preparedness and different factors was assessed using Chi-square at $p < 0.05$, and logistic regression was done to identify factors which independently influenced birth preparedness.

In the case of the qualitative data collection, it consisted of two focus group discussions (FGDs) and two key informant interviews (KIIs) in each community. In each community, the two FGDs were conducted separately with men of 18-35 years in one group, and those of 36 years and above in another group. Each group consisted of seven to ten men who were purposively selected to ensure that each group had some degree of homogeneity in terms of age. The participants for the two KIIs (community head in one and leader of community development association in the other) were also purposively selected, here on the basis of their positions in the communities which the researchers assumed would have put them in the best position to understand the issues related to birth preparedness in their communities. The FGDs and KIIs were conducted by the lead author (as the moderator) and one of the research assistants (as the note taker) who were both trained and

experienced in qualitative data collection. They were done using topic guides that mainly covered the following themes: ways through which men get involved in the care of their pregnant wives, how men prepared for delivery of their wives' pregnancy, discussions between husbands and their wives about birth preparedness, extent to which husbands show concern about their wives' health, whether community has any provision to help husbands to practice birth preparedness, factors that determine whether a man will engage in the practice of birth preparedness.

Discussions and interviews were conducted in Hausa. Before each interview, permission was obtained from the participant for the discussions to be recorded (using note taker and tape recorder simultaneously) for the purpose of transcription and analysis. The focus group discussions took place in classrooms of the primary school within each community while the KIIs took place in the key informants' family homes. The locations used were acceptable to all participants.

To minimize data loss, all recordings from qualitative data collection were jointly transcribed, translated, and back-translated by the moderator and note taker, both of whom were native speakers of the language of interview. The data were then presented in prose according to a framework that was derived from the thematic areas, and used to explain the findings of the quantitative data and the contexts in which they occurred.

RESULTS

Quantitative Component

A total of 411 men were interviewed. All of them (and their wives) were Muslim and Hausa-Fulani. Majority of them were aged 30 years and above (with a mean age of 37.3 ± 10.9), had no formal education, and median number of living children

was 5, with a range of 0- 27. Their commonest occupations were farming and petty trading. The rest of the socio-demographic characteristics are shown in Table I.

Table II shows how the men differed from their wives in terms of socio-demographic characteristics; majority of them were at least 10 years older than their wives, had different occupations from those of their wives, earned more money and had more children than them. Almost half of them were of higher educational levels than their wives.

Overall, 27 (6.6%) of the men had good practice of birth preparedness. When the different indices that were used to measure birth preparedness were assessed individually (Figure 1), saving money (26.5%) was the commonest among the respondents, while prior arrangement for means of getting safe blood (2.4%) was the least common.

Associations between the practice of birth preparedness and some factors were also assessed (Tables III, IV and V). On bivariate analysis, statistically significant associations were observed with husband's age ($p=0.047$), their number of living children ($p=0.003$) and the difference between their income and those of their wives ($p=0.004$).

However, after logistic regression to adjust for effect of confounding variables (Table VI), only the difference between the participants' income and those of their wives remained a significant predictor of husband's involvement in birth preparedness. Husbands who earned less than or equal to their wives or who did not know their wives income were almost three times more likely to have good practice of birth preparedness (aOR= 2.856, 95% CI=1.280-6.369).

Table I: Socio-demographic characteristics of the men studied (n=411)

Socio-demographic characteristics	Frequency	Percent
Age (years)		
20-29	103	25.1
30-39	126	30.7
40-49	117	28.5
50-59	45	10.9
60 and above	20	4.9
Highest Level of Education		
No formal education	253	61.6
Primary	65	15.8
Secondary	83	20.2
Tertiary	10	2.4
Occupation		
Unemployed	1	0.2
Petty trading	71	17.3
Civil service	27	6.6
Farming	263	64.0
Others	49	11.9
Number of living children		
0-4	193	47.0
5	218	53.0
Type of marriage		
Monogamy	187	45.5
Polygamy	224	54.5

Table II: Comparison of socio-demographic characteristics of the men and those of their wives (n=411)

Difference between socio-demographic characteristics	Frequency	Percent
Age		
Husband <10 years older	127	30.9
Husband 10 years older	284	69.1
Level of education		
Husband's level higher	184	44.8
Same level	192	46.7
Husband's level lower	35	8.5
Occupation		
Same occupation	68	16.5
Different occupations	343	83.5
Income		
Husband earned more	256	62.3
Earnings were equal	53	12.9
Husband earned less	57	13.9
Don't know	45	10.9
Number of living children		
Husband had more	218	53.0
Husband had same or less	193	46.9

Table III: Practice of birth preparedness by socio-demographic characteristics of men studied
(n=411)

Socio-demographic characteristics	Practice of birth preparedness n (%)		p-value
	Good	Poor	
Age (years)			
<30	12 (11.7)	91 (88.3)	0.016
30	15 (4.9)	293 (95.1)	
Highest Level of Education			
No formal	13 (5.1)	240 (94.9)	0.233
Primary	5 (7.7)	60 (92.3)	
Secondary	7 (8.4)	76 (91.6)	
Tertiary	2 (20.0)	8 (80.0)	
Occupation			
Unemployed or petty trading	4 (5.6)	68 (94.4)	0.702
Employed, farming or running business	23 (6.8)	316 (93.2)	
Type of marriage			
Monogamy	16 (8.6)	171 (91.4)	0.137
Polygamy	11 (4.9)	213 (95.1)	
Number of living children			
0-4	20 (10.4)	173 (89.6)	0.003
5	7 (3.2)	211 (96.8)	

Table IV: Practice of birth preparedness by difference between socio-demographic characteristics of men and those of their wives

(n=411)

Difference between socio-demographic characteristics	Practice of birth preparedness		p-value
	Good	Poor	
Age			
Respondent <10 years older	12 (9.4)	115 (90.6)	0.115
Respondent 10 years older	15 (5.3)	269 (94.7)	
Level of education			
Same or husband higher	24 (6.4)	352 (93.6)	0.617
Husband lower	3 (8.6)	32 (91.4)	
Occupation			
Same occupation	1 (1.5)	67 (98.5)	0.063
Different occupations	26 (7.6)	319 (92.4)	
Income			
Husband earned more	14 (4.5)	294 (95.5)	0.004
Husband earned less, same or wife's unknown	13 (12.6)	90 (87.4)	
Number of living children			
Husband had more	10 (4.6)	208 (95.4)	0.085
Husband has less or same	17 (8.8)	176 (91.2)	

Table V: Practice of birth preparedness by some indices of pregnancy care (n=411)

Variable	Practice of birth preparedness		p-value
	Good	Poor	
Wife's ANC attendance^a			
Yes	14 (12.6)	97 (87.4)	0.888
No	7 (11.9)	52 (88.1)	
Presence at wife's ANC^b			
Yes	4 (11.8)	30 (88.2)	1.000 ^c
No	10 (13.0)	67 (87.0)	
Knowledge of danger signs			
Good	3 (6.8)	41 (93.2)	1.000 ^c
Poor	24 (6.5)	343 (93.5)	
Level of spousal communication			
High	15 (7.4)	189 (92.6)	0.524
Low	12 (5.8)	195 (94.2)	
Level of joint decision-making			
High	0 (0.0)	4 (100.0)	1.000 ^c
Low	27 (6.6)	380 (93.4)	

^aThis included only men whose wives were pregnant during the survey. Here, n=170

^bThis included only men whose wives were pregnant and attending ANC during the survey. Here, n=111

^cFisher's exact test was used here

Table VI: Determinants of practice of birth preparedness among men studied

Characteristics	OR (95% CI)	aOR (95% CI)	p-value
Husband's Age			
<30 years	2.6 (1.2-5.7)	2.2 (0.9-5.2)	0.078
30 years	Referent		
Husband's children			
0-4	Referent	1.4 (0.6-3.4)	0.446
5	2.0 (0.9-4.5)		
Difference in income			
Husband's more	Referent	2.9 (1.3-6.4)	0.010
Husband's less or same	3.0 (1.4-6.7)		

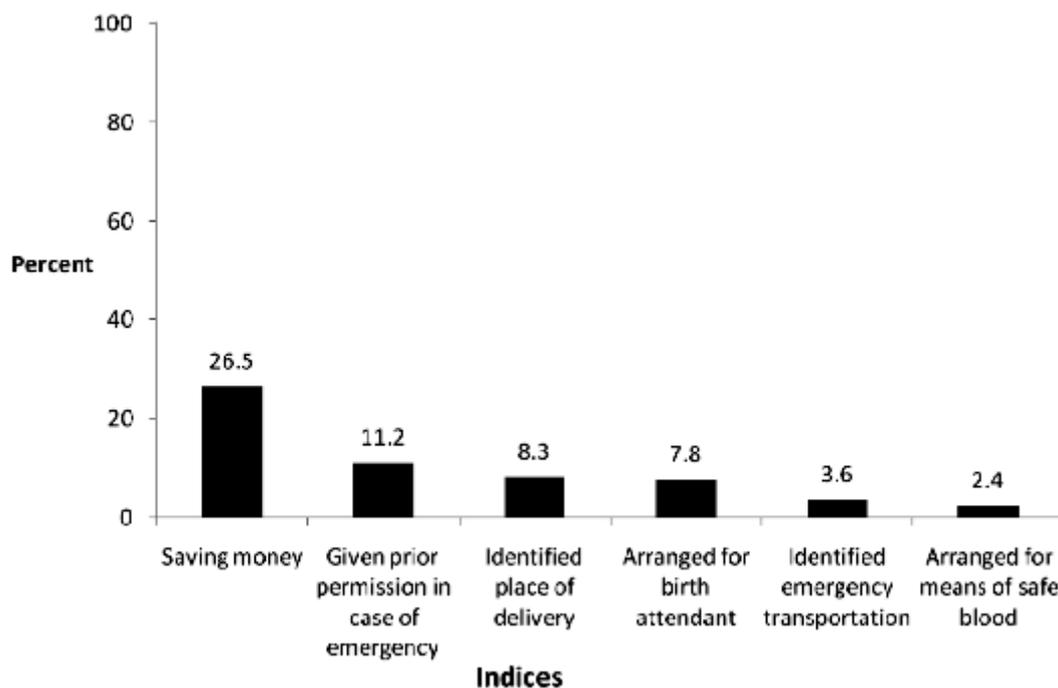


Figure 1: Indices used to assess practice of birth preparedness (n=411)

Note: there were multiple responses

Qualitative Component

Introductory remarks

When asked about health problems among the women of their communities, the men listed some general medical problems, and some problems that are specific to pregnancy; prolonged labour, miscarriage, vaginal bleeding, anaemia, foot swelling, fitting, dizziness, prolonged labour and obstructed labour, and lack of ready transport to health facility in times emergency. One participant mentioned, *“Bleeding in pregnancy which results to death of pregnant women”*.

On the role that husbands play to safe guard their wives' general health, this was said to be best in cases where there was good understanding between a man and his wife, and it was mostly by getting someone to relieve her of household chores, taking care of her upkeep or by taking her to the hospital

and buying all the drugs prescribed. And one participant mentioned that most husbands would only start showing care after a complication has arisen. But on the role played to safe guard the health of their pregnant wives, they mentioned accompanying her to ANC, engaging in household chores, taking care of her basic needs, encouraging her to go for ANC, permitting her to seek health care when ill, taking her to the health facility, donating blood whenever she needed to be transfused and even providing traditional medicines for her to take regularly. But one FGD participant said roles that required a husband's presence was usually difficult to play because husbands had to contend with the business of earning a living for the family.

Practice of birth preparedness and factors influencing it

Between the men and their wives, discussions about birth preparedness were uncommon, because they

mostly preferred to “rely on God” for safe delivery of their pregnant wives. A common notion was that most pregnant women in their communities delivered safely at home making birth preparedness unnecessary. One community head during a KII said, “Discussions about birth preparedness is uncommon in my own house. There were fifteen deliveries here and it was the sixteenth one that had a complication that took her to the hospital”. But few participants agreed they had discussed the need for prior arrangement for transport in case of any obstetric emergencies.

Talking about the individual practices that constitute birth preparedness, most participants agreed that saving money was important. One participant in an FGD said, “For me, I think saving money is the most important preparation”, and the rest agreed to this, but added that it was not easy to keep money for long without spending it. Most husbands prepared only by stocking items like razor blade, cardigan, traditional medicines, firewood, and purchasing ram and food items for naming ceremony. They, however, added that in times of financial need, these items served as savings because they could be sold to raise money. There was not usually prior arrangement for emergency transportation or source of safe blood. Also prior permission for a wife to go to the hospital in times of emergency was not common, so that when emergency sets in permission is granted by the husband, or in his absence, by his own relatives.

They mentioned that younger people were more educated and more inclined towards western practices and so are more likely to engage in birth preparedness. Another factor they mentioned was that a man who loves and/or respects his wife was more likely to engage in birth preparedness. Also they believed that a man could only afford to save money if he has much to spare, stressing that saving money was not easy because they had to feed their families. In addition, prior blood donation was not seen as a

good practice because it either perceived as a sign of “bad wish”. Additionally, prior blood donation was not commonly practised because whenever it turned out that the pregnant women did not need a transfusion, the donated blood was never returned to her relatives, even when they happened to need a transfusion. So they would rather wait to arrange for a donor when it becomes certain that the blood is needed. On a husband giving prior permission for a pregnant woman to seek care during obstetric emergency in the absence of her husband, this was not a common practice, and any assistance from relatives and fellow community members was welcomed only where a husband had given prior permission for it.

Every man catered for his own pregnant wife, and there was no definite arrangement by the community to support or encourage husband's involvement in pregnancy care. Most participants said there was no need for any arrangement by the community because it is always a man's responsibility to care for his wife, and his own friends and neighbours would always come to his aid whenever necessary. Out of their own will, fellow community members used to reduce the burden of spending on a family by giving presents and tokens to the family after delivery.

The participants suggested that all members of a community should be encouraged to save money which would be donated to any individuals and families needing financial assistance to attend to health needs including, obstetric complications. Also communities should be encouraged and guided to form groups that would always assist with transportation for obstetric emergencies. Government should build good roads so that obstetric emergencies could be transported without difficulty. A few mentioned that men would be encouraged to allow their pregnant wives to use health facilities if there are female workers.

DISCUSSION

Overall, this study observed that the men's involvement in the practice of birth preparedness was low, with saving of money being the commonest index and prior arrangement for safe blood the least common. Also men who earned less than or equal to their wives were more likely to be involved in birth preparedness than the others.

Delays in care seeking for obstetric emergencies are a major contributor to maternal death^{14, 15} and birth preparedness helps to remove three of these four delays. When compared with the findings from Nepal,^{13, 5} the lower level of MI in birth preparedness recorded in this study could have been due to the difference between the scoring systems used in the two studies. While this study required a husband to have done at least three out of the six listed activities to be classified as being involved in birth preparedness, the above two studies required him to have done only one of them. Nevertheless, this difference could be because more than half of the participants in the Nepalese studies attained secondary level of education which is far higher than the one-fifth that did so in this study.^{15, 10} In addition, the lower level of involvement among the men in this study could be explained by the findings from the qualitative studies which had most of the husbands insisting that the God who gives pregnancy knows when and how to deliver it safely. All the participants in this study were Muslims in rural areas, so this finding supports earlier reports of misconceptions among such rural communities that Islam commands you to leave all your problems and aspirations to God.¹⁶ This finding suggests a possible advantage in using religious messages to promote the practice of birth preparedness in such communities. Additionally, both quantity and qualitative data from this study demonstrate that the practice of saving money was the commonest

among the birth preparedness practices. This finding is in contrast with the finding of a study in Kano¹⁰ in which, among the main indices, saving was second to arrangement for transportation. Even though the proportions that were saving money in this study and the Kano study were similar, they were both less than those reported from Burkina Faso,¹⁷ Uganda^{18, 19} and Nepal.²⁰ Although the three studies were done among women, and women have been reported to over-state the support that they received from their husbands while the husbands under-state the support they gave.⁻⁹

In this study, only about one-tenth of the men gave prior permission for their wives to seek care in case of obstetric emergency. This is similar to the finding of another study in northern Nigeria where 10.5% put in place a decision-making process in case of an emergency.¹⁰ The proportions in both studies are a far cry from the almost three-quarters reported to be giving permission in south-western Nigeria.⁸ Although, another study in the same south-western Nigeria has reported that only a quarter of the women say their husbands did not have to give consent in emergency obstetric situations before they would allow any form of intervention to be done on them.⁻⁹ These findings indicate the need for campaigns to improve early maternal health care seeking to shift towards educating men on the relevance of giving prior permission for their wife to seek any needed care in case obstetric emergencies.

Again both the Kano study in northern Nigeria,¹⁰ and this one reported less than one-tenth of the husbands identifying a place of delivery for their wives pregnancy, and this is by far lower than the proportion reported from Uganda which is about seven times higher.¹⁹ The practice of identification of skilled attendant showed is similarly higher in the Ugandan study.

The proportion that had identified a means of transportation in case of emergency was low and only about one-eighth of the 24.2% reported from Kano in the same northern Nigeria.¹⁰ This may be because while this study was done in a 100% Hausa-Fulani population, the Kano study had more than one-tenth of its population as non Hausa-Fulani. Similarly, while only about a third of the population in this study had formal education, more than two-third of the population in the Kano study had formal education.

Obstetric haemorrhage is the leading direct cause of maternal deaths in Nigeria, accounting for about a quarter of these deaths.²¹ Just like the study conducted in Kano,¹⁰ this study observed prior arrangement for means of getting safe blood was the least common among the indices. Many of them, however, expressed the willingness to donate if the blood could be available to any other relative if not used by the pregnant woman. Thus, for the campaign to increase prior arrangement for means of getting safe blood to be successful, it may be necessary to adjust the current system of blood donation. For example, if the blood donated for possible transfusion of a pregnant woman is not utilized by her, it should be available in the future for transfusion of the donor or at least a first degree relative in times of need.

It is important to note that the low level of practice of birth preparedness among the men in this study does not necessarily imply a lack of concern among them for the health of their wives, but possibly a pointer to ignorance on what constitutes an indispensable form of birth preparedness. This is because they reported participating in other practices which they perceived by them to be forms of birth preparedness. Examples of the practices which many of them reported engaging in were purchasing prescribed drugs for their wives and even encouraging them to take the drugs,

encouraging her to attend ANC, and taking care of their basic needs such as feeding and clothing. Other practices include stocking items like razor blade, cardigan and traditional medicines firewood, and purchasing ram and food items for naming ceremony. Moreover, they mentioned that in times of financial need, these items were sold to raise money, making them to serve as some forms of savings. These practices have been reported in previous studies.^{1-9,10,19,22}

In this study, husbands who earned same or less than their wives were more likely to have been involved in the practice of birth preparedness than those who earned more. The reason for this could be that wealthier wives in such communities find it easier to sidestep gender-related restrictions in matters that concern their health.²³ Moreover, studies have reported men's description of pregnancy outcome to be compromised.²⁴ This raises the possibility that a wealthier woman could be more assertive in improving her husband's appreciation of the need to prepare against possible obstetric complications. Thus this finding suggests that empowering women of such communities economically could have a positive role to play in improving the involvement of men in the practice of birth preparedness.

This study found that the only factor that independently increased the likelihood of a husband engaging in practice of birth preparedness is the relative level of his income compared to that of his wife. However, previous studies have identified factors like a man's age,^{10,25} employment status,^{5,25} level of education,^{5,10,19,25,26} number of children ever borne,²⁷ and engaging in joint decision with his wife.⁵ In this study, these do not appear to be significant determinants probably due to an overbearing effect of the religious misconception highlighted above.

Overall, the possible influence of religious misconception observed in this study suggests that the decision not to practice birth preparedness among the married men of communities is not entirely based on logic. Thus, interventions to improve practice of birth preparedness in such communities need to start addressing religious misconceptions. Additionally, empowering women of such communities economically could increase their assertiveness and, therefore, increase their ability to sidestep gender-related restrictions in seeking care during obstetric emergencies.

It is important to mention here that this study has two limitations. First, factors like the love between a husband and his wife, whether a man had ever lost a wife or baby due to pregnancy complications, and access to maternal health service could have influenced the extent to which the men got involved in the preparation towards delivery of their wives' pregnancies. Some of these factors were not measured in this study. Secondly, the responses given by the men were not independently verified by interviewing their wives.

Note: *Results of this study were first presented at the 29th Scientific Conference of the Association of Public Health Physicians of Nigeria (APHPN).*

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