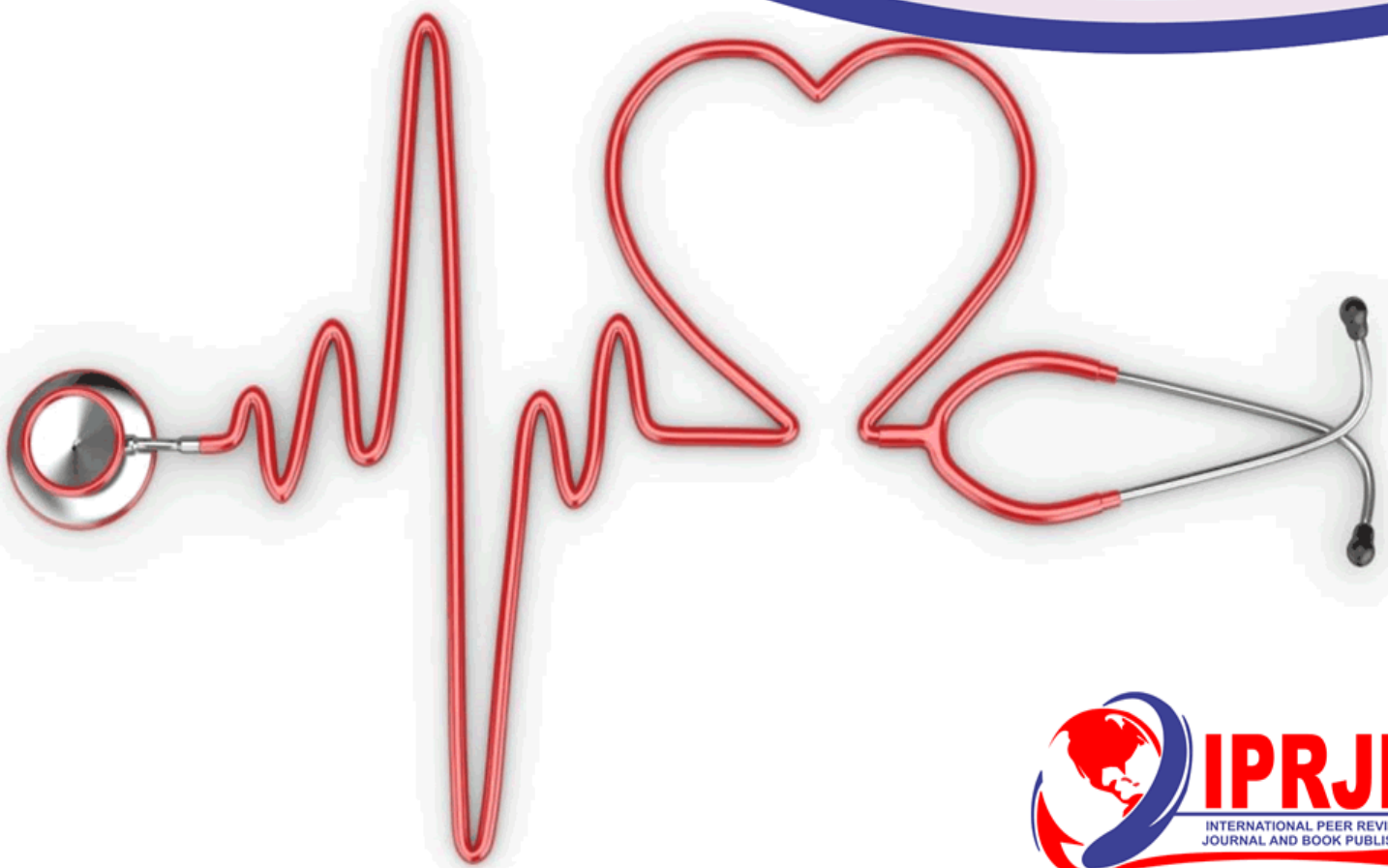


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**MEN KNOWLEDGE/AWARENESS LEVEL ON BIRTH PREPAREDNESS AND
COMPLICATION READINESS IN MAGARINI SUB COUNTY**

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MEN KNOWLEDGE/AWARENESS LEVEL ON BIRTH PREPAREDNESS AND COMPLICATION READINESS IN MAGARINI SUB COUNTY

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Abstract

Purpose: This study sought to find out the knowledge/awareness level of men on birth preparedness and complication readiness in Magarini Sub County.

Methodology: A cross-sectional study sequential mixed methods design was used where a total of 464 men will be enrolled. Quantitative data was collected using semi structured questionnaires and interview guides were used to collect qualitative data. Quantitative data was coded, and analyzed by SPSS software. Chi-square test was used to determine associations between categorical variables and Logistics regression was used to identify factors associated with birth preparedness and complication readiness. The associations between awareness and each independent variable were determined by odds ratio (OR) and 95% confidence interval (CI). Thematic content analysis was applied for qualitative data analysis.

Findings: The result indicated that the odds of pregnancies resulting in a baby that was born alive were 47.306 times higher for more than two pregnancies as compared to one pregnancy (Odds=47.306, p=0.000). The odds of pregnancies resulting in a baby that was born alive were 16.25 times higher for one pregnancies as compared to no pregnancy (Odds=16.25, p=0.000).

Unique contribution to theory, practice and policy: Birth Preparedness and Complication Readiness (BPACR) should be endorsed as an essential component of safe motherhood programs to reduce delays for care-seeking for obstetric emergencies and this has been proven to positively impact on birth outcomes

Keywords: *knowledge/awareness level, birth preparedness, complication readiness, Magarini Sub County*

1.0 INTRODUCTION

Despite great gains in maternal and child health, 3.3 million newborns continue to die each year with 99% of deaths occurring in middle- and low-income countries (Braat, 2018). Various interventions utilize male involvement to improve maternal and child health outcomes (Mwije, 2021) however male involvement in newborn care is a relatively unexplored strategy.

Maternal mortality has decreased worldwide in the last ten years; however, in the Sub-Saharan countries it is still high. The World Health Organization (WHO) estimates that, currently, 287,000 women a year die of preventable complications related to pregnancy and childbirth; the majority of these (99%) occur in developing countries and, out of those, 51% occur in the Sub-Saharan region (Avvisati,2020). The main direct causes of maternal deaths are hemorrhage, hypertensive disorders, infections, prolonged labour and unsafe abortion.

A search of relevant databases for exploratory and intervention studies of male involvement in maternal and newborn health in African contexts published from 2000–2012 was completed. Search results revealed that male involvement interventions involve men in a variety of ways, at different levels of inclusion and use a range of outcome measures (Sahu, 2016).

Reported outcomes of effective strategies to involve men in maternal and newborn health varied and included male attendance at maternal health services, men's knowledge and attitudes, couple communication and relations, and service utilization of men and women such as treatment for sexually transmitted infections and HIV testing (Nguyen,2020). Partner notification is a widely-used strategy at the health facility level with significant results in a number of settings (Kingbo, 2020). Interventions reported positive health behavior change in both men and women including increases in sexual and reproductive health service utilization, condom use, practices to prevent mother to child transmission of HIV, couple communication and reduced loss to follow up (Denno, 2015). Although successful, partner notification can present challenges to increasing male involvement. Men are often reluctant to participate in clinic-based programmes as clinics are seen as women's spaces; better understandings of barriers to male involvement and new tactics to include men in clinic settings are necessary.

Incentives were identified as an effective way to increase male involvement in antenatal care however this strategy was not sustainable and had some negative consequences (Robinson, 2017). For example, a UNICEF-sponsored competition in Malawi offered village chiefs a prize for high male attendance at antenatal care, but village chiefs subsequently discouraged health providers from seeing women who arrived to appointments without their husbands in order to win the prize (Chongole, 2019). An increase in male attendance at antenatal care was achieved at the expense of some women's health.

Programmes addressing couple communication, health education and gender norms which incorporated men into intervention strategies from the beginning, sometimes placing men in leadership roles, were also successful (Greer,2015). In contrast to traditional sexual and reproductive health education programmes which only distribute health information to women by women, these male-inclusive programmes encourage men and women to view each other as equal partners in health and relationships. Positive outcomes were reported in men's sexual and reproductive health knowledge, investment and involvement in antenatal care and attitude changes around gender norms.

As men in many settings, such as in East Africa, hold the financial power in the family and can influence the decision on where women deliver or what to do in case of an emergency, women depend on financial assistance from men for their reproductive and maternal health needs (Gupta, 2015). Ugandan women were more likely to have a birth plan if they were escorted by their partner to the emergency obstetric care, and also if their spouses helped with household chores and childcare (Wang, 2015)

Studies on men's knowledge of danger signs and steps taken for BP/CR are scarce. In Malawi (Diemma, 2019) a study on male perception of birth preparedness and severity of danger signs showed that men would promptly seek care in a health facility if a woman had severe bleeding, convulsions or swelling of hands and feet. Still, a quarter of men would go to traditional healers for care of pregnant women in the case of convulsions. This finding indicates that more efforts are needed to make men understand the severity of pregnancy complications. Therefore, for BP/CR to be effective, men, as well as the whole community, must be empowered with the knowledge of danger signs, in order take appropriate action when labour starts and/or if an emergency occurs.

Strategies for involving men in maternal health services should aim at raising their awareness about emergency obstetric conditions, and engaging them in birth preparedness and complication readiness (Tessemæ, 2021). Spouses to utilize emergency obstetric services early and the couple would adequately prepare for birth and ready themselves for complications. This would lead to a reduction in all three phases of delay and thereby positively impact birth outcomes.

The key elements of the birth plan package include recognition of danger signs, a plan for a birth attendant, a plan for the place of delivery, and saving money for transport or other costs in case the need arises Thokala (2016). In addition, for birth preparedness, a potential blood donor and a decision-maker (in case of emergencies) need to be identified (Bogale, 2015). This is because complications such as hemorrhage are unpredictable and highly fatal if timely treatment is not obtained. This makes this package a very important strategy in developing countries, where obstetric services are poor. The obstetric referrals are women of low status and contribute significantly to maternal and neonatal morbidity and mortality.

2.0 METHODS AND PROCEDURES

The study was conducted in Magarini Sub County which is located in Kilifi County in the former Coast Province of Kenya. It covers an area of 2417.9km² and has an altitude of 0-418m above sea level. The study used a cross sectional survey using mixed methods comprising of both quantitative approach and qualitative in-depth interview and Focus Group Discussions was used in the study over a period of three months from June 2014 to September 2014. Study participants were male partners to women of reproductive age (18 - 49 years) that had a full-term delivery within the previous 24 months preceding the survey. Male opinion leaders were involved in the in-depth interviews. A semi structured questionnaire prepared in English and translated into Kiswahili was used to collect quantitative data. The questionnaire, was developed based on the guidelines of the Safe Motherhood Initiative Birth Preparedness and Complication Readiness matrix of JHPIEGO (affiliate of Johns Hopkins University). Quantitative data was coded, and analyzed by SPSS software. Chi-square test was used to determine associations between categorical variables and Logistics regression was used to identify factors associated with birth preparedness and complication readiness.

The associations between awareness and each independent variable were determined by odds ratio (OR) and 95% confidence interval (CI). Thematic content analysis was applied for qualitative data analysis. The study was conducted after approval of both the Scientific Steering Committee (SSC) of KEMRI and from the Ethical Review Committee (ERC), also by ascertainment of informed verbal and written consent from study participants

3.0 RESULTS

Knowledge Determinants of Men Preparedness and Readiness in Magarini Sub County

The study sought to establish the knowledge/awareness level of men on birth preparedness and complication readiness in Magarini Sub County. The result indicated that the odds of pregnancies resulting in a baby that was born alive were 47.306 times higher for more than two pregnancies as compared to one pregnancy (Odds=47.306, p=0.000). The odds of pregnancies resulting in a baby that was born alive were 16.25 times higher for one pregnancies as compared to no pregnancy (Odds=16.25, p=0.000). The result are in agreement to (Fantaye, 2019) that asserts that maternal mortality remains a public health challenge worldwide, and the global maternal mortality ratio of 342, 900/100,000 live births annually is still unacceptably high.

The result indicated that the odds of pregnancies resulting in a baby that was born dead were 65.667 times higher for more than two pregnancies as compared to one pregnancy (Odds=65.667, p=0.000). The odds of pregnancies resulting in a baby that was born dead were 6.3 times higher for one pregnancies as compared to no pregnancy (Odds=6.3, p=0.002). The results were consistent to (Hodin, 2016) results that indicated that a disproportionately high burden of maternal deaths is borne by developing countries such as Uganda, with a maternal mortality ratio of 432 per 100,000 live births .

Table 1 *Gravidity and parity*

gravidity	Prevalence		N	Chi sig	Regression Results			
	unprepared F (%)	Prepared F (%)			Sig.	OR	95% CI Lower-Upper	
Alive	0	13 68.4%	6 31.6%	19	107.735(0.000)	0.000		
	1	4 11.8%	30 88.2%	34		0.000	16.25	3.917 -67.412
	2 above	18 4.4%	393 95.6%	411		0.000	47.306	16.121-138.818
Dead	1	21 60.0%	14 40.0%	35	158.482(0.000)	0.000		
	2	5 19.2%	21 80.8%	26		0.002	6.3	1.923-20.643
	2 above	9 2.20%	394 97.80%	403		0.000	65.667	25.512-169.026

The result went further to show that the odd of being prepared are 0.013 times lower for those with knowledge compared to those without knowledge (Odds=0.013, p=0.000). The odd of being prepared are 0.0182 times lower for those who were aware of vaginal bleeding as compared to those who were not aware of vaginal bleeding (Odds=0.0182, p=0.000). The odd of being prepared are 0.0105 times lower for those who were aware of severe headache as compared to those who were not aware of severe headache (Odds=0.0105, p=0.000). The odd of being prepared are 0.029 times lower for those who were aware of blurred vision as compared to those who were not aware of blurred vision (Odds=0.029, p=0.000).

This results were consistent to families (Mapunda, 2017) who argued that a key strategy that can reduce the number of women dying from such complications is making a birth plan that constitutes birth-preparedness and complication-readiness measures for pregnant women, their spouses and their

The odd of being prepared are 0.009 times lower for those who were aware of convulsions as compared to those who were not aware of convulsions (Odds=0.0009, $p=0.000$). The odd of being prepared are 0.014 times lower for those who were aware of convulsions as compared to those who were not aware of convulsions (Odds=0.014, $p=0.000$). This results were consistent with (Negi, 2018) findings that indicated that on an estimate more than 600,000 women die due to pregnancy- and birth-related causes in Africa.

The odd of being prepared are 0.014 times lower for those who were aware of swollen hands as compared to those who were not aware of swollen hands (Odds=0.014, $p=0.000$). The odd of being prepared are 0.043 times lower for those who were aware of high fever as compared to those who were not aware of high fever (Odds=0.043, $p=0.000$). The odd of being prepared are 0.07 times lower for those who were aware of higher fever as compared to those who were not aware of high fever (Odds=0.029, $p=0.000$). This results were consistent with (Audet, 2016) findings that indicated that on an estimate more than 600,000 women die due to pregnancy- and birth-related causes in Africa.

The odd of being prepared are 0.09 times lower for those who were aware of difficult breathing as compared to those who were not aware of difficult breathing (Odds=0.09, $p=0.000$). The odd of being prepared are 0.063 times lower for those who were aware of severe breathing as compared to those who were not aware of severe breathing (Odds=0.063, $p=0.000$). The odd of being prepared are 0.073 times lower for those who were aware of severe abdominal pain as compared to those who were not aware of severe abdominal pain (Odds=0.073, $p=0.000$). The odd of being prepared are 0.077 times lower for those who were aware of reduced fetal movement as compared to those who were not aware of reduced fetal movement (Odds=0.077, $p=0.000$). The odd of being prepared are 0.032 times lower for those who were aware of water breaks as compared to those who were not aware of water breaks (Odds=0.032, $p=0.000$). The results are in line to Yaya (2019) findings which asserts that the sub county statistics, Magarini Sub county in Coast Province has MMR of 625 per 100,000 live births.

Table 2: Bivariate Regression Results of knowledge Factors on men preparedness and readiness in Magarini sub county

Knowledge	Prevalence		N	Chi sig	Sig.	OR	95% CI
	Unprepared F (%)	Prepared F (%)					
knowledge	1	10 2.3%	416 97.7%	426	201.3 (0.000)	0.000	0.013 0.005 -0.031
	2	25 65.8%	13 34.20%	38			
Vaginal	1	16 4.3%	352 95.7%	368	26.4 (0.000)	0.000	0.182 0.089-0.37
	2	19 20.0%	76 80.0%	95			
Severe_Headache	1	1 1.1%	94 98.9%	95	7.216(0.007)	0.027	0.105 0.014-0.776
	2	34 9.2%	335 90.8%	369			
Blurred_vision	1	20 4.5%	420 95.5%	440	109.605(0.000)	0.000	0.029 0.011-0.073
	2	15 62.5%	9 37.5%	24			
Convulsion	1	17 3.8%	425 96.2%	442	182.690(0.000)	0.000	0.009 0.003-0.029
	2	18 81.8%	4 18.2%	22			
Swollen_hands	1	21 4.70%	425 95.30%	446	132.455(0.000)	0.000	0.014 0.004-0.047
	2	14 77.8%	4 22.20%	18			
High_fever	1	21 4.8%	417 95.2%	438	84.673(0.000)	0.000	0.043 0.018-0.105
	2	14 53.8%	12 46.2%	26			
Consiousness_loss	1	21 4.9%	410 95.1%	431	61.979(0.000)	0.000	0.07 0.031-0.157
	2	14 42.4%	19 57.6%	33			
Difficult_breathing	1	20 4.7%	402 95.3%	422	52.550(0.000)	0.000	0.09 0.041-0.194
	2	15 35.7%	27 64.3%	42			
Severe_breathing	1	18 4.3%	405 95.7%	423	74.198(0.000)	0.000	0.063 0.029-0.137
	2	17 41.5%	24 58.5%	41			
Severe_abdominalpain	1	19 4.5%	404 95.5%	423	63.911(0.000)	0.000	0.073 0.034-0.16
	2	16 39.0%	25 61.0%	41			
Reduced_foetal_movement	1	21 4.9%	408 95.1%	429	57.181(0.000)	0.000	0.077 0.034-0.173
	2	14 40.0%	21 60.0%	35			
Waterbreak	1	21 4.8%	420 95.2%	441	98.674(0.000)	0.000	0.032 0.012-0.083

4.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATION

Discussions

The study sought to establish the knowledge/awareness level of men on birth preparedness and complication readiness in Magarini Sub County. .The result revealed that married people are 12.125 times more likely to be prepared compared to single people (Odds 12.125,p=0.0000).The results are consistent with the Kenya Demographic Health Survey of 2008/2009 which showed that 66.9% of men in Coast province make decisions about their female partners health care. The result revealed that the odd of being prepared is 21.875 times higher for men with tertiary level of education as compared to illiterate men (Odds=21.875,p=0.000).The odd of being prepared is 8.575 times higher for men with secondary level of education as compared to illiterate men (Odds=8.575,p=0.000).

The odd of being prepared is 14.233 times higher for men with primary level of education as compared to illiterate men (Odds=14.233,p=0.000).The result were in line with (Mwilike, 2018) who asserted that the men echoed decision making thought process acknowledging that when a problem arose during delivery the decision of where the baby would be born was deferred to the husband. Otherwise hospital births were for problems and not for normal deliveries, which could be conducted successfully at home

Conclusions

The odd of being prepared are 0.014 times lower for those who were aware of swollen hands as compared to those who were not aware of swollen hands .The study concluded that the odds of men who acknowledged that when women do not go to a health facility to give birth, it is mainly because it is difficult to get there were 96.572 more as compared to those who did not acknowledge of men who acknowledged that in their community, (doctors/nurses/TBAs) know what kind of care a woman needs during pregnancy, childbirth, and immediately after child birth were 71.197 more as compared to those who did not acknowledge.

Recommendations

The study also recommended that greater attention and efforts are scaled up to address challenges such as low emergency obstetric coverage, poor access to skilled attendance along the continuum of care, lack of community involvement in Maternal Neonatal Health, high unmet need for family planning and the delays in seeking appropriate skilled care

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