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Factors associated with men involvement in child nutrition in health center area of Burundi

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ABSTRACT

Background: Men play a central role in decision making regarding women's and children's health, their involvement in child nutrition has been proven to be essential in the prevention of child undernutrition. In Burundi, nutrition interventions have been introduced to strengthen mothers' knowledge on infant feeding, but no interventions are targeting men specifically. The objective of this study was to analyze the factors of men involvement in child nutrition.

Methods: A cross-sectional analytical study was carried out from July 2023 up March 2024 in health centers of Vumbi health district in Burundi. The study population consisted of 231 men with children aged 6-23 months. A questionnaire downloaded in Kobocollect application was used during data collection and the analysis were performed using Stata 15.

Results: The level of men involvement in child nutrition was 53.68% in the area. The men education level (OR=2.54; CI95%: [1.36-4.75]), men participation in nutrition sessions facilitated by the CHWs (OR=3.29; CI95%: [1.82-5.96]), men knowledge in terms of their involvement in child nutrition (OR=2.00; CI95%: [1.12-3.56]), and women accompaniment to health services (OR=2.30; CI95%: [1.18-4.46]) all with p<0.05 were statistically associated with men involvement in child nutrition.

Conclusions: The men involvement in children nutrition for Muramba health center is low, which demonstrates a flaw in child nutrition with the consequent high rate of malnourished children in the locality.

Keywords: Associated factors, Burundi, Child nutrition, Fathers of children, Health center, Men involvement

INTRODUCTION

Good nutrition allows children to survive, grow, develop, learn, play, participate and contribute to the good healthy while undernutrition robs children of their future and stunts their development with enormous health consequences.¹

In 2020, 149.2 million under five children (22%) suffered from chronic malnutrition globally, with nearly three-quarters of them living in sub-Saharan Africa and southern Asia.²

In Burundi, 56% of under five children were chronically malnourished, 29% underweight and 5% acutely malnourished in 2017.³ Thus, severe acute malnutrition contributes to the mortality of more than 20% of deaths in children under five and represents one of the main threats to child survival less than five years old.⁴

In this regard, reducing undernutrition among children requires several interventions, including the involvement of men in nutrition education to promote adequate complementary feeding practices and good nutrition for children.⁵

However, some feeding and nutrition policies have placed too much emphasis on the role of women by underestimating the potential collaboration and complementarity between men and women. This focus on women forgets the power and privilege that men have to address undernutrition because of their decision-making power in the allocation of resources.⁶

Women are often responsible for food production and preparation, but due to limited access to financial resources in the household, very few women make decisions about their children's health care and nutrition. Men play a central role in decision-making regarding women's and children's health, their involvement in child nutrition has been proven to be essential in the prevention of child undernutrition. §

In 2021, men's participation in child nutrition activities showed that their main responsibility was to provide financial and material support to the household in Madagascar.⁹

In 2022, only 43.1% of fathers had a good participation in child feeding in Ethiopia. Thus, the sex of the small child, the rank in the siblings of the small child, the level of the father's education, the father's nutritional knowledge, the fact of having heard the involvement of men and the father's culture were some of the factors associated with the involvement of men in the nutrition of children.¹⁰

In Uganda, men's knowledge of nutrition is very limited, with less than 40% of men knowing anything about breastfeeding and complementary feeding for children.¹¹

In Rwanda, factors such as communication and decision making in couple, social and peer support, cultural and social gender norms, and male friendly nutrition services were highlighted as drivers of men's involvement in child nutrition. Thus, specific nutritional interventions are very important to reduce wasting and chronic malnutrition in children under five years, but the success of these interventions depends on several factors, including the involvement of men in child care and feeding practices.

In 2022, among the forty-eight health districts of Burundi, 25 health districts were in the "Alert" phase in terms of the severity of acute malnutrition, including Vumbi. The Vumbi health district has a high rate of chronic malnutrition (61.1%) among children under 5 years.¹⁴

Nutrition interventions have been introduced to strengthen mothers' knowledge of infant feeding through the country's health system, but no interventions specifically target men. In addition, many studies have focused on determining factors linked to chronic malnutrition in children, but to our knowledge, no studies have looked at the factors associated with the involvement of men in child nutrition in Burundi. The objective of this study was to analyze the factors

associated with men involvement in child nutrition, to reduce undernutrition in children aged 6 to 23 months.

METHODS

Type and framework of study

This was a descriptive and analytical cross-sectional study aimed at identifying factors associated with men's involvement in child nutrition conducted from July 2023 up March 2024. This study took place in Muramba health center area. It is a public health center, one of the 16 health centers of Vumbi health district with a greater number of children suffering from malnutrition according to data from the database (DHIS-2) of the Ministry of Public health of Burundi. The health center has 8 hills in its area of responsibility. This study was limited to fathers of children aged 6 to 23 months.

Inclusion criteria

Fathers of children aged 6 to 23 months, resident in the survey hills for at least 1 year.

Exclusion criteria

Father with a child aged 6 to 23 months who was seriously ill and unable to communicate, had a mental disorder or refused to answer the questionnaire were excluded.

Sample size

Sampling was conducted using a proportional cluster sampling method. The population of the Muramba health center area is spread over 8 hills and has been taken as clusters. To find the population of men from which the sample was drawn, a list of fathers with children aged 6 to 23 months was compiled using community registers. Fathers of children aged 6 to 23 months were counted and a total of 579 fathers of children aged 6 to 23 months were found. The sample size was calculated using the following formula:

$$n = \frac{Z^2 p (1-p) N}{d^2 (N-1) + Z^2 p (1-p)}$$

N= population size, n= required sample size, d= margin of error at 5 %, Z= standard deviation corresponding to the 5% risk of error; p= prevalence of men involvement in child nutrition. As the prevalence of men involvement in child nutrition is not known, a value of p=0.5 was used. This gave us a sample of 231 fathers of children aged 6 to 23 months.

Assessing the involvement of men in child nutrition

Men's involvement in child nutrition was assessed with 20 questions that encompass the five main areas such as: shared decision-making in child feeding practice

(5 items), physical support to the mother (4 items), psychosocial support (3 items), workload sharing (3 items), financial and resource support (5 items). Of these 20 questions addressed to fathers, scores ranging from 12 and above were considered good involvement of men, while scores varying from less than 12 were considered as non-involvement of men in child nutrition.

Collection techniques and tools

Data collection was carried out using a pre-tested questionnaire, structured and administered by an interviewer to fathers of children aged 6 to 23 months with a smartphone running Kobocollect. To begin, we started from the middle of each targeted hill and used the pen method where the dot indicated the direction of the first household. Then, in collaboration with the Community Health Workers (CHW) who helped us to identify households with children aged 6 to 23 months whose fathers are available, we proceeded from one step to the next until we reached the determined sample on each hill.

Statistical analysis

Descriptive analysis of the variables was done using STATA version 15. Numbers and proportions were calculated for qualitative variables. Univariate analysis was performed to detect the association of each of the explanatory variables and the dependent variable using odds ratios (ORs) and their 95% confidence intervals. To explore the factors that influence men's involvement in child nutrition, multiple logistic regression was used. Significant variables at the 20% level in bivariate were introduced into the multivariate logistic model. The selection of variables to be included in the saturated logistic model was made by the manual step-by-step method descending at the 5% threshold. Variables with a p value <0.05 were considered to be significantly associated with men involvement in the final model.

RESULTS

Description of the study population characteristics

Among the 231 fathers of children aged 6 to 23 months surveyed, 48.92% of the fathers were in the age group of 25-35 years, 66.23% were catholic, 52.81% had a primary level of education, 64.94% had more than 3 children, 56.71% have male young children and 96.54% were monogamous. Over 95% of the men surveyed were farmers. The majority of men (92.64%) surveyed agreed that they supported mothers financially and with resources (Table 1).

With regard to factors linked to the health system (health education) and those linked to knowledge, 56.28% of the men surveyed took part in nutrition sessions run by health centers less than twice a year, while 54.98% took part in nutrition sessions run by community health workers

(CHWs) less than twice a year. The principles of basic nutrition were known by 63.20% of the men surveyed, while the benefits of good nutrition were known by 77.49%. Knowledge of men's involvement in child nutrition was proven by 51.52% of respondents.

Table 1: Distribution of the study population by sociodemographic and economic characteristics.

Characteristics			Percentage	
A C	<25	(N) 16	6.93	
Age of fathers	25-35	113		
(years)	>35	102	48.92 44.16	
(Jears)	Catholic	153	66.23	
Religion of the fathers	Protestant	42	18.18	
	Muslim	16	6.93	
	Without	20	8.66	
	None	84	36.36	
1	Completed	04	30.30	
Father's	primary school	122	52.81	
level of	Completed			
education	high school	25	10.82	
	and above	23	10.02	
	None	107	46.32	
N. 47 1	Completed			
Mother's level of	primary school	112	48.48	
education	Completed			
education	high school	12	5.19	
	and above			
Number of	Less than 3	81	35.06	
children in	children	01	33.00	
the	3 children	150	64.94	
household	and more			
Sex of the	Feminine	100	43.29	
small child	Masculine	131	56.71	
Rank of the	Elder	36	15.58	
small child in	Cadet and more	195	84.42	
the siblings		0		
Polygamous father	Yes	8	346	
latner	No	223	96.54	
5 4 1	Farmer	220	95.24	
Father's	Shopkeeper	4	1.73	
occupation	Civil servant	5	2.16	
	Casual labour	2	0.87	
37.41	Farmer	224	96.97	
Mother's	Shopkeeper	4	1.73	
occupation	Civil servant	2	0.87	
	Other	1 17	0.43	
M41.1	<170.000 BIF	117	50.65	
Monthly	Between 170.000 and	100	47.10	
household income	300.000 and	109	47.19	
nicome	>300.000 BIF	5	2 16	
Financial	>300.000 BIF Yes	214	2.16 92.64	
and resource	168			
support	No	17	7.36	
Support				

With regard to culture-related factors, the vast majority (92.64%) of men surveyed confirmed that decision-making on child nutrition is a joint process. Over 73% of male couples surveyed also shared decisions between spouses. Among our respondents, workload sharing within the household was sometimes done at 86.15%, while men who sometimes support child nutrition were at 84.85%. In terms of healthcare use, over 68% of the men surveyed confirmed that they had never accompanied their wives to health services (Table 2).

Table 2: Distribution of the study population according to health system, knowledge and cultural factors.

Characteristics		Actual (N)	Percentage (%)
Distance from home to health	Less than 5 km	130	56.28
facilities	More than 5 km	101	43.72
Participation in the nutrition	More than 2 times	101	43.72
sessions facilitated at the CDS	Less than 2 times	130	56.28
Participation in nutrition sessions	More than 2 times	104	45.02
facilitated by CHWs	Less than 2 times	127	54.98
Knowledge of	Good	146	63.2
basic nutritional principles	Weak	85	43.72
Knowledge of the	Good	179	77.49
benefits of good nutrition	Weak	52	22.51
Knowledge of	Good	119	51.52
their involvement in child nutrition	Low	112	42.48
Exchange	Yes	170	73.59
between spouses	No	61	26.41
Joint decision-	Yes	214	92.64
making for child nutrition	No	17	7.36
Household	Sometimes	199	86.15
workload sharing	Never	32	13.85
Human social	Sometimes	196	84.85
support for child nutrition	Never	35	15.15
Accompaniment	Never	158	68.4
of women in the	Sometimes	68	29.44
health service	Always	5	2.16

Level of involvement of men in child nutrition

The involvement of men in child nutrition was 53.68% among the 231 fathers of children aged 6 to 23 months surveyed in the CDS Muramba area (Figure 1).

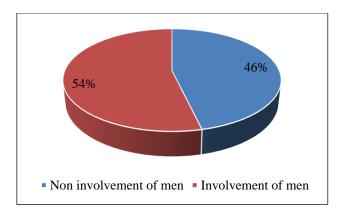


Figure 1: Distribution of respondents according to their involvement in child nutrition.

Factors associated with men involvement in child nutrition

Socio-demographic factors

The analysis of the association between sociodemographic factors shows that the difference was not statistically significant between men involvement in child nutrition and the age of fathers, fathers' religion, mother's level of education, number of children in the household, sex of the small child, the rank of the small child in the sibling group and the polygamous father.

In addition, there is a significant association between men involvement in child nutrition and fathers' level of education (p value <0.05). The involvement in child nutrition is twice as high among men with primary education then men with no education.

Economic factors

Analysis of the association between economic factors and men involvement in child nutrition shows that no factor is significantly associated with men involvement in child nutrition

Factors related to the health system

There is a significant association between men involvement in child nutrition and having participated in nutrition sessions facilitated at health center and by community health workers (p value <0.05). Thus, men who had participated more than twice in nutrition sessions led by community health workers were more than three times more involved in child nutrition than those who had participated less than twice, OR=1.74; 95% CI [1.03 - 2.96]; p=0.038).

Men who attended health center nutrition sessions more than 2 times were more than three times more engaged than those who attended less than twice (OR=3.51; 95% CI [2.02 - 6.08]; p<0.001).

Knowledge factors

The described results show that men with good knowledge of their involvement in child nutrition were more than twice involved than those with low knowledge at the 5% threshold (OR=2.19, 95% CI [1.29-3.71], p=0.003). In contrast, variables such as knowledge of basic nutritional principles and knowledge of the benefits of good nutrition were not statistically associated with men involvement in child nutrition.

Cultural factors

At the 5% threshold, there was a statistically significant association between men involvement in child nutrition and exchange between spouses, joint decision making for child nutrition, household workload sharing, men's social support for child nutrition, and accompanying women to the health service.

Thus, men who exchanged with their spouses were more than twice involved in child nutrition than those who did not (OR=2.66; 95% CI [1.45-4.87]; p=0.001). In addition, men who shared the household workload with their spouses a few times were 3 times more involved in child nutrition than those who never shared (OR=2.95; 95% CI [1.33 - 6.56]; p=0.007).

Men who made joint decision-making on child nutrition with their wives were more than 3 times more likely to be involved in child nutrition than those whose decision was

not made jointly (OR=3.01; 95%CI [1.02-8.83]; p=0.045), while men who accompanied their wives to the health service a few times were about 3 times more likely to be involved in child nutrition (OR=2.93; 95% CI [1.58 - 5.41]; p<0.001).

Predictors of men involvement in child nutrition

The comparison of the general model to the saturated model allowed us to retain the saturated model (low BIC). Thus, after adjusting with other variables, four variables are significantly associated with men involvement in child nutrition (the father's level of education, participation in nutrition sessions led by CHWs, knowledge of their involvement in child nutrition and accompanying women to the health service). Men with primary education were 2 times more likely to be involved in child nutrition than those with no education (OR=.00; 95% CI [1.36-4.75], p=0.004).

In addition, men who participated in nutrition sessions facilitated by community health workers more than twice were more than 3 times more involved in child nutrition (OR=3.29; 95% CI [1.82-5.96]; p<0.001). Men with good knowledge of their involvement in child nutrition were more than twice as likely to be involved than those with low knowledge (OR=2; 95% CI [1.12-3.56]; p=0.019). Finally, men who had accompanied their wives to health services a few times were more than twice as likely to be involved in child nutrition than their counterparts who had never accompanied them (OR=2.30; 95% CI [1.18-4.46]; p=0.014) (Table 3).

Table 3: Predictors of men involvement in child nutrition.

Evolonotowy voniables	Percent	Initial model		Final model		
Explanatory variables		Adjusted OR CI _{95%}	P value	Adjusted OR CI _{95%}	P value	
Father's level of education						
None	31.7	1	0.021	1		
Have completed primary school	59.8	2.09 [1.19-3.67]		2.54 [1.36-4.75]	0.004	
Have completed high school and above	64.0	2.49 [0.99-6.27]		2.00 [0.73-5.48]	0.176	
Participation in nutrition sessions facilitated by CHWs						
Less than 2 times	40.2	1	< 0.001	1		
More than 2 times	70.2	3.51 [2.02-6.08]		3.29 [1.82-5.96]	< 0.001	
Knowledge of their involvement in child nutrition						
Low	43.8	1	0.003	1		
Good	63.0	2.19 [1.29-3.71]		2.00 [1.12-3.56]	0.019	
Accompaniment of women to health services						
Never	46.8	1	<0.001	1		
Sometimes	72.1	2.93 [1.58-5.41]		2.30 [118-4.46]	0.014	
Always	20.0	0.28 [0.03-2.60]		0.29 [0.03-2.80]	0.284	

Table 4: Bivariate analysis of men's non-involvement in child nutrition and the different explanatory variables (n=231).

			Involvemen	Involvement of men in child		
Characteristics		Total	nutrition		P value	
			N (%)	Adjusted OR CI95%		
Age of fathers (years)	18-25	16	9 (56.2)	1		
	25-35	113	49 (43.5)	1.68 [0.58 - 4.83]	0.564	
	35 and older	102	49 (48.0)	1.39 [0.58 - 4.83]		
Religion of the fathers	Catholic	153	64 (41.8)	1	0.301	
	Protestant	42	23 (54.8)	0.59 [0.30 - 1.18]		
	Muslim	16	9 (56.3)	0.56 [0.20 - 1.58]		
	Without	20	11 (55.0)	0.59 [0.23 - 1.50]		
	None	84	35 (31.7)	1		
Father's level of	Have completed primary school	122	73 (59.8)	2.09 [1.19 - 3.67]	0.021	
education	Have completed high school	25	16 (64.0)	2.49 [0.99 - 6.27]	0.021	
	and above	23	10 (04.0)	2.49 [0.99 - 0.27]		
	None	107	52 (48.6)	1	_	
Mother's level of	Have completed primary school	112	63 (56.3)	1.36 [0.80 - 2.32]	0.179	
education	Have completed high school and above	12	9 (75.00)	3.17 [0.81 - 12.37]	0.175	
Number of children in	3 children and more	150	76 (50.7)	1	0.070	
the household	Less than 3 children	81	31 (38.6)	1.66 [0.96 - 2.87]	0.070	
Car of the amall abild	Feminine	100	51 (51.0)	1	0.475	
Sex of the small child	Masculine	131	73 (55.7)	1.21 [0.72 - 2.04]	0.475	
Rank of the small child	Cadet and more	195	104 (53.3)	1	0.006	
in the siblings	Elder	36	20 (55.5)	1.09 [0.54 - 2.24]	0.806	
D-1	Yes	8	4 (50.0)	1	0.831	
Polygamous father	No	223	120 (53.8)	1.17 [0.28 - 4.78]		
	Farmer	220	119 (54.1)	1	0.817	
Eath and a musfaceion	Shopkeeper	4	2 (50.0)	0.85 [0.12 - 6.13]		
Father's profession	Civil servant	5	2 (40.0)	0.57 [0.093 - 3.45]		
	Casual labour	2	1 (50.0)	0.85 [0.052 - 13.74]		
	Farmer	224	121 (54.0)	1	0.981	
Mathaula accumation	Shopkeeper	4	2 (50.0)	0.85 [0.12 - 6.15]		
Mother's occupation	Civil servant	2	1 (50.0)	0.85 [0.53 - 13.78]		
	Other	1	0 (0.0)	1		
Monthly household	Between 170.000 and 300.000 BIF	109	55 (50.5)	1	0.490	
income	< 170.000 BIF	117	67 (57.3)	1.32 [0.78 - 1.22]		
	> 300.000 BIF	5	2 (40.0)	0.65 [0.11 - 4.07]		
Financial and resource	Yes	214	114 (53.3)	1	0.650	
support	No	17	10 (58.8)	1.25 [0.46 - 3.41]	0.659	
Distance from home to	More than 5 km	101	57 (56.4)	1	0.459	
FOSA	Less than 5 km	130	67 (51.4)	0.82 [0.49 – 1.38]	0.439	
Participation in the	Less than 2 times	130	62 (47.7)	1		
nutrition sessions facilitated at the CDS	More than 2 times	101	62 (61.4)	1.74 [1.03 – 2.96]	0.038	
Participation in	Less than 2 times	127	51 (40.2)	1		
nutrition sessions	More than 2 times	104	73 (70.2)	3.51 [2.02 - 6.08]	< 0.001	
facilitated by CHWs			73 (70.2)	5.51 [2.02 - 0.08]		
Knowledge of basic	Weak	85	40 (47.1)	1	0.124	
nutritional principles	Good	146	84 57.5)	1.52 [0.89 - 2.61]	0.124	
Knowledge of the	Weak	52	29 (55.8)	1	0.731	
benefits of good nutrition	Good	179	95 (53.1)	0.90 [0.48 - 1.67]		

Continued.

Characteristics		Total	Involvement of men in child nutrition		P value
			N (%)	Adjusted OR CI95%	
Knowledge of their	Low	112	49 (43.8)	1	
involvement in child nutrition	Good	119	75 (63.0)	2.19 [1.29 - 3.71]	0.003
Exchange between	No	61	22 (36.1)	1	0.002
spouses	Yes	170	102 (60.0)	2.66[1.45 - 4.87]	
Joint decision-making for child nutrition	No	17	5 (29.4)	1	0.045
	Yes	214	119 (55.6)	3.01[1.02 - 8.83]	
Household workload	Never	32	10 (31.3)	1	0.000
sharing	Sometimes	199	114 (57.3)	2.95 [1.33 - 6.56]	0.008
Social support for child	Never	35	11 (31.4)	1	0.005
nutrition	Sometimes	196	113 (57.7)	2.97 [1.38 – 6.40]	
Accompaniment of	Never	158	74 (46.8)	1	
women in the health	Sometimes	68	49 (72.1)	2.93 [1.58 - 5.41]	< 0.001
service	Always	5	1 (20.0)	0.28 [0.03 - 2.60]	-

DISCUSSION

The overall objective of the study was to analyze the factors of men involvement in child nutrition. This study used a methodology that identified the current status of men involvement in child nutrition, the level of men involvement and its predictors.

Thus, the level of education of fathers, participation in nutrition sessions led by community health workers, knowledge of men involvement in child nutrition and accompanying women to health services were found as factors significantly associated (p<0.05) with men involvement in child nutrition among fathers of children aged 6 to 23 months.

The results of our study show that the level of involvement of men in child nutrition was 53.68%; a low level of involvement justifying that children aged 6 to 23 months in the Muramba health center area of the Vumbi Health District have a flaw in terms of their nutrition.

These results are close to those found in a study done in Ethiopia by Wolkanto et al in 2019 on men's involvement in complementary feeding for children in which 50.9% of men were involved in the practice of complementary feeding for children.¹⁷

This results are also similar to those found by Guerrero et al in their study where they found that more than 50% of fathers are involved in feeding their children and about 50% of fathers daily participated in preparing meals for their child and family.¹⁸

Our results diverge with the results of a study conducted in northern Ghana in 2021 by Mahama et al where 63.5% of men were involved.¹⁹

In addition, our results are at odds with those found in Bangladesh by Bhattacharyya et al where they found that 63% of fathers were well involved.²⁰

And these are similar to the results found in the Uganda study conducted by Kansiime et al who found that the level of involvement of men was 65.5%.¹¹

This difference could be explained by the fact that most of the participants in the Ghana study had only one child under two years, whereas in the present study most had more than 3 children. The first children in the family are most often followed by their fathers in terms of their feeding and care. In addition, contradictory results to our study appear in a study conducted in Ethiopia by Bogale SK. and his collaborators who found that the involvement of men was 43.1%.¹⁰

After the multivariate analysis, the results of the final model of the present study showed that father's level of education were statistically associated with men involvement in child nutrition. Men with primary education were twice as likely to be involved in child nutrition than those with no education. Other authors found similar results to our study, in Ethiopia in 2022, Bogale et al reported in their study that men with primary education were 4.94 times more likely to be well involved in child feeding than men with no education.¹⁰

In addition, Bhattacharyya et al in their study found that fathers with primary education were 2.55 times more involved in nutrition practices than those who had not attended formal education.²⁰

This could be explained by the fact that more men have a higher education level, the more they have access to a range of information on children's nutrition and thus understand why it is important for them to be involved in child nutrition.

The chance of being involved in child nutrition were higher among men who participated twice and more per year in community nutrition sessions facilitated community health workers than men who attended at least twice a year (p<0.001). The results are closer to the study conducted in Ghana in 2021 by Mahama et al where they found that women whose husbands participated in nutrition education sessions were 2 to 3 times more likely to give their children minimal dietary diversity compared to women whose husbands did not participate in nutrition education.¹⁹

This could be explained by socio-cultural reasons where most often are mothers of children who participate in the various health education sessions facilitated at the health center and in the community. In the same sense of idea, a study carried out in Kenya by Mukuria et al in 2016 found that nutrition education sessions for fathers improved children's feeding practices.²¹

In our study, men's knowledge of their involvement in child nutrition influences their level of involvement (p=0.019). Men with good knowledge of their involvement in child nutrition were more than twice as likely to be involved than those with low knowledge. Our study results are similar to those found by Saaka et al in Ghana in 2022 where they found that children whose fathers had low nutritional knowledge were 1 to 7 times more likely to be malnourished, compared to their counterparts whose fathers had high nutritional knowledge. ¹⁹

In addition, our results are similar to those found by Bogale et al in Kenya in 2022 who found that fathers with good nutrition knowledge were 3.84 times more likely to be well involved in child feeding than those with low knowledge. 10 The present study took place in the area of responsibility of a single health center, and the small size of our sample could also influence the non-significance of certain variables in the study. Extending the study to a representative sample of men from multiple health center areas would increase the accuracy of the proportion of men involvement in child nutrition as well as the factors determining this involvement. We did not include the age of the young child in the family to see if there is a link with the involvement of fathers.

CONCLUSION

The overall objective of the study was to analyze the factors of men involvement of Muramba health center area in child nutrition. The study identified the current status of men involvement in child nutrition, the level of men involvement and its predictors. The results of the study highlighted that men's level of education, men's participation in nutrition sessions led by community health workers, men's knowledge of their involvement in child nutrition and accompanying women to health services are predictors of men involvement in child nutrition.

Thus, the low involvement of men in child nutrition demonstrates a flaw in child nutrition with the consequent high rate of malnourished children in the locality. The implementation of a clear and effective policy that can involve men in child nutrition remains essential in order to reduce the rate of undernutrition.

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