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Title: Knowledge, Attitude and Practices on Epilepsy Management Among Community Health Workers in Nyabihu District, Rwanda

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Abstract

The study general objective is to assess the level of knowledge, attitude and practices (KAP) of community health workers towards Epilepsy management in Nyabihu District. It was a cross-sectional study using quantitative approach. 207 Community Health Workers were selected using simple random sampling technique. Pearson's chi square was used to assess the association between dependent and independent categorical variables. Multiple logistic regression analysis was used to determine the strength of association. Results shows that Community Health Workers aged between 41 to 50 years were about 2 times more likely to have adequate practices [AOR=1.722; 95%CI=0.519-5.711; P=0.374] compared to those aged from 51 years and above and those with moderate/low knowledge towards epilepsy management were 0.085 times less likely to have adequate practices [AOR=0.085; 95%CI=0.028-0.254; P<0.001] compared to those with high knowledge. The study respondents with good attitude was 5 times more likely to have adequate practices towards epilepsy management [AOR=5.244; 95%CI=1.969-13.967; P=0.001] compare to those with poor attitude. The study found that the level of understanding and knowledge regarding epilepsy is to be enhanced by community educational programs in order to fill the gaps, and reduce the social stigma. There is an issue of Epilepsy management, majority were having moderate knowledge regarding epilepsy management.

Key words: *epilepsy, knowledge, attitude, practices.*

Introduction

There are reports of epilepsy, one of chronic neurological disorders, and also classed into non-communicable diseases, among 69 million people worldwide at all ages (Wagner et al. 2014). The condition of epilepsy affects people from all ethnicities, socio-economic class and geographical location (Ackerman, 2012). In 2012, there were over 13 million people living in Africa with epilepsy (PWE), and the prevalence was estimated at 1 percent of the global population as a whole. But, in low-income countries with prevalence greater than twice that of high-income countries, epilepsy is most commonly found (Newton and Garcia 2012). This was probably due to the higher incidence of risk factors.

The first important step in developing strategies to refute illness myths and misconceptions is to consider the awareness, beliefs and practices of epilepsy in the population (Pandian et al., 2006). Then, awareness of the epileptic community is a key to overcoming stigma in their respective culture of people with epilepsy. The progressive emergence step of positive public beliefs among people with epilepsy has been noted in research conducted by Karmaveer Bhaurao Patil College (KBP) in both countries developed and developing one (Pandian et al., 2006).

In comparison with other psychiatric and psychological disorders, the prevalence of epilepsy in Rwanda has been found to be high (Simms et Al. 2008). Consequently, health policy-makers have recommended creating a national mental health strategy that recognizes this condition as particular disease in Rwanda country (MoH, 2011).

Very recently epilepsy was among the first recorded by health facilities with the prevalence of 56 percent of all mental health problems in Rwanda and the district of Nyabihu announced that 581 epilepsy cases were most prevalent by 2018 relative to other districts in the country (MoH, 2011) This study therefore explores awareness, attitudes and practices in epilepsy management among community health workers in the District of Nyabihu, as the healthcare sector are essential tools for individuals who can play a large role in mobilizing societies to address prejudice and integration of epileptic individuals.

Methodology

Population

The target population of this survey included in particular community health workers from the district of Nyabihu and 768 CHWs. Therefore, the sample size for the current study is 263 Community Health Workers from 16 health centers of Nyabihu District. This study is designed with a self-administered questionnaire to collect quantitative data. The participants of the study research were reached during their monthly meeting and with possibility to stay free of charge with the questionnaire.

The study applied simple random sampling of the CHWs at sector level where CHWs from all sectors have responsibility to report to them at sector level on a monthly basis.

Statistical Analysis

Descriptive statistics were applied to tabulate and define data, to measure the levels of knowledge, attitude and practices in accordance with the tool's different questions and to determine the relation between independent and dependent categorical variables using P values. With several logistic regressions, the strengths of the associations are determined. The statistics were obtained with a p-value < 0.05 and the interval of confidence of 95%. The results were shown in frequency, cross-tableting and diagrams.

Findings

Level of knowledge about epilepsy management among CHWs

The overall score of knowledge regarding epilepsy management among CHWs were determined by using a score of responses as results were presented in figure1.

The maximum attainable total score was 22 and minimum score was 13. A score was classified at (70% and above); moderate (69-50%) and low knowledge (Below 50%).The majority (76.3%) were having moderate knowledge, followed by (16.9%) and (6.8%) with high and low knowledge about epilepsy management among CHWs respectively.

Attitude of Community Health Workers towards epilepsy management

The overall score of attitudes of community health workers towards epilepsy management were determined by using a score of responses. Six (6) variables presented in Table 1 were considered together. The maximum attainable total score was 6 and lowest score was 3. A score was generated and classified as good attitude (70% and above) and poor attitude (Below 70%).Majority (76.3%) of the respondents were having good attitude while (23.7%) were having poor attitude towards epilepsy management.

Practices of Community health workers regarding epilepsy management

The overall score of practices towards epilepsy management among community health workers were determined by using a score of responses. Eight (8) variables presented in Table 2 were considered together. The maximum attainable total score was 8 and minimum score was 1. A score was classified as adequate (70% and above) and inadequate (Below 70%) practices regarding Epilepsy management among CHWs. Majority (70.6%) of the respondents were having adequate practices while (29.4%) were having inadequate practices towards epilepsy management.

Bivariate analysis with the practices towards epilepsy management

As indicated in Table 3, there was statistically significant association between demographic characteristics, knowledge and attitude with the practices of community health workers towards epilepsy management with p values less than 0.005.

Multiple logistic regression analysis was used in order to identify the variables independently associated with the practices towards epilepsy management. Then after, fitting factors using binary logistic regression and by specifying *'backward conditional'* method with removal at P<0.05, one (3) factor remained in model of analysis (Table 4).

Multivariate analysis for factors associated with the practices

The study respondents aged between 41 to 50 years were about 2 times more likely to have adequate practices towards epilepsy management [AOR=1.722; 95%CI=0.519-5.711; P=0.374] compared to those aged from 51 years and above.

Community health workers with moderate/low knowledge towards epilepsy management were 0.085 times less likely to have adequate practices about epilepsy management [AOR=0.085; 95%CI=0.028-0.254; P<0.001] compared to those with high knowledge.

People with good attitude was 5 times more likely to have adequate practices towards epilepsy management [AOR=5.244; 95%CI=1.969-13.967; P=0.001] compare to those with poor attitude about epilepsy management.

Discussion

The present study found (76.3%) having moderate knowledge, followed by (16.9%) and (6.8%) with high and low knowledge about epilepsy management among CHWs respectively. Majority (76.3%) of the respondents were having good attitude while (23.7%) were having poor attitude towards epilepsy management. In line with the study conducted by Asefa (2014) where the western culture presented much influence towards coping and inclusion of people with epilepsy in the community.

The study respondents aged between 41 to 50 years were about 2 times more likely to have adequate practices towards epilepsy management [AOR=1.722; 95%CI=0.519-5.711; P=0.374] compared to those aged from 51 years and above. Community health workers with moderate/low knowledge towards epilepsy management were 0.085 times less likely to have adequate practices about epilepsy management [AOR=0.085; 95%CI=0.028-0.254; P<0.001] compared to those with high knowledge. People with good attitude was 5 times more likely to have adequate practices towards epilepsy management [AOR=5.244; 95%CI=1.969-13.967; P=0.001] compare to those with poor attitude about epilepsy management.

The results showed that the epilepsy management of CHWs in Nyabihu district should be strengthened according the findings. Overall (76.3%) were moderate, followed by (16.9%) and (6.8%) were extremely and poorly informed of the management of epilepsy among CHWs. Inadequate clinical procedure was observed by (29.4%) of interviewees, while appropriate procedures were found by (70.6%) in the management of epilepsy. The age group of CHWs had important links with their awareness and attitude to epileptic management among CHWs in the District of Nyabihu.

In conclusion, this study found that the level of understanding and knowledge regarding epilepsy management is to be improved by community education programs in order to fill the gaps so as to improve misconceptions as well as minimization of the social stigma. In additional, findings indicated that there is issue of epilepsy management where the majority were having moderate knowledge related to epilepsy management among CHW. They have to be more familiar with information on epilepsy.

Disclosure

The Authors report no conflict of interest

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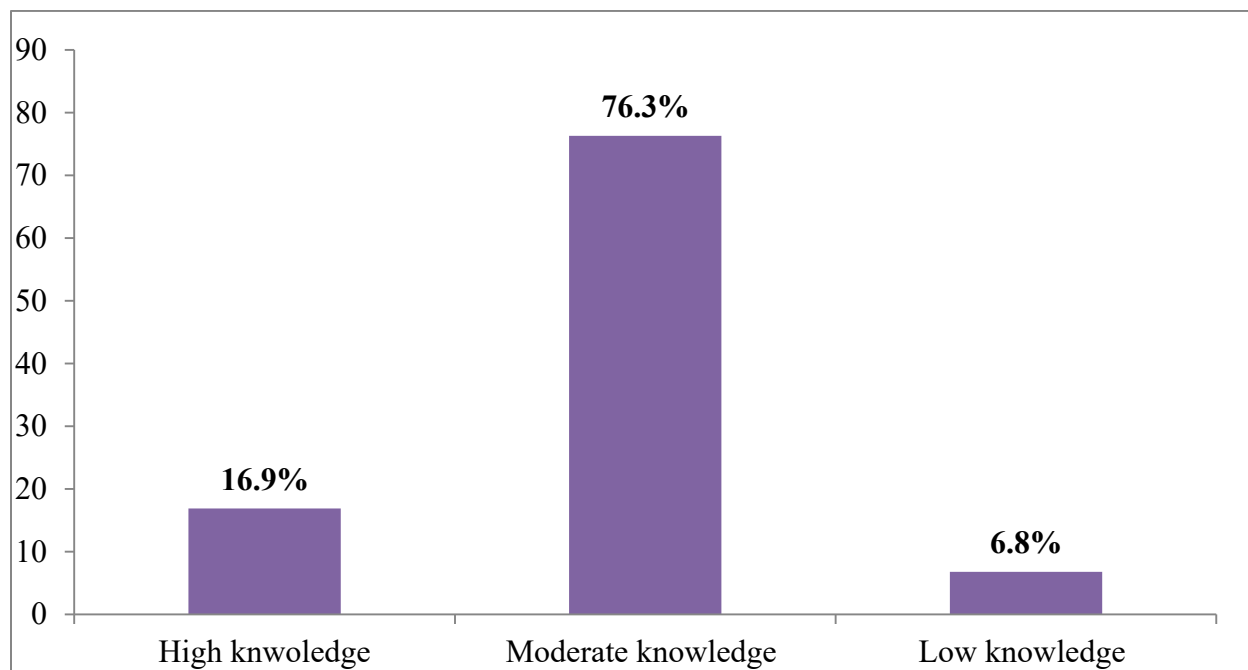**Figure 1. Level of Knowledge about Epilepsy Management among CHWs**

Figure 2. Attitude of Community Health Workers towards Epilepsy Management
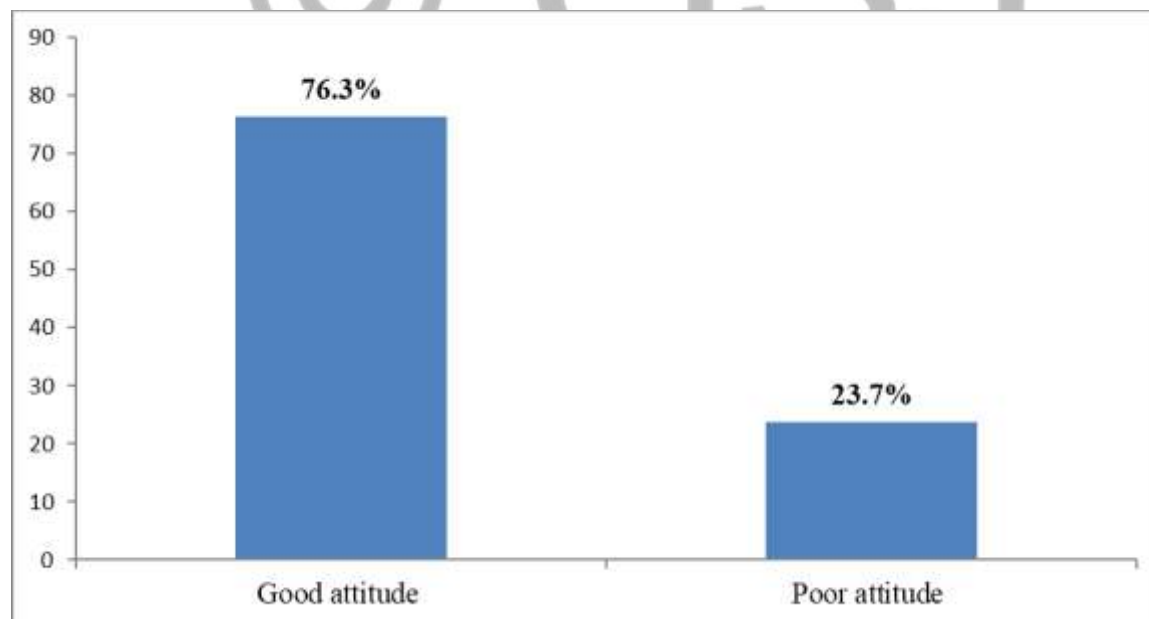
Table 1. Attitudes of Community Health Workers towards Epilepsy Management

Variables	Category	Frequency	Percent
Society segregates against persons with epilepsy	Yes	98	47.3
	No	109	52.7
Willing to live with epileptic person	Yes	173	83.6
	No	34	16.4
A person with epilepsy should be living to special house	Yes	10	4.8
	No	197	95.2
Willingness to associate with learners with epilepsy:			
I could allow my children to play with a person with epilepsy	Yes	173	83.6
	No	34	16.4
Would question to individual with epilepsy wedding a close relative of yours (brothers, sister or child)?	Yes	138	66.7
	No	69	33.3
Persons with epilepsy ought to have children	Yes	207	100

Table2. Practices of Community Health Workers towards Epilepsy Management

Variables	Category	Frequency	Percent
I relate people with epilepsy in social gatherings	Yes	207	100
I do not alter my status of mind to an associate with a recent diagnosis of epilepsy	Yes	104	50.2
	No	103	49.8
I have a person with epilepsy as a close friend	Yes	148	71.5
	No	59	28.5
Had the opportunity to take care to person with epileptic during the seizure	Yes	79	38.2
	No	128	61.8
Had the opportunity to visit people with epilepsy to understand their problems so as to help them	Yes	74	35.7
	No	133	64.3
Had the opportunity to educate people with epilepsy about epilepsy and their rights	Yes	94	45.4
	No	113	54.6
I refer the patient with epilepsy to the health facility for medical care	Yes	169	81.6
	No	38	18.4
I refer patients with epilepsy to school to continue their education	Yes	187	90.3
	No	20	9.7

Table 3. Bivariate analysis with the practices towards Epilepsy Management

Variables	Adequate		Inadequate		Qui-square	P value
	n	%	n	%		
Age group					64.856	**<0.001**
18-40	9	8	103	92		
41-50	50	62.5	30	37.5		
51 and above	5	33.3	10	66.7		
Gender					3.508	0.061
Male	34	37.8	56	62.2		
Female	30	25.6	87	74.4		
Marital status					9.908	**0.002**
Married	64	34.2	123	65.8		
Widowed	0	0	20	100		
Education					18.207	**<0.001**
Primary	64	37	109	63		
Secondary	0	0	34	100		
Knowledge level					53.202	**<0.001**
High knowledge	29	82.9	6	17.1		
Moderate/low knowledge	35	20.3	137	79.7		
Level of attitude					12.896	**<0.001**
Good attitude	59	37.3	99	62.7		
Poor attitude	5	10.2	44	89.8		

Table 4. Multivariate analysis for factors associated with practices

Variables	OR	95%CI		P value
		Lower	Upper	
Age group				
18-40	0.129	0.035	0.476	**0.002**
41-50	1.722	0.519	5.711	0.374
51 and above	Reference			
Knowledge level				
High knowledge	Reference			
Moderate/low knowledge	0.085	0.028	0.254	**<0.001**
Level of attitude				
Good attitude	5.244	1.969	13.967	**0.001**
Poor attitude	Reference			