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Factors influencing utilization of physiotherapy services by health care providers at Busia County Referral Hospital in Kenya

Johnstone Milimo Eyinda[1*], Hellen Myezwa[2] and Kganetso Sekome[2]

Abstract

Background The surging trend of noncommunicable diseases complicated by trauma and infectious diseases has left many with marked physical limitations. Physiotherapy component of primary health care could be utilized for management of both communicable and noncommunicable diseases to restore physical functions.

Objectives To establish the health care providers' level of knowledge and factors that influence the utilization of physiotherapy services among community members of Busia County in Kenya. The association between level of knowledge and demographic profile of health care providers at BCRH was also established.

Method Descriptive cross-sectional quantitative study involved 192 participants (nurses, doctors, and clinical officers) who were purposively selected. They completed self-administered questionnaire between August and November 2019. They were both sexes above 18 years of age, drawn from Busia County Referral Hospital. Data was analysed by Microsoft Excel and SPSS version 25.

Results The majority (92%) of the health care service providers had adequate knowledge about physiotherapy from their training to working with likelihood ratio chi-square of 7.714 with *p*-value at 0.01 at 5% level of significant. They had excellent communication (86.03%) with physiotherapists and helped to refer patients at BCRH for physiotherapy ($\chi^2 = 52.02$ and *p*-value = 0.01) at 5% level of significant. They had trust (91.56%) that physiotherapists were knowledgeable enough to handle patients on their own.

Conclusion The health care service providers are knowledgeable about the importance of physiotherapy and have supported its utilization. However, there is need to integrate physiotherapy service at all levels of training and practice of the components of primary health care. This will lead to a holistic patient's care in terms of preventive, curative, and rehabilitative. Quality of life for the community members will be enhanced for appropriate functionality to meet the population needs. Lower utilization of physiotherapy services in Busia County could be due to factors associated with dynamics within the community and the health care service providers.

Keywords Physiotherapy, Rehabilitation, Utilization, Noncommunicable diseases

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Introduction

Physiotherapy is classified as one of the primary health care components among health care services [1]. Primary health care (PHC) focuses on the broader determinants of health, namely physical, mental, and social health and wellbeing [1]. Physiotherapy plays a vital role in health promotion, prevention, treatment, and rehabilitation for mobility dysfunction caused by environmental factors, injuries, illness, pain, or ageing [2]. Physiotherapy is utilized in the management of various conditions like neurological disorders, sports injuries, burns injuries, musculoskeletal problems, rehabilitation for patients in the intensive care unit, and prevention of complications caused by chronic noncommunicable and communicable diseases [1].

Noncommunicable diseases (NCDs) account for between 50 and 70% of all hospital admissions and up to half of all the patients' mortality in Kenya [3]. Furthermore, injuries and violence are among the top 10 causes of mortality and morbidity in Kenya [3]. The complications of NCDs, injuries, violence, and general ill health could be prevented by appropriate utilization of physiotherapy services. The presence of the complications due to NCDs, injuries, violence, and other diseases points to the possibility of poor utilization of physiotherapy services [3]. Based on the study done by [4], they concluded that there was poor utilization of physiotherapy services in Kenya due to various factors like distance between hospital to patients' homes, shortage of physiotherapists, lack of equipment, and prognosis.

The nurses, the clinical officers, and the medical officers have a big role to play on ensuring that the referral system of health facility is effective. Their knowledge about other health care services is paramount on influencing the integrated management of patients. They are the primary conduct of almost all the patients who attend health services in a health institution before they are referred for various services including physiotherapy. Therefore, the reduced utilization of physiotherapy services may relate to their level of knowledge of physiotherapy service.

The prevalence of people with disabilities in Busia County in Kenya is 2% and globally is 15%, which is attributed to global population ageing, an age group where there is a higher risk of developing chronic conditions including noncommunicable diseases and increases in natural and human-made disasters [5]. Physiotherapy and other rehabilitation interventions are advocated for as the fundamental process to support physical independence, mental, social, and vocational abilities [5]. Physiotherapy plays an important role in the patient's care through preventive, curative, and rehabilitative services to patients if well initiated promptly during patients' care.

Studies concerning the level of awareness of the role and importance of physiotherapy in the health care system are scarce [6]; the available literature indicates a low level of awareness regarding the availability and the role of physiotherapy among various populations [6]. This study aims to establish the factors influencing the utilization of physiotherapy services at Busia County Referral Hospital in Kenya.

Methodology

This was a quantitative descriptive cross-sectional study using self-administered questionnaire. This design was use for it is viable for obtaining reliable data through observation of variables which could be individuals, cases, or any other type of data performed in a single moment.

This study was conducted at Busia County Referral Hospital (BCRH) which had the below listed attributes that made it favourable for this study. Busia is a county in the western part of Kenya and has a total population of 825,836 people [3]. BCRH has bed capacity of 300 patients and a workforce of 1012 health workers, which included nurses, clinical officers, medical doctors, physiotherapists, radiographers, public health officers, occupation therapists, orthopaedic technologists, oral health officers, nutritionists, clerical officers, and support staff officers. The hospital has a general outpatient clinic, surgical, internal medicine, gynaecology and obstetrics, mother–child health clinic, dental, physiotherapy, occupational therapy orthopaedic for functional aids, and mental health. This makes BCRH favourable for this study than any other facility within this area for it is possible to get the necessary data to meet the threshold of this study.

The study participants comprised of 498 health care providers which included 124 nurses, 117 clinical officers, and 45 medical officers who were approached to participate.

To obtain the sample size required for this study, the Raosoft® sample size calculator to estimate the minimum sample for all participants was used (health care providers nurses, clinical officers, and the medical officers) required for this study. The software utilizes the following formula (Table 1):

$$x = Z(^{c}/_{100})^{2} r(100 - r)$$
$$n = {}^{Nx}/_{((N-1)E^{2}+x)}$$
$$E = \mathrm{Sqrt}\left[{}^{(N-n)x}/_{n(N-1)}\right]$$

Where 'n' is the sample size, 'E' is the margin of error, 'N' is the population size, 'r' is the fraction of responses,

Table 1 Calculation of the sample size of the study

Raosoft parameter	Nurses	Clinical officers	Medical officers
Margin of error	5%	5%	5%
Population size	498	117	45
Response distribution	50%	50%	50%
Recommended sample size with 80% confidence interval	124	69	36

and 'Z($^{c}/_{100}$)' is the critical value where 'c' is the level of confidence (Raosoft.com, 2004). According to Raosoft® (Raosoft.com, 2004), to achieve an 80% confidence interval, a minimum of 124 nurses, 69 clinical officers, and 36 medical officers was required for this study.

To be eligible for inclusion in this study, one has to be a medical doctor or a Kenya registered nurse or a clinical officer who had been working in Busia County for the last 6 months. Provision of health service requires a well-elaborated system on how things are done. Working at BCRH for 6 months gave the health service providers humble time to get familiar with trends of referral and how health service is utilized by Busia County. For medical doctors, nurses, and clinical officers doing other duties, out of the hospital environment were excluded from this study. This was because this study was hospital based.

To achieve the objectives of this study which were to establish the level of knowledge of physiotherapy services among nurses, clinical officers, and medical officers in the referral patterns to physiotherapy among nurses, clinical officers, and medical officers in Busia County Referral Hospital and the association between level of knowledge and demographic profile of health care providers in BCRH, questionnaire was used. Questionnaire for this study was adopted from [7] on the utilization of postnatal physiotherapy services at Mulago and Mengo hospitals in Kampala, Uganda, which had been used in Lusaka Zambia on Lusaka women-friendly project by [7]. Modification on some questions based on the study population and type of services being studied was done to suit the situation at Busia County Referral Hospital in Kenya.

The content validity was ensured by validating this questionnaire by six experts who had over 10 years' experience in both clinical and academic physiotherapy platforms. Those experts were drawn from health service provisions and learning institutions in Kenya. The questionnaires were sent to them electronically to review and give their input on questionnaires ability to meet the objectives of this study. Apart from minor editing inputs, there was no significant input to change the questionnaires.

The reliability of the questionnaires was established by carrying out a pilot study, with 10% of the study population. Cronbach's test was done on the results of the pilot study to determine internal consistency. From the test scale for (items) variables in the questionnaire for health care providers, Cronbach's alpha score is = 0.703, which indicates that there is internal consistency for 0.703 scores indicating high internal consistency, and thus, the questionnaire was reliable.

For ethical consideration, the researcher applied for ethical clearance from various research ethics committees and was granted as follows: the University of the Witwatersrand Human Research Ethics Committee (medical) clearance certificate number M 190249, Moi Teaching and Referral Hospital/Moi University College of Health Science Research and Ethics Committee (IREC) (research approval regional centre) clearance certificate number MU/MTRH-IREC — 0003346 and National Commission of Science, Technology and Innovation (NACOSTI), clearance certificate number, P/19/76458/31509. Permission to access the health workers was granted by the hospital administrators. The participants were taken through the process of informed consent by the researcher and signed a written consent to participate.

A pilot study was conducted with 10% ($n = 23$) (23 health care providers,12 nurses, 7 clinical officers, and 4 medical doctors) of the study participants at Busia County Referral Hospital. The pilot study helped to determine the reliability of the questionnaires, the amount of time it took to complete the questionnaire, and any ambiguity that existed in the questions.

Once ethical clearance had been granted, participants were recruited from the department of nursing, clinical officers, and general medicine. An information sheet was given to the heads of those departments to familiarize them with the study. Consent was sought from the heads of departments to recruit participants in their departments. The heads of departments involved in the study were requested for lists of members in their departments. Names of members who met the inclusion criteria were randomly picked to get the number required for the study. Participants selected were contacted telephonically or personally, and appointment time was made. The participants were given information sheet and consent form to read, understand, and sign to participate. The participants were asked to fill in the questionnaire and identify questions they did not understand by highlighting them. The researcher guided them to ensure that the questionnaires were filled in correctly. After filling in the questionnaire, the participants handed them over to the researcher. The time taken to respond to the questions

was within the expected time 15 to 20 min by all the participants. There were no noted ambiguities or confusion on all the questionnaire items.

The main study data collection process was the same as the pilot study procedure. From these lists of each department, two sets of lists were made: one for males and the other for females. Names of members who meet the inclusion criteria were randomly picked, ensuring gender balance to avoid being biased in getting the number required for study from each department. Gender balance was necessary to ensure the ethical principle of justice and also capture views across for the perception of utilization of physiotherapy could vary across gender.

For health care service providers, participants selected were contacted through their heads of departments in their work stations. Participants were given an information sheet and consent form to read, understand, and sign to participate. The participants were asked to fill in the questionnaire with the guidance of the researcher to ensure that the questionnaires were filled correctly. After filling in the questionnaire, the participants handed them over to the researcher. Data collection took 2 months: October and November 2019.

The data from completed questionnaires filled by the respondents were entered into Microsoft Excel® and then to Statistical Package for Social Sciences (SPSS) version 25 for analysis. SPSS generates central tendency, dispersion, and distribution of the factors, as well as correlation and significant tests, which are statistical measures. A confidence interval of 80% was used in this study to get a minimal sample size representation. Cronbach's alpha coefficient was used to test for the reliability of the questionnaires. Pearson's chi-square was used to test for the association between level of knowledge and demographic profile of health care providers at Busia County Referral Hospital. A multinomial logistic regression analysis was performed to determine the relationship that best fits the observed data in terms of the access and utilization of physiotherapy. A p-value less or equal to 0.05 indicates the factor is significant. The variable in this study was illustrated using frequency tables, bar graphs, pie charts, and histograms.

Results

The following are study's findings on the factors that influence utilization of physiotherapy services at BCRH by the health care workers. The data was analysed based on demographic factors such as gender, age category, profession, level of profession training, marital status, religion, and period of service at BCRH. The number of participants invited was 498 health care workers. Those who participated included 192 (38.55%) health care workers. Nurses were 54.17% of the health care providers, and 27.08% of the respondents were aged between 30 and 34 years. The majority (55.73%) of them had a diploma as their level of qualification, and 25.26% had worked in Busia County Referral Hospital for between 4 and 5 years. The majorities of health care providers were married (59.37%) and were Protestants by religion (46.88%).

Descriptive analyses of the study data on factors associated with utilization of physiotherapy services by health care providers like the level of knowledge on the importance of physiotherapy services, physiotherapist abilities of patients' management, and level of interaction with the physiotherapists at BCRH were also looked into (Table 2).

Among the health care providers, more clinical officers (43.86%) and nurses (35.24%) than medical doctors (12.90%) indicated that they always knew the role of a physiotherapist from both training and working. Majority of medical doctors (58.06%) were also not sure of the responsibilities of physiotherapists from their training and therefore indicated some of the time.

Majority of the health care providers agreed that physiotherapists were knowledgeable enough to manage referred patients. All the medical officers, 82.45% of the clinical officers, and 92.23% of the nurses agreed at various levels that physiotherapists were knowledgeable enough to manage referred patients.

Table 2 Level of knowledge about physiotherapy and its utilization among health care service providers ($n=192$)

	From both your training and working, has it been clear what the role and responsibility of physiotherapy in health care provision are?				
	Never, *n* (%)	**Do not know, *n* (%)**	**Some of the time, *n* (%)**	**Most of the time, *n* (%)**	**Always, *n* (%)**
Clinical officer	4 (7.02)	1 (1.75)	20 (35.09)	7 (12.28)	25 (43.86)
Medical officer	0 (0)	2 (6.45)	18 (58.06)	7 (22.58)	4 (12.90)
Nurse	0 (0)	3 (2.86)	32 (30.48)	33 (31.43)	37 (35.24)
Others	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	4 (2.07)	6 (3.11)	70 (36.27)	47 (24.35)	66 (34.2)

Assessment of the quality of physiotherapy services

All health care providers expressed that physiotherapy is useful (medical officers — 90.32%, clinical officers — 84.21% and nurses — 80.39%). All the health care providers expressed that physiotherapy was effective. However, about physiotherapy service being of high quality, it was expressed as follows: clinical officers — 45.61%, medical officers — 12.90%, and nurses — 27.45% (Table 3).

More clinical officers (74%), and medical officers (74%) compared to nurses (51%), expressed that most of the patients at Busia Hospital required physiotherapy services. A lower percentage of medical doctors (61%) compared to clinical officers (76.36%) and nurses (71.44%) expressed that all patients who required physiotherapy were referred for the services. Clinical officers (90.9%) and medical doctors (93.55%) showed more compared to the nurses (70.48%); those patients who suffer from mobility challenges are referred for physiotherapy services. A majority of clinical officers (91.2%), medical officers (83.9%), and nurses (86.67%) were satisfied with the physiotherapy services offered to referral patients (Table 4).

All the departments were satisfied with communication with the physiotherapy department except minor theatre where 50% ($n=1$) were somewhat dissatisfied. All the respondents from the administration unit at the BCRH expressed satisfaction with communication with the physiotherapy department. The chi-square test showed that there was a significant association between both profession and department the health care provider works and physiotherapy department ($\chi^2=52.02$, $p=0.001$).

Logistic regression

A multinomial logistic regression analysis was performed to determine the relationship that best fits the observed data in terms of the access and utilization of physiotherapy. The data and calculations presented are based on the multinomial logistic regression model for access and utilization of physiotherapy at BCRH.

Multinomial logistic regression with profession

Here, nurse was used as the category for the baseline comparison group. The model converged after four iterations at the log likelihood − 185.80727. The likelihood

Table 3 Referral of patients to physiotherapy by health care providers ($N=192$)

	Disagree completely	Somewhat disagree	Somewhat agree	Strongly agree	Agree completely
Most of the patients who attend health services in Busia county referral hospital require physiotherapy services	n%	n%	n%	n%	n%
Clinical officer	5 (9.26)	9 (16.67)	15 (27.78)	17 (31.48)	8 (14.81)
Medical officer	0 (0)	8 (25.81)	15 (48.39)	8 (25.81)	0 (0)
Nurse	12 (11.43)	39 (37.4)	17 (16.19)	35 (33.33)	2 (1.9)
Total	17 (8.95)	56 (29.47)	47 (24.74)	60 (31.58)	10 (5.26)
All the patients who require physiotherapy are always referred for physiotherapy	n%	n%	n%	n%	n%
Clinical officer	7 (12.73)	6 (10.91)	25 (45.45)	12 (21.82)	5 (9.09)
Medical officer	0 (0)	12 (38.71)	15 (48.39)	4 (12.9)	0 (0)
Nurse	20 (19.23)	15 (14.42)	32 (30.77)	24 (23.08)	13 (12.5)
Total	27 (14.21)	33 (17.37)	72 (37.89)	40 (21.05)	18 (9.47)
Most of the patients suffering from mobility and other physical challenges are referred to physiotherapy	n%	n%	n%	n%	n%
Clinical officer	2 (3.64)	3 (5.45)	13 (23.64)	24 (43.64)	13 (23.64)
Medical officer	0 (0)	2 (6.45)	12 (38.71)	17 (54.84)	0 (0)
Nurse	14 (13.33)	17 (16.19)	29 (27.62)	32 (30.48)	13 (12.38)
Total	16 (8.38)	22 (11.52)	54 (28.27)	73 (38.22)	26 (13.61)
Physiotherapy given to a patient is determined by the reason for referral and the patients' condition	n%	n%	n%	n%	n%
Clinical officer	4 (7.27)	1 (1.82)	9 (16.36)	33 (60)	8 (14.55)
Medical officer	0 (0)	4 (12.9)	5 (16.13)	22 (70.97)	0 (0)
Nurse	4 (3.81)	8 (7.62)	22 (20.95)	47 (44.76)	24 (22.86)
Total	8 (4.19)	13 (6.61)	36 (18.85)	102 (53.4)	32 (16.7)

Table 4 Below presenting the results of the assessment of the communication between physiotherapy other departments

Department	How satisfied are you with the communication you have with the physiotherapy department in your current department?					Chi-square	*p*-value
	Extremely dissatisfied *n* (%)	Somewhat dissatisfied *n* (%)	Somewhat satisfied *n* (%)	Very dissatisfied *n* (%)	Extremely satisfied *n* (%)		
Administration	0 (0)	0 (0)	7 (58.33)	0 (0)	5 (41.67)	52.02	0.001
General out-patient	0 (0)	6 (13.33)	26 (57.78)	0 (0)	13 (28.89)		
Medical clinic	0 (0)	3 (6.52)	7 (58.7)	3 (6.52)	13 (28.26)		
Minor theatre	0 (0)	1 (50)	1 (50)	0 (0)	0 (0)		
Mobile clinic	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)		
Surgical clinic	1 (1.96)	1 (1.96)	2 (49.02)	2 (3.92)	22 (43.14)		
Others	0 (0)	8 (22.86)	18 (51.43)	1 (2.86)	8 (2.86)		
Total	1 (0.52)	19 (9.9)	104 (54.17)	7 (3.65)	61 (31.77)		

ratio chi-square of 11.064 with *p*-value at 0.004, implies that the model fits well at 5% level of significance (Table 5).

x_{1i} is to what extent do you agree that physiotherapy services are among the core services provided in your current working department.

Using x_{1i} as follows:

x_{1i} is from both your training and working has it been clear what the role and responsibility of physiotherapy in health care provision are.

This yields likelihood ratio chi-square of 7.714 with p-value at 0.021 that fits at 5% level of significance (Table 6).

The result shows that clinical officers and medical officers on relative log odds scale were 0.136 times and 0.568 times were unlikely to agree compared to the responses from the nurses.

Multinominal logistic regression with department

The study used surgical clinic as the baseline comparison group. The model converged after five iterations at the log likelihood = −299.79563. Likelihood ratio chi-square was 12.121 and *p*-value 0.059, thus fitting at 10% level of significance.

x_{1i} is how satisfied are you with communication you have with the physiotherapist in your current department.

The result shows that health care providers in the administration were 0.337 times on relative log odds scale more likely to agree compared to surgical clinic responses. However, general outpatient, medical clinic, minor theatre, and mobile responses with relative log odds of 0.241 times, 0.365 times, 1.132 times, 2.490 times, and 0.596 times respectively are most unlikely to agree compared to the surgical clinic responses.

Discussion

This study was conducted in Kenya to establish the level of knowledge and factors that influence the utilization of physiotherapy services among health care providers at Busia County Referal Hospital. This was achieved through considering the level of knowledge

Table 5 Multinominal logistic regression with profession

Profession	Coef	St. err	*t*-value	*p*-value	95% conf	Interval]	Sig
O. nurse	0.000						
O. constant	0.000						
Clinical officer	−0.160	0.197	−0.81	0.417	−0.546	0.227	
Constant	0.019	0.770	0.03	0.980	−1.490	1.528	
Medical officer	−0.780	0.241	−3.23	0.001	−1.253	−0.307	***
Constant	1.589	0.863	1.84	0.066	−0.103	3.281	*
Mean-dependent var		1.619	SD-dependent var			0.747	
Pseudo r-squared		0.029	Number of obs			194.000	
Chi-square		11.064	Prob. > chi-square			0.004	
Akaike crit. (AIC)		379.615	Bayesian crit. (BIC)			392.686	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 6 Multinominal regression with profession

Profession	Coef	St. err	*t*-value	*p*-value	95% conf	Interval	Sig
O. nurse	0.000						
Constant	0.000						
Clinical officer	−0.136	0.168	−0.81	0.418	−0.467	0.194	
Constant	−0.058	0.679	−0.09	0.932	−1.388	1.273	
Medical officer	−0.568	0.209	−2.72	0.007	−0.977	−0.159	***
Constant	0.888	0.776	1.15	0.252	−0.632	2.408	
Mean-dependent var		1.619	SD-dependent var			0.747	
Pseudo r-squared		0.020	Number of obs			194.000	
Chi-square		7.714	Prob > chi-square			0.021	
Akaike crit. (AIC)		382.964	Bayesian crit. (BIC)			396.036	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

about physiotherapy and use by health care providers. The referral patterns of physiotherapy patients to physiotherapy by health care providers were also considered. The study also looked into the association of utilization of physiotherapy services and the demographic information of the health care providers.

From the study, the majority of the medical doctors and nurses knew the roles and usefulness of the physiotherapist from their training and work experience. Lack of knowledge about physiotherapy services by the health care providers at the entry point in the health care in the hospital may lead to reduced utilization of those services [8]. An important pillar for the referral systems is the level of knowledge about other cadres' roles and responsibilities for patient care. For example, inadequate knowledge about physiotherapy by professionals involved in mental health care led to poor physical health instead of poor mental health for patients with mental health problems [9]. In the current study, the level of knowledge depicted by health care providers is high; the expectation would be high utilization of physiotherapy service in this population. Increased physical activities and a healthy diet led to a healthy body in general and less physical health challenges [9]. However, the Busia population still struggles with noncommunicable diseases like diabetes, arthritis, hypertension, and obesity, meaning the utilization of physiotherapy services may be considered to be low.

Health care service providers have indicated that they have confidence in the physiotherapists and deem them knowledgeable enough to handle referred patients and have good communication with the physiotherapy department. The two attributes, confidence and good communication, are good indicators of good chances of influencing utilization of physiotherapy services by other cadres in the health care team. Perception and attitude towards a service depend on the level of knowledge about that service by the intended users including other health workers and patients/clients, and this is a determinant of the usage of that service [10]. It is expressed that physiotherapists need to do more to create awareness of the importance of physiotherapy among physicians and other health care providers. One can see how even physician's knowledge of physiotherapy which in some countries is a first-line practitioner can change their perception [10]. In literature, various perceptions are expressed by physicians about physiotherapists, some express that physiotherapists cannot serve patients independently and need to work under supervision [11], and respiratory physicians have no idea about the role of physiotherapy in the care for patients with respiratory problems [12].

In a study conducted in Nigeria by [13], the physicians in gynaecology and obstetrics expressed positivity about the interaction of physiotherapists with their patients. In a study in Saudi Arabia, 75% of the physicians who were aware of the role of physiotherapy in-patient care perceived physiotherapists as subordinates, and only 11% referred patients to physiotherapists [14]. The health care providers' level of knowledge about the role of physiotherapy in health care at Busia County Referral Hospital leads to various perceptions and attitudes towards physiotherapy services, which may influence its utilization. The current study indicates a supportive situation to positively influence the utilization of physiotherapy services at BCRH.

The majority of the medical officers and nurses expressed that physiotherapy services were useful. The motivation to utilize a service may be determined by the perception of whether that service is useful or not [15]. All three cadres of health care providers scored very high on whether physiotherapy services were useful in patients' care, and this may lead to high utilization of physiotherapy services, for they will refer patients for physiotherapy services. The health care providers at

BCRH further expressed that patients under their care required physiotherapy services, 74% of clinical officers, 74.2% of medical officers, and 51.42% of nurses. This kind of response may imply that utilization of physiotherapy is well supported by the main health care providers at BCRH. In return, there shall be indications of high utilization for physiotherapy services within this community with clear-cut indicators like fewer occurrences of noncommunicable diseases like diabetes, hypertension strokes obesity, and arthritis, which is contrary.

Holistic care for patients in health care is determined by a well-structured referral system [16]. Maybe self-referrals were thought to be a strategy to boost utilization of physiotherapy services [17]. However, with the low levels of awareness among the community members about physiotherapy service, it makes it apparent that self-referral, as a strategy, may not work [17]. In the current study, half of the health care providers expressed that physiotherapists were not knowledgeable enough to handle self-referred patients. It contrasts with what the health care providers indicated about the knowledge of the physiotherapist earlier. There is almost no difference in the approach of managing self-referred, and a patient referred to the physiotherapist by the other cadres in the health care team. There is a need to interrogate that perception expressed by the health care providers on self-referred patients. There is a need to establish more information on the increased occurrence of noncommunicable diseases among the Busia County community members despite health care providers being supportive of physiotherapy utilization by referring patients who require it.

Reasons for referral and the condition of the patient determine the kind of physiotherapy intervention health care providers expressed this in the current study. However, the percentage of the health care providers that are satisfied with the outcome from the referral to physiotherapy was low; only 27.6% of the medical officers expressed satisfaction. In all, the majority of the clinical officers were not satisfied with the outcome of the physiotherapy referral at the BCRH. Physiotherapy interventions' results are very practical and can be seen and felt practically. There is a need to interrogate why the health care providers, after indicating physiotherapy service, are essential and useful thereafter they indicate the contrary that they were not satisfied with the results of cases they referred for physiotherapy. Clinical officers' expressions may be informed by the fact that they may not meet the patients they refer to physiotherapy again, and if they do, they may not be able to remember them because of nature of the workload they handle in a day. Other studies have identified the opinion of medical officers with regard to the competency of physiotherapists, and their opinions include that physiotherapists are subordinated without skills of managing patients on their own, and physiotherapists need to work under supervision and not independently [11]. This could be a clear indication of a low level of knowledge of the capabilities of physiotherapists as a profession and a strong team player of the health care provider.

Conclusion

From the results of this study, we can conclude that the health care service providers (clinical officers, medical officers, and the nurses) had a good understanding of the importance of physiotherapy in health care services; they all describe it as a useful service to patients who require it. The health care service providers had adequate information about physiotherapy services, and they did all it takes to foster its utilization within BCRH. The health care providers had excellent communication with the physiotherapy department; they referred patients to physiotherapy when there was need and trusted that physiotherapists had sufficient knowledge to be able to manage referred and self-referred patients.

From this study, it could be concluded that there was an association between the level of knowledge about physiotherapy services for health care service providers and period of service at BCRH, professional affiliation, and department one works. Therefore the low level of utilizationof physiotherapy service could be due to various dynamics associated with both the health care service providers and the community members.

Abbreviations

PWD	People living with disability
BCRH	Busia County Referral Hospital
APTA	America Physical Therapy Association
MOH	Ministry of Health
NCD	Noncommunicable disease
PT	Physical therapist
NACOSTI	National Commission of Science, Technology and Innovation
APDK	Association of Physical Disable of Kenya
MU	Moi University
MTRH	Moi Teaching and Referral Hospital
OPD	Outpatient department
IREC	Institutional Research Ethics Committee

Supplementary Information

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Supplementary Material 1.

Supplementary Material 2.

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Availability of data and materials
Attached files and at jeyinda@auc.ac.ke — Alupe University College.

Declarations

Ethics approval and consent to participate
Ethical clearance was obtained from various research ethics committee as follows: the University of the Witwatersrand Human Research Ethics Committee (Medical) clearance certificate number M 190249, Moi Teaching and Referral Hospital/Moi University College of Health Science Research and Ethics Committee (IREC) — clearance certificate number MU/MTRH-IREC — 0003346, and National Commission of Science, Technology and Innovation (NACOSTI), clearance certificate number, P/19/76458/31509. The incharges granted permission to access the patients and people living with disabilities. Informed written consent was obtained from all the participants by the researcher.

Consent for publication
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Competing interests
The authors declare that they have no competing interests.

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References

1. American Physical Therapy Association. Today's physical therapist: a comprehensive review of a 21st-century health care profession [Online]. 2011. Available: https://www.apta.org/uploadedFiles/APTAorg/Practice_and_Patient_Care/PR_and_Marketing/Market_to_Professionals/TodaysPhysicalTherapist.pdf [Accessed].
2. Kutty R, Gebremichael H, Vargehese S. Knowledge, attitude, practice and associated factors of physiotherapy among medical doctors in Tigray, northern Ethiopia: a cross sectional study. GJBAHS. 2013;2:74–81.
3. Ministry of Health, K. Kenya Health Sector Strategic and Investment Plan (KHSSPI) July 2013-June 2017. Kenya: Ministry of Health 2017.
4. Gona J, Newton CR, Geere JA. Users' experiences of physiotherapy treatment in a semi-urban public hospital in Kenya. 2013.
5. Khan F, Owolabi MO, Amatya B, Hamzat TK, Ogunniyi A, Oshinowo H, Elmalik A, Galea MP. Challenges and barriers for implementation of the World Health Organization Global Disability Action Plan in low-and middle-income countries. J Rehabil Med. 2018;50:367–76.
6. Paul A, Mullerpatan R. Review of physiotherapy awareness across the globe. Int J Health Sci Res. 2015;5:294–301.
7. Nankwanga A, Phillips J. Factors influencing utilisation of postnatal services in Kampala, Uganda. 2008.
8. Karthikeyan S, Jones A. Knowledge of physiotherapy services among hospital-based health care professionals in Papua New Guinea. 2015.
9. Lee S, Waters F, Briffa K, Fary RE. Limited interface between physiotherapy primary care and people with severe mental illness: a qualitative study. J Physiother. 2017;63:168–74.
10. Alshehri MA, Alhasan H, Alayat M, Al-Subahi M, Yaseen K, Ismail A, Tobaigy A, Almalki O, Alqahtani A, Fallata B. Factors affecting the extent of utilization of physiotherapy services by physicians in Saudi Arabia. J Phys Ther Sci. 2018;30:216–22.
11. Etrog O, Alperin M, Laufer Y. Attitudes and perceptions of family physicians and physiotherapists regarding orthopedic physiotherapy in the community. Physiotherapy. 2015;101:e365–6.
12. Al Mohammedali Z, O'Dwyer TK, Broderick JM. The emerging role of respiratory physiotherapy: a profile of the attitudes of nurses and physicians in Saudi Arabia. Ann Thor Med. 2016;11:243.
13. Odunaiya NA, Ilesanmi T, Fawole AO, Oguntibeju OO. Attitude and practices of obstetricians and gynecologists towards involvement of physiotherapists. 2013.
14. Al-Eisa ES, Al-Hoqail H, Al-Rushud AS, Al-Harthi A, Al-Mass B, Al-Harbi BM, Al-Azzaz S, Alghadir AH, Iqbal ZA. Awareness, perceptions and beliefs about physiotherapy held by physicians working in Saudi Arabia: a cross-sectional study. J Phys Ther Sci. 2016;28:3435–9.
15. Allan Whitfield TW, Allison I, Laing A, Turner PA. Perceptions of the physiotherapy profession: a comparative study. Physiother Theory Pract. 1996;12:39–48.
16. Duncan C, Muc L, Heck C. Impact of using physiotherapy self-referral in the medical–surgical neurological intensive care unit. Physiother Can. 2015;67:39–45.
17. Holdsworth LK, Webster VS, McFadyen AK, Group, S. P. S. R. S. Physiotherapists' and general practitioners' views of self-referral and physiotherapy scope of practice: results from a national trial. Physiotherapy. 2008;94:236–43 in management of obstetric and gynecologic conditions. International journal of women's health, 5, 109.

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