

Physical activity and health promotion strategies among physiotherapists in Rwanda

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Abstract

Background: Physical inactivity has become a global health concern and is among the 10 leading causes of death and disability. Physiotherapists are in a position to combat inactivity and effectively promote physical activity to their clients.

Objectives: To establish the relationship between physical activity levels of physiotherapists and their physical activity promotion strategies.

Methods: A sequential mixed method design was used by means of a self-administered questionnaire (n=92) and a focus group discussion comprising of 10 purposively selected physiotherapists. Descriptive statistics were employed to summarize demographic information. Inferential statistics was used to test the associations between different categorical variables ($p < 0.05$). Tape recorded interviews were transcribed. Thematic analysis was then done.

Results: The findings revealed that 64% of the participants were physically active both within the work and recreation domains and 65% of the participants had good physical activity promoting practices. Discussing physical activity and giving out information regarding physical activity were most common methods used in promotion of physical activity. Policies on physical activity, cultural influence, and nature of work, time management as well as the environment were the barriers highlighted.

Conclusion: Although physiotherapists experience barriers to promoting physical activity, they have good physical activity promoting practices.

Key words: physical inactivity, chronic diseases of lifestyle, health promotion strategies, physiotherapy, Rwanda *African Health Sciences* 2013; 13(1): 17 - 23

Introduction

The World Health Organization has described chronic diseases of lifestyle as the leading cause of mortality in the world, representing 60% of all deaths¹. The burden of mortality, morbidity and disability attributable to chronic diseases is currently greatest and is continually growing in the developing countries. It was estimated that by 2020, chronic diseases associated with diet and lifestyle in Sub-Saharan Africa will constitute almost 50% of the burden of disease^{2,3}. Literature has highlighted that lack of physical activity, unhealthy diet, tobacco and alcohol use contribute in a large part to chronic diseases of lifestyle⁴. Physical inactivity has been identified as a serious global public health problem which is associated with numerous preventable diseases and has been classified as the fourth leading risk factor

for global mortality⁵. The World Health Organization estimates that globally the prevalence of physical inactivity among adults is 17%, ranging from 11% to 24% across different regions of the world¹.

In order to combat this health concern linked to physical inactivity there is a need for health promotion interventions that focus on single factors such as physical inactivity. It has been argued that primary healthcare professionals such as physiotherapists are ideally placed to promote physical activity within local communities to combat the impact of chronic diseases of lifestyle. "Many health professionals including physiotherapists take health promotion as an integral part of their role" as health promotion and health education are currently one of the core competencies expected from the physiotherapy profession⁶. It is further indicated that physiotherapists should prioritize and organize their efforts based on their skills and knowledge of physical activity and guided by community preventive evidence based recommendations for promotion of physical activity to advocate for the inclusion of physical activity policies in various settings⁷. Within the primary health

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care setting, health professionals are considered an important part of a wider public health drive to encourage more people to become physically active. If physiotherapists should advocate and address health promoting physical activity then they could promote health holistically.

The conceptualization of health promotion in physiotherapy is different from other fields of health promotion which emphasize empowerment as the central concept of health promotion but instead health education is the most emphasized health promotion strategy in physiotherapy⁸. Researchers have indicated that “health education and health promotion activities are a fundamental requirement for all health professionals. These two paradigms are closely related but are not inter-dependent”⁹. Worldwide, the World Health Organization is advocating for physical activity as a preventive measure to chronic diseases of lifestyle. While a growing body of literature supports the effectiveness of physical activity interventions delivered in the primary care setting, few studies have evaluated efforts concerning the use of physical activity as a health promoting strategy by physiotherapists. The aim of the study was to establish the physical activity levels of physiotherapists in Rwanda and their physical activity health promotion practices.

Methods

The study employed a sequential mixed method design and was conducted in referral and district hospitals of Rwanda. The quantitative method was a descriptive cross section survey and the qualitative component incorporated a focus group discussion. In Rwanda there are 160 registered physiotherapists of whom 142 registered physiotherapists worked in public and private hospitals, clinics and institutions of higher learning. For the current study physiotherapists working in the referral and district hospitals (n=104) were targeted for the quantitative aspect of the study. In addition, ten physiotherapists from the study sample were purposively selected to participate in the focus group discussions based on the outcomes of the Physical Activity Exit Interview (PAEI) questionnaire completed by participants in the quantitative component.

Data from the physiotherapists were collected by means of self-administered questionnaires which consisted of 3 sections. The first section requested for demographic information and information on physical activity based on the

reliable and valid World Health Organization Steps framework instrument for non-communicable diseases risk factors^{10,11}. The WHO STEPS surveillance instrument has been used in various African countries^{12,13}. Another section of the questionnaire was the valid and reliable Physical Activity Exit Interview (PAEI) which measured the content of physical activity promoting practices by physiotherapists¹⁴. In the focus group discussion an interview guide with probes for discussions was developed based on the aim of the study and literature.

Ethical clearance was obtained from the ethics committee at UWC (10/8/20) and permission was obtained from the Ministry of Health, the Rwanda national ethical committee, and the directors of the hospitals at which the study was conducted. Written informed consent was obtained from all participants and they were informed that participation was voluntary. Permission was also obtained from the participants in the focus group discussion to use a tape recorder to capture audio data during the focus groups discussion and a confidentiality form was signed by all participants.

Data for the quantitative study was analysed using the Statistical Package for Social Science (SPSS) version 18.0. Descriptive statistics was employed to summarize the demographic data and a continuous indicator of Metabolic Equivalent Task (MET) was used to estimate the mean physical activity levels of the sample, the total time spent in physical activity in a typical week, the number of days as well as the intensity of physical activity. Inferential statistics using the chi-square was employed to compare association between physical activity levels and other variables like physical activity promoting strategies ($p < 0.05$). For the qualitative data, analysis included, transcribing interviews, typing field notes, sorting and arranging data, making sense and overall meaning of information and coding information into categories. The narrative data was subjected to the process of interpretation and analysis.

Results

All physiotherapists practicing in referral and district hospital were invited to participate in the study yielding a total of 104 physiotherapists. Of the 104 questionnaires distributed, a total of 92 physiotherapists voluntarily participated in the study giving a response rate of 88.5%. Among the participants, males accounted for 70% (n= 64) and females 30% (n=28). The participants’ age ranged

from 26- 60 years, with a mean age of 32.49 years (SD= 6.56). Participants had work experience of ranging from between 1 year to 34 years, with a mean working experience of 1.62 years (SD= 1.03). Most of the participants' highest education level was a diploma (70%), followed by a BSc degree (21%) and a Masters degree (9%).

Physical activity levels in relation to physical activity domains

According to reported physical activity levels, 28% were classified as sedentary, 33% moderately active and 39% vigorously active. Participants' physical activity levels were assessed with regard to the different physical activity domains such as: work, transport and recreational activities. The highest mean MET- minutes/week (2685.9) was recorded at work, followed by the recreational physical activity domain (table 1).

Table 1: Mean MET-minutes/week in physical activity domain in relation to the demographic characteristic

Characteristics	Mean MET minutes/week		
	Work	Recreation	Transport
Gender			
Male	2695.9*	1102.5*	554.4**
Female	2685.7*	765.0*	617.2*
Marital status			
Single	2024.2*	1078.0*	569.0**
Married	2747.1*	1159.0*	539.1**
Level of education			
Diploma	2376.0*	826.8*	753.0*
BSc degree	2436.0*	1248.0*	724.7*
Masters	2588.0*	1748.5*	477.2*

** Sedentary

* Moderate

Physical activity promoting practices

Physical activity promoting practices were analyzed using the Physical Activity Exit Interview Questionnaire and the study found that 65% had high physical activity promoting practices, 32% had moderate physical activity promoting practices and 3% had poor physical activity promoting practices. No statistically significant association was found between physical activity levels and physical activity promoting practices ($p > 0.05$). Participants below the age of 35 years had higher physical activity promoting practices (51%) than any other age group and males (46%) had high physical activity promoting practices compared to the females (20%). The most common form of health promotion strategies used by physiotherapists included discussing physical activity participation with their clients (98%), rather than the use of written material (9%).

Barriers to physical activity health promoting practices

Participants in the focus group discussion consisted of 5 participants who had good physical activity health promoting strategies and 5 who had poor physical activity health promoting strategies. In the focus group discussions with the participants, four themes emerged as the barriers to promoting physical activity among clients with six categories and eleven subcategories. The themes, categories and subcategories are presented in Table 2 and supported with relevant quotations.

Table 2: Themes and categories developed from qualitative data analysis

Themes	Categories	Subcategories	Participants experiences	Quotes
Policy on physical activity	Government policy on physical activity	Funding	Participants felt that government had not effectively budgeted for the role out of the physical activity policy to institutions	<p><i>“The government policy is there but it is not well defined to give good directions such that institutions know their responsibility in encouraging their employees in engaging in physical activity and sports and also give a universal day for all institutions to allow their employees to participate in physical activity.” (P7).</i></p> <p><i>“Although the policy is there, the government does not allocate a budget for physical activity to institutions and this makes it a problem for institutions to buy equipment for sports and promote physical activity.” (P8)</i></p>
		Infrastructure	The policy is not clear on the development of facilities linked to promoting physical activity.	
	Institutional Policy on Physical activity	Implementation Plan	Policies exist but there is no clear guidelines for implementation as to when and how	<p><i>“Due to lack of policy from our institution to promote physical activity, this may stop the institution from improving the staff’s knowledge on physical activity for example there is a lack of books or articles on physical activity in the library.» (P6)</i></p>
		Inconsistent support	Support to implement effective physical activity strategies at the workplace tended to vary from institution to institution	
Time management	Lack of time	Long working hours	The government policy to work nine hours a day tend to deprive people time to engage in physical activity	<p><i>“Time may be a factor because we can’t get time during working hours due to the big number of appointments we give to our clients. It’s very hard for us to make a follow up and we can’t go out to their homes.” (P2)</i></p>
		Additional Responsibilities	Due to the high cost of living in Rwanda people tend to take different jobs for supplement their income or further their education in hope of a better pay.	<p><i>Due to other additional responsibilities we have, for example there are some staff among us who have opted to continue their further studies so when they are not working they go for studies, so time is a barrier.” (P4)</i></p>
Cultural influence on physical activity	Cultural Restrictions	Gender	Boys were groomed to be protectors of families while girls were groomed to be mothers and family wives hence not allowed in physical activity while men were trained to be warriors therefore allowed to do physical activity	<p><i>“The Rwandan Culture plays a big role in influencing physical activity. It prevents some groups of people from participating in physical activity for example women were not allowed to participate in physical activity, they were only allowed to do simple tasks like cooking and other tasks that did not require use of energy.”...because of how people dressed some time back, women were required to dress in long dresses. This would hinder or discourage doing physical activity..”</i></p>

Themes	Categories	Subcategories	Participants experiences	Quotes
		Cultural image	Culture view women as weak so they were given less strenuous activities that did not involve a lot of energy expenditure	
		Dress Code	Women in the Rwandan culture are mothers into the society therefore they are obliged to have a special dress code cover their body of which it prevents them from doing physical activities and sports	
		Cultural beliefs	The primarily responsibilities of women was to give birth and look after children and their husbands	<i>"Women were prevented from doing heavy work their only role was to give birth, look after the children and husbands at home and prepare food and the rest of work was done by men and children."</i> (P3)
Environmental influence on physical activity	Physical factors (infrastructure)	Distance to facilities	Participants felt that lack of facilities in their surrounding communities contributed to lack of physical activity participation	<i>"For me the sports centre is a long distance away from where I stay, so I have to walk or pay for transport, therefore financial means also limits me from going there."</i> (P6)

Discussion

Physical activity has been globally recognized to have the solution and prevention of increasing chronic diseases of lifestyle. Increase in physical inactivity is evidence that the world population is engaging less in physical activity⁵. Health professionals, especially physiotherapists are in a better position to promote physical activity among their clients¹⁵. Although physiotherapists may have the knowledge, the promotion of physical activity as a health promotion strategy is influenced by various factors such as personal practices, the cultural beliefs of the population factors and policy.

In the current study, physiotherapists in Rwanda were equally represented in all categories of physical activity level participation, with them being most active whilst at work. Compared to other health professionals in South Africa, research found that most nurses working in public hospitals were considered to be sedentary¹⁶. The difference between physiotherapists and the other sample population may be due to their knowledge of physical activity acquired during their training when still in school compared to other populations. Physiotherapists are perceived as experts in the promotion of physical activity. It is in this regard that their clients/patients

and other health professionals respect their advice concerning health matters. This puts physiotherapists in the best position to advocate and influence their clients' participation in physical activity¹⁵. In the current study discussing physical activity and the use of written materials on physical activity were the strategies used in promoting physical activity to clients/ patients. These strategies are similar to those commonly used in New South Wales, Australia where it was reported that physiotherapists used some of these strategies to promote physical activity¹⁷. Other health professions like doctors¹⁴, did not use written materials or give written exercise plans to their patients. It was also revealed that it was easier for dieticians¹⁸ to discuss physical activity than giving written material since it's time consuming and costly.

What is important from the current study is the emphasis on the cultural influence on physical activity participation as indicated by the following quote *"The Rwandan Culture plays a big role in influencing physical activity. It prevents some groups of people from participating in physical activity for example women were not allowed to participate in physical activity"*. This lends us to understand the role of cultural competence as a core skill among health professionals. However a study

conducted by Murrock and Madigan¹⁹ helps us to focus on culture in a way that promotes physical activity. In most cultures traditional dances and positive lifestyle activities are encouraged thus it can be used to promote physical activity and researchers are encouraged to explore the positive aspects of culture on physical activity¹⁹. In addition, to improve cultural beliefs as mentioned by the participants in the current study, research highlighted that for national policies and plans on physical activity to be implemented and be successful, they should be socially inclusive and participatory³. Therefore cultural ties and influence should be considered.

Finally, if health promotion strategies are to be plausible, it should be guided by policy as is the case in Rwanda. However, challenges exist and if these challenges are not addressed effectively the policy will not serve its purpose. It has been highlighted that for national policy to be implemented effectively, all stakeholders should comply and develop institutional policies that work hand in hand with the national policy and have effective collaboration in all physical activity programs²⁰. Therefore responsibility should be defined at every level so that activities should not overlap.

Conclusion

Based on the findings of the current study, it is evident that physically active physiotherapists are well positioned to incorporate health promotion strategies that can encourage patients to participate in physical activity. However, the successful implementation of these health promotion strategies related to physical activity is still influenced by barriers such as government policy, cultural influences, environmental influences and time constraints experienced by the practitioner.

Implications for practice

It is thus important for physiotherapists and other health professionals to be empowered about intervention strategies within the limited resources we are faced with and governments should streamline the policy on physical activity for better promotion of physical activity.

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