

## Nurses and Physicians' Perceptions towards Physical Activity Promotion in Kanye Health Facilities – Botswana

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### Abstract

*This study on perceptions, practices, and levels of physical activity (PA) promotion by nurses and physicians in Kanye health facilities is a quantitative cross-sectional research. The population comprised 220 prospective respondents (205 nurses and 15 physicians). Of those who agreed to participate, data were collected using a self-administered structured questionnaire after a pilot study. Simple random sampling was used in data collection. Data were analyzed using STATA. Findings were presented in the form of tables and graphs. Results showed 98.4% perceive PA as promoting health, while 92.3% said PA promotion is a daily duty of nurses and physicians. Of the total respondents, 61.3% were engaged in PA. A major finding of this research is that 89.2% of respondents perceive that PA promotion should be a requirement for contemporary health facilities. Results showed that a good number of respondents (67.6%) reported that they promote physical activity. Thus, hypothesis number two that there is a high proportion of nurses and physicians who do not promote PA was rejected at 0.05 level of significance. The study recommended the inclusion of PA promotion and skills in the curriculum of nurses and physicians.*

**Key words:** *physical activity (PA), PA promotion, general practice, moderate-intensity PA, engaged in PA.*

### Introduction

Although major epidemiological advancements have been accomplished in health and allied professions, the mortality, morbidity and disability attributed to noncommunicable diseases (NCDs) in 2004 accounted for about 60% of all mortality and 47% of the global burden of disease. These figures are expected to rise to 73% and 60%, respectively, by 2020 (World Health Organisation – WHO, 2008). Furthermore, the WHO stipulated that the greatest increase will be seen in the African region. NCDs, mainly cardiovascular diseases, cancers, chronic respiratory diseases and diabetes represent a leading threat to human and development. These four diseases are the world's biggest killers, and 80% of all deaths are from low and middle-income countries. The two main risk factors for NCDs have been identified as diet and physical activity (PA). Steptoe et al. (1999) stated that in Catalonia in the United Kingdom, there was a lack of evidence regarding the levels of physical activity promotion; yet, Donaldson (2009) stated that the benefits of regular physical activity to health, longevity, well being and protection from serious illness have long been established. He emphasised that they easily surpass the effectiveness of any drugs or other medical treatment. The challenge for everyone, young and old alike, is to build these benefits into their daily lives. If a medication existed which had a similar effect, it would be regarded as a “wonder drug” or “miracle cure”. Donaldson (2009) concluded that it is crucial to encourage a culture of physical fitness in the population which spans all ages. This can be

achieved through physical activity promotion programmes by nurses and physicians. A review of literature does not show any study done in Botswana to find out the nature and extent of physical activity promotion in general practice by nurses and physicians.

Therefore, this study sought to investigate perceptions, practices, and the level of physical activity promotion by nurses and physicians in Kanye health facilities.

The broad objective of the study was to identify perceptions towards physical activity promotion to patients by nurses and physicians in Kanye health facilities.

The specific objectives were as follows:

To determine Kanye health facilities nurses' and physicians perceptions toward PA

To identify the proportion of Kanye health facilities nurses and physicians engaged in regular PA

To establish the frequency of PA health promotion to clients

To establish factors (demographic and socio-economic) associated with PA promotion by nurses and doctors. For the purpose of this research, it is hypothesised that:

1. There will be a high proportion of nurses and physicians that are not engaged in PA promotion.
2. There will be a high proportion of nurses and physicians who do not promote PA to patients.

## **Review of literature and related studies**

### **Physical activity promotion setting**

While it has been recognised that physical activity (PA) is crucial to maintain health and prevent some noncommunicable diseases, it is also true that most people are still inactive. For example Donaldson (2009) said that inactivity affects 60-70% of the adult population in United Kingdom (UK); yet the potential benefits of physical activity to health are huge. Ribera, McKenna, and Riddoch (2005) showed that 88% of the studied physicians/ nurses promoted PA at least infrequently. Work conditions were perceived as unfavourable, with the main barriers being lack of time, training, and protocols. Physical activity was especially hindered by seeing PA as a secondary task, and patients ignoring recommendations. The research concluded that PA promotion remained to be integrated into practice consultations.

Findings of Sparling, Owen, Lambert, Haskell (2000) and USDHHS (1996) revealed that non-pharmacological, behavioural interventions may be more cost-effective and safer than the alternatives, and encouraging primary-care health professionals to promote physical activity is one feature of this approach. Similarly, Conn (2004) showed that interventions to increase PA reduce anxiety in healthy participants. Interventions were most effective when they included supervised PA, and were delivered to individuals, used moderate or high-intensity PA. Despite the fact that the framework document for the elaboration of the health plans of Catalonia emphasised that by the year 2000, fifty percent of physicians in primary care should promote physical activity to patients, there was a lack of evidence regarding the levels of PA promotion. Furthermore, the practices, barriers and personal behaviours that have been identified as predictors of promotional intensity in other westernised public health services remained unexplored (McKenna & Riddoch, 2005).

### **Trend of inactivity**

The life style of many people has changed toward predisposing them to weight gain, which leads to high incidence of non-communicable diseases (Donaldson, 2009). The distance travelled on foot did not only decline in the Western world alone, but observations show that even in the developing world, this trend is prevalent. With inactivity being a major public health problem, the

medical community is searching for effective solutions to prevent these costly and deleterious health consequences (Epstein, 1998).

The United States (US) Department of Health and Human Services -USDHHS (1996) quoted by Ribera, McKenna, and Riddoch (2005) acknowledged that sedentary behaviour is one of the strongest risk-factors for many chronic diseases and conditions, including coronary heart disease, hypertension, diabetes mellitus type 2, osteoporosis, colon cancer, depression and anxiety. A reduction in sedentary lifestyles will have beneficial effects on sedentary-related diseases and will reduce future health-care expenditure (Guallar-Castillon, Lopez, Lozano, et al 2002; Gutierrez-Fisac, Banegas, Rodriguez, & Regidor 2000) quoted in Ribera, McKenna, and Riddoch (2005). Furthermore, Sparling et al (2000) said that while infectious diseases remain endemic in South Africa, morbidity from chronic diseases is increasing along with the prevalence of contributing risk factors such as smoking, sedentary living and a change from a more traditional to a Westernised diet. Levitt et al (1993) quoted in Sparling et al (2000), showed that over 40% of historically, socio-politically, disadvantaged persons living in urban communities reportedly do not participate in any leisure or occupational physical activity.

### **The role of health professionals in physical activity promotion**

Results of a study by Lobelo and Frank (2009) showed that doctors are well positioned to provide physical activity counselling to patients. They are a respected source of health-related information and can provide continuing preventive counselling feedback and follow-up. The same research showed that clinical providers who themselves act on the advice they give, provide better counselling and motivation of their patients to adopt such health advice. It was recommended that medical schools need to increase the promotion of students adopting and maintaining regular physical activity habits to increase the rates and quality of future PA counselling delivered by doctors. This concept can also be extended to nursing schools especially in developing countries where the ratio of patient-nurse is higher than that of patient-physician. This assertion has been supported by the 1999 US Surgeon General report, which stated that health professionals, in addition to being role models for healthy behaviours, need to encourage their patients to get out of their chairs and start fitness programs tailored to their individual needs. An individually tailored exercise programme, delivered by trained nurses from within general practices, was effective in reducing falls in three different centres (Robertson, Devlin, Gardner, & Campbell (2001). This strategy should be combined with other successful interventions to form part of home programmes to prevent falls in elderly people. Results of this study showed that nurses' health promotion reduced falls by 30% from an incidence rate ratio of 70%.

In addition, results of Sparling, Owen, Lambert and Haskell (2000) affirmed that healthcare settings offer a unique opportunity to counsel adults and young people about physical activity. The same authority went on to say that as esteemed professionals, physicians significantly influence their patients regarding healthy lifestyles.

Further results of a study by Elley, Kerse, Arroll, and Robinson (2003) showed that a trend towards decreasing blood pressure became apparent but no significant difference in four year risk of coronary heart disease among participants who engaged in health physical activity and those who were not. However, their conclusion was that counselling patients in general practice on exercise is effective in increasing physical activity and improving quality of life over 12 months.

In a study to examine the promotion of physical activity by general practitioners (GPs) and practice nurses (PNs), McKenna, Naylor, and McDowell's (1998) results showed that GPs were less likely to regularly promote physical activity with their patients if they indicated lack of time as a barrier, or lack of incentives, and more likely to promote exercise if they themselves were regular exercisers. For PNs, personal physical activity stage was the strongest significant predictor of promotion level, but with a stronger effect than in the GPs.

The main finding was that GPs in the action or maintenance stage of changing their own physical activity are three times more likely to regularly promote the same behaviour in their patients than those in the other stages. However, for PNs the same difference quadruples the likelihood of them promoting physical activity. Professional readiness to change is influenced by known system barriers in GPs, and not in PNs, but is more strongly predicted by personal physical activity behaviour in both groups.

Nurses were more physically active than the GPs while both reported that the major barrier to being more physically active was a lack of time (McKenna, Naylor, & McDowell, 1997). The data suggested that PNs who are active themselves perceived system barriers as having less limiting effects on their level of physical activity promotion. They also report promoting physical activity more often with different patient groups than the irregularly active PNs. It was established that one possible means to increase levels of physical activity is the concept of preventive care in which general practitioners are encouraged to offer regular health checks to their adult patients, and health promotion services to all registered patients. In addition, Lim and Taylor (2005) highlighted that it is important that clinicians who care for people with health problems such as diabetes and arthritis provide advice on the possible benefits of physical activity as a routine part of clinical care (p. 39). Ribera, McKenna, and Riddoch (2005) found that a majority of staff (88%, n = 214) reported promoting PA in practice consultations. More nurses (93.5%) than physicians (84.1%) reported doing this. Personally active staff (action or maintenance stages) reported promoting PA to all patients. The majority of inactive staff (49.8%) promoted PA with few of their patients.

### **Recommended duration and type for daily physical activity**

The United States department of health and human services (1996), quoted in Sparling, Owen, Lambert, and Haskell (2000) affirmed that when all research is considered collectively, a dose-response relationship between activity levels and disease prevention is clearly evident. Among questions that people debate is how long should one get engaged in physical activity? Pate et al, (1995; NIH, 1996; American College of Sports Medicine quoted in Sparling et al (2000), said that although specific recommendations may vary with age and health status, a consensus guideline is that every adult should accumulate 30 minutes or more of moderate-intensity endurance-type physical activity over the course of most days of the week. A distance of 3.2kilometers per day could reduce American death rates by 5-6% from cardio-vascular heart diseases (CHD), diabetes, and colon cancer if 50% of the population made increases in physical activity practices (McKenna & Riddoch, 2005).

Over 60% of the adult population in England fail to meet the minimum recommendation of 30 minutes of physical activity five times a week (Donaldson (2009). This poses a substantial risk to public health. Everyone, irrespective of their age, can take action to reverse this dangerous trend, with significant benefits to their health and general wellbeing.

Donaldson's report continued to say that 61% of men and 71% of women aged 16 years failed to meet the minimum adult recommendations for physical activity. Levels of inactivity amongst children are startlingly high. Amongst two to 15 year olds, 68% of boys and 76% of girls do not meet the minimum recommendation of an hour of moderate physical activity per day. As a result, children are being exposed to health risks including obesity, weak bones and future heart disease. The proportion of the population meeting recommended levels has increased in recent years, but the change is small.

### **Guidelines for physical activity**

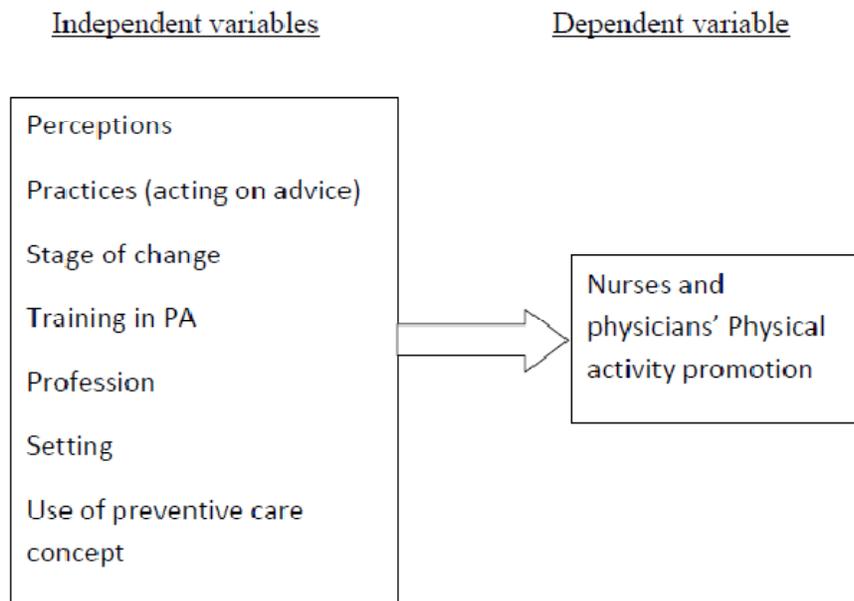
Hagberg (2005) guidelines for healthy adults under age 65 are 30 minutes a day, five days a week of moderately intensity physical activity or do vigorously intense cardio 20 minutes a day, three days a week and do eight to 10 strength-training exercise, eight to 12 repetitions of each

exercise twice a week. It should be noted that to lose weight or maintain weight loss, 60 to 90 minutes of physical activity may be necessary. The 30 minute recommendation is for the average healthy adult to maintain and reduce the risk for chronic disease.

Starting an exercise programme, one should choose activities enjoyed most to stay motivated. Activities include aerobic, swimming, jogging, cycling, playing basketball, running, taking stairs, and walking. Walking is described as a great way to do moderate-intensity physical activity.

The guidelines for older adults and adults with chronic conditions are similar to those for younger adults. Strength training is extremely important for all adults, but especially so for older adults, as it prevents loss of muscle mass and bone, and is beneficial for functional health. Three to six months of healthy lifestyle changes, including increased physical exercise, decreased salt intake, and weight loss, are currently recommended as the initial treatment for people with mild to moderate increases in blood pressure. Exercise also helps with weight control and improves blood cholesterol and glucose levels so that one's risk of having heart attack or stroke is lower, even if the blood pressure is not reduced to normal levels.

### Conceptual framework



## Methodology

### Introduction

The purpose of this study was to identify perceptions, practices, and level of physical activity promotion by nurses and physicians to patients in Kanye health facilities. This chapter presented the research design to be followed, population of study, sample size, sampling method, research tool, data collection techniques, data analysis and presentation of findings.

### Design

This research was a population cross-sectional study of whether nurses or physicians promote or do not promote physical activity. This utilised both quantitative and qualitative information from respondents.

### Population

The study was conducted in Kanye health facilities in the Southern District, Botswana. The population of study comprised of nurses and physicians at the respective places. Kanye Seventh-day Adventist Hospital, which was the major health facility in the district, had a total of 145 nurses and 12 physicians (KSDAH Personnel Office). Surrounding clinics had a population estimated to 60 nurses and 3 doctors (Matron, Southern District Office). Thus the whole population was 220 prospective respondents.

### **Sample and sample size**

Assuming a conservative physical activity promotion rate estimate of 69% (found in a prior research on physical activity promotion – Fox, Biddle, Edmunds, Bowler, and Killoran 1997) among nurses and physicians, with 5% precision and a 95% confidence interval, the required minimum sample size was 330 randomly selected individuals. However, the sample size was increased to 364 assuming that a non-response of 10% is expected. The formula to determine sample size when an estimate proportion is known was used.

### **Research tool**

A 26- items structured questionnaire was used to collect data from respondents. The tool was filled in by respondents who were selected as members of that sample. The research instrument was pilot tested amongst 5 nurses and physicians randomly chosen from Kanye clinics to determine the reliability and validity of the tool. Results in question 10 and 11 helped the researchers to identify respondents' stages of change and level of engagement in PA in relation to the trans-theoretical theory.

### **Data collection technique**

Simple random sampling technique was used. The study used primary data collected using a questionnaire. The investigators distributed the questionnaires to individuals who consented to participate in the study. Data collected include demographic characteristics such as age and sex; perceptions towards physical activity. The study will be conducted from 1<sup>st</sup> July 2011 to 31<sup>st</sup> September 2011.

### **Ethical considerations**

An application for ethical clearance to conduct the study was submitted to the Ministry of Health Human Research Ethics Committee. A letter seeking authorisation to access nurses and physicians was submitted to the Hospital Administrator of Kanye SDA Hospital and other relevant authorities, that is District Health Team. Data collected from participants was kept confidential and will remain anonymous as no identifiers will be used. The profession of nurse or physician will be considered in data analysis and interpretation. Data was shared only amongst investigators conducting the analysis and used only for the purpose of this study. Data has been stored in a locked drawer at the Kanye College of Nursing, and the consent forms will be kept for at least five years.

### **Data analysis and presentation**

Data was entered in EPI INFO, cleaned and analysed using STATA. The analysis included descriptive analysis of the study population. Frequency tables of demographic and perception related factors will be produced. Cross-tabulations was also run to investigate associations between demographic and physical activity promotion. Chi-square test of association was done to find out whether such relationships are significant.

## RESULTS AND DISCUSSIONS

### Introduction

This chapter presents results of the study, and discusses them in light of the review of literature and related studies.

**Table 1** - Distribution of respondents' demographic characteristics

Variable	Characteristic	Total	Percentage	p-value
Gender	Female	23	35.3	0.426
	Male	42	64.6	
Marital status	Single	29	44.6	
	Married	34	52.3	0.521
	Widow	2	3.0	
Age-group	≤ 30 years	23	35.3	0.945
	31-50	24	36.9	
	51 and above	14	21.5	
Religion	Christian	55	84.6	0.489
	Non-Christian	10	15.3	
Profession	Nurse	53	81.5	
	Physician	12	18.4	
Work- department	Clinic	37	56.9	
	In-patient	11	16.9	
	Others	10	10.7	
Place of residence	Campus	24	36.9	0.602
	Outside	41	63	
Diseases suffered	Psychiatric problems	2	3	
	Non-communicable	12	18.4	
	Others	5	7.6	
	None	46	70.7	
Means of transport	Personal car	34	52.3	
	Public	13	20	
	Walking	18	27.6	

Though according to the World Health Organisation (2006), the majority of health workers were women, these findings indicated that there were more males (64.6%) in the sample. This is an important finding as studies of factors associated with PA practice, males were found to be more active than females (Finn, Johannsen, and Specker (2002); Lim and Taylor (2005); and Plotnikoff et al. 2006). A sizeable number of respondents (52.3%) were married. More (72.2%) of the respondents were below age 50, which was supposed to be physically active as their strength and vigour are still at a high level. In their study on factors associated with physical activity in Canadian adults with diabetes, Plotnikoff, Taylor, Wilson, Courneya, Sigal, Birkett, Raine, and Svenson (2006), higher PA levels were associated with a younger age, being single, and a higher income. The majority (84.6%) were Christians, who should be exemplary in upholding health principles as advocated by the Bible's teaching (Beloved, I pray that you may prosper in all things and be in health, just as your soul prospers. If anyone defiles the temple of God, God will destroy him. For the temple of God is holy, which temple you are 3 John verse 2 and 1Corinthians 3 verse 17 respectively).

Results showed that 81.5% were nurses and 18.4% were physicians. This is the trend in health care institutions that nurses are more than medical doctors.

Sixty three percent of respondents resided outside of their work place, which an opportunity to walk to or from work, thus practice physical activity easily for those who cannot do the formal PA activities like basketball or football. This study showed that 18.4% suffered from some types of non-communicable diseases, which of a great concern worldwide and regular PA has brought relief to those who decide to practice. This was revealed in the Chief Medical Report of United Kingdom in 2009, which stated that the potential benefits of physical activity to health are huge. If a medication existed which had a similar effect, it would be regarded as a wonder drug or miracle cure.

**Table 2** Distribution of nurses and physicians' perception towards physical activity

Variable	Characteristic	Total	Percentage
PA promotes health	Yes	64	98.4
	No	1	1.5
PA promotion is daily duty	Yes	60	92.3
	No	5	7.6
Perception about PA – it is for ...	Rich people	1	1.5
	Young people	1	1.5
	Enhance health	47	72.3
	Leisure activity	8	12.3
	Lose weight	8	12.3

The great majority (98.4%) acknowledged that PA promotes health, while 92.3% said that PA promotion is a daily duty of nurses and physicians. Seventy two and 3 decimals percent said that PA enhances health and 12.3% perceived PA as an activity to reduce weight. Some 12.3% considered PA as a leisure activity.

### **Distribution of proportion of nurses and physicians' promotion of PA to patients**

Results showed that a good number of respondents (67.6%) reported that they promote physical activity. Thus, hypothesis number two that there is a high proportion of nurses and physicians who do not promote PA was rejected at 0.05 level of significance. These findings agree with those of Ribera, McKenna, and Riddoch (2005) who found that a majority of staff (88%, n = 214) reported promoting PA in practice consultations.

**Table 3** – Distribution of type of physical activity practiced by respondents

Variable	Total	Percentage
Aerobics	9	13.8
Brisk-walking	15	23
Cycling	2	3
Jogging	8	12
Mountain climbing	2	3
Stairs climbing	1	1.5
Others	3	5
None	25	38

Table three above shows that of the total respondents, 38% were not engaged in any physical activity, while 61.3% were engaged in some PA. The findings agree with what other research found that males are more active than women as the studied population had a good representation of males (Finn, Johannsen, and Specker (2002); Lim and Taylor (2005); and Plotnikoff et al. 2006).

### **Distribution of respondents' rate of promoting physical activity**

Findings in table five show that more respondents (64.6%) sometimes promoted PA, which could be due to lack of time, and other barriers. These results confirmed what Ribera, McKenna, and Riddoch (2005) found that 88% of their studied physicians/ nurses promoted PA at least infrequently. It is noticeable however, that 21.5% always promoted physical activity which also tallies with other associations found in the sample such as young age, and male gender.

### **Distribution of respondents' perceptions towards whether physicians have opportunity to promote PA**

The findings show that 46% of respondents perceived that physicians always have opportunity to promote physical activity, while 43% thought physicians sometimes have the said opportunity. These findings agree with Lobelo, Duperly and Frank (2009) who found that doctors are well positioned to provide physical activity counselling to patients. They are a respected source of health-related information and can provide continuing preventive counselling feedback and follow-up; they may have ethical obligations to prescribe physical activity. Research has shown that clinical providers who themselves act on the advice they give provide better counselling and motivation of their patients to adopt such health advice.

There is compelling evidence that the health of doctors (physicians) matters and those doctors' own PA practices influence their clinical attitudes towards PA. In their study, Sparling, Owen, Lambert, and Haskell (2000) concluded that there is a need for healthcare clinicians and behavioural scientists to be proactive, persuasive and collaborative with business leaders and policy makers to incorporate environmental features that foster physical activity (e.g. green spaces/parks, walkways, bicycle commuter trails) in all aspects of development. These findings were in line with what was perceived in the table below, showing that always physicians have the responsibility to promote physical activity.

### **Distribution of respondents' perceptions towards whether physicians have responsibility to promote PA**

The study shows that the majority of respondents (69.2%) perceived that physicians always have the responsibility to promote PA. This was implied by Ribera, McKenna, and Riddoch (2006) found that PA promotion delivery rarely accounted for either patients' individual needs or the circumstances that influenced their interest in PA promotion. This was a missed opportunity in promotional consultations. It is therefore important that during consultations, physicians take the opportunity and promote PA.

### **Distribution of respondents' perceptions towards whether nurses have the opportunity to promote PA**

The majority of respondents (72%) perceived that nurses have the opportunity to promote PA. These findings are supported by Ryan (2008), who propounded that with their knowledge about health and interaction with co-workers and community leaders, school nurses also serve as an example to those around them by exhibiting healthy lifestyle behaviours. She added that School nurses are uniquely qualified to collaborate with others in planning, implementing, and evaluating a staff health promotion programme. This implies that they can also promote PA. In their study, Ribera, McKenna and Riddoch (2005) established that general practices are an ideal setting to advise on physical activity (PA). A majority of staff (88%,  $n = 214$ ) reported promoting PA in practice consultations. More nurses (93.5%) than physicians (84.1%) reported doing this. As nurses exercise their duties in general practice, it is evident that they have the opportunity to promote PA. Over 70% of physicians and nurses perceived physical activity promotion as very important. When they perceive PA as important, especially in reducing the major contemporary

killing diseases: diabetes, high blood pressure, stroke, cancer, pulmonary chronic diseases, and then it will be right for them to promote PA to clients. This finding is a baseline for the following table that showed the 67.6% perceived nurses as being responsible for promoting PA.

### **Distribution of respondents' perceptions towards whether nurses have the responsibility to promote PA**

A good number of respondents (67.6%) perceive that nurses have the responsibility to promote PA. According to findings of Rollo (2004), as part of the holistic health assessment, nurses should ask their patients questions about the amount, type and frequency of the exercise they undertake. With a good understanding of the specific benefits for particular conditions they can then make recommendations for lifestyle changes that are relevant to their patients.

The findings of this study agree with McDowell, McKenna, and Naylor (1997) who stated that it is recognised that general practice do promote physical activity.

### **Distribution of respondents' perceptions towards types of barriers to PA**

Respondents' perception towards types of barriers to PA promotion showed: lack of time 56.9%, lack of resources 13.8% lack of feedback 9.9%, and non-institution support 9.2%. These findings agree with those of Ribera, McKenna and Riddoch (2005) that work conditions were perceived as unfavourable, with the main barriers being lack of (i) time, (ii) training and (iii) protocols. Therefore, PA promotion was opportunistic, focused on selected patients, used generalized messages and was highly dependent on personal interests. Further, McDowell, McKenna, and Naylor (1997) identified that a large proportion of practice nurse (PN) in a single administrative catchment are currently promoting physical activity and this supports the notion that PNs are taking the responsibility for the role of health promotion in the practice environment, provided that they are appropriately trained and experienced, including health promotion. The data suggest that PNs who are active themselves perceive system barriers as having less limiting effects on their level of physical activity promotion.

### **Distribution of respondents' perception towards curriculum having PA promoting skills**

A sizeable number of respondents (69.2) perceived that their curriculum had limited or no preparation for health promotion, while 30.7% perceived that they had enough skills to promote PA. Nevertheless, this percentage is negligible considering the burden of non-communicable diseases in the developing nations. These findings seem to disagree with those of McDowell, McKenna, and Naylor (1997) who found in large number of practice nurses promoting PA. Of the PNs who reported not promoting activity, two thirds had received no formal training in this field in the past five years; significantly fewer than in the promoting PNs. It may be logically speculated that the provision of training may increase the numbers of promoting PNs thereby increasing the potential range for public contact. Though the studied population reported not having received enough training, they at the same time reported promoting PA, probably because of campaigns of the Ministry of health calling all health providers to promote PA to curb the scourge of non-communicable diseases.

### **Distribution of respondents' perceptions towards who should be a role model in PA practice**

Of the total respondents, 30.7% felt that nurses should be role models in PA practice and promotion, while 13.8% felt physicians should be the ones. Perhaps the most important finding of this study is that a sizeable number (53.3) of respondents reported that both nurses and physicians should be role models in practice and promotion of PA. The finding agree well with literature that states that nurses have enough time with patients, and physicians are well respected, thus their

health promoting counsel can be taken very seriously by clients. The findings also confirm the 1999 United States Surgeon General report, which stated that health professionals, in addition to being role models for healthy behaviours, need to encourage their patients to get out of their chairs and start fitness programs tailored to their individual needs.

### **Distribution of respondents' perceptions towards PA promotion being a requirement for contemporary health facilities**

A great majority of respondents (89.2%) felt that contemporary health facilities should promote physical activity. Only 10.7% of the studied population felt that it is not necessary to promote physical activity. It is very important that the respondents, being health professionals feel the urge to promote PA in the contemporary society as this is one of the objectives of the health objectives of many nations. Findings of this study agree with those of Sparling, Owen, Lambert, Haskell (2000) and USDHHS (1996) which revealed that non-pharmacological, behavioural interventions may be more cost-effective and safer than the alternatives means to alleviate the burden of NCDs, and encouraging primary-care health professionals to promote physical activity is one feature of this approach

### **Conclusion**

General practice-based physical activity promotion appears to have the potential to influence a larger proportion of patients. Nurses and physicians are in a better position to influence lifestyle changes among patients and local community. They are also better placed to market the more holistic lifestyle-oriented prescription of moderate physical activity currently being advocated by public health officials. The findings of this study are encouraging as the majority of respondents are involved in physical activity promotion and practice. The study revealed that a good number of respondents do not have the skills in PA. It was noted that a sizeable number of the studied sample are in the action and termination stages of the trans-theoretical theory, which shows that there is a great potential of general practice-based PA promotion to bring about lifestyle changes that promote health .

### **Recommendations**

Based on the findings of this study, it recommended that:

1. Nurses' and physicians' training institutions include physical activity promotion skills in their curriculum.
2. Considering the prevalence rate of non-communicable diseases in Sub-Saharan Africa countries, and the role played by physical activity in their prevention and control, it is further recommended that the number of nurses may be increased so that time to promote PA may be availed if the number of patients per nurse goes down.
3. Both nurses and physicians should take every available opportunity to promote PA to patients as their advice is seriously appreciated by patients.

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