KNOWLEDGE, ATTITUDES AND PRACTICES OF PHYSIOTHERAPISTS REGARDING THEIR ROLE IN HEALTH PROMOTION IN GAUTENG PROVINCE, SOUTH AFRICA

By

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RESEARCH DISSERTATION

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DECLARATION

I declare that the dissertation hereby submitted to the University of Limpopo, for the degree of Masters in Public Health (the field of research: Knowledge, Attitude and Practice of physiotherapists regarding their role in health promotion in Gauteng Province, South Africa) has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been duly acknowledged.

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Date

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ABSTRACT

Background: Previously the role of health promotion in physiotherapy was not well understood to the extent where there was no emphasis on the practice of health promotion in the education program of physiotherapists. However in the last twenty years, especially after the adoption of the Ottawa Charter (1986) the emphasis has shifted significantly towards health promotion.

Purpose: To determine the knowledge, attitudes and practices of physiotherapists regarding health promotion in Gauteng Province, South Africa.

Method: This was a quantitative cross-sectional descriptive study using a self administered questionnaire to collect data on the knowledge, attitude and practices of physiotherapists in Gauteng Province regarding health promotion. The target populations were qualified physiotherapists in Gauteng Province registered with the Health Professions Council of South Africa (HPCSA).

Results: The overall percentage of all the physiotherapists' knowledge, attitude and practice was 76% which is regarded as good according to the score chart (60-79%). The participant's knowledge, attitude and practice were rated as 72%, 79% and 76% which is also regarded as good according to the score chart (60-79%)

Conclusion: In conclusion physiotherapists have good knowledge, attitude and practice towards health promotion in Gauteng Province, South Africa. However, there is room for improvement in acquiring more in- depth knowledge about health promotion principles and if this can be achieved, more physiotherapists will be able to practice health promotion actively.

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LIST OF ABBREVIATIONS

COPD – Chronic obstructive pulmonary disease

CPD- Continuing professional development

CHD – Congestive Heart Disease

HBM- Health belief model

HPCSA – Health Professions Council of South Africa

KAP – Knowledge, Attitude and Practice

MREC- Medunsa Research and Ethics Committee

TTM- Transtheoretical model

WHO – World Health Organization

DEFINITIONS

Knowledge: For this study refers to the understanding of physiotherapists in Gauteng Province regarding their role in health promotion.

Attitude: For this study refers to the feelings of physiotherapists in Gauteng Province regarding their role in health promotion.

Practice: For this study refers to the ways in which physiotherapists in Gauteng Province demonstrate their knowledge and attitude regarding their role in health promotion.

Physiotherapists: Regarded as allied health care professionals that aim to rehabilitate and improve people / society with movement disorders by using evidence-based methods such as exercise, adapted equipment, education, motivation and advocacy.

Role: For this study refers to the significant involvement of physiotherapists in Gauteng Province with regard to health promotion.

Health Promotion: This is defined as the process of enabling people to increase control over their health and to improve it (WHO 1986)

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The concept of health promotion was brought to the forefront by Ottawa Charter for Health Promotion in 1986 in which the links between social and economic condition, physical environment, individual lifestyle and health was high lightened. These links contributed to the holistic understanding of health which is necessary to understand the definition of health promotion.

In the Ottawa Charter, health promotion is defined as the process of enabling people to exert control over the determinants of health and thereby improving their health (WHO 1986). Due to expanding research that contributed to the advancement in knowledge, the concept of health promotion has changed in the last 20 years. These changes include improved understanding on the determinants of health.

Although Africa has made a delayed entry into the world of health promotion, the increased attention regarding promotive and preventative health measures in communities is setting a firm foundation for health promotion that could be used for further development (Nyamwaya, 2003).
The role of health promotion amongst physiotherapists in South Africa, is not well documented, with only three related studies Frantz (2008), Maleka (2008) and Ramklass (2009) been published.

This weak research evidence base regarding the role of physiotherapist in health promotion (McQueen, 2001), has highlighted the need for implementation, monitoring and the reporting of this profession's health promotion activities (Turner, 2001).

Previously the role of health promotion in physiotherapy was not well understood to the extent where there was no emphasis on the practice of health promotion in the education program of physiotherapists. However in the last twenty years, especially after the adoption of the Ottawa Charter (Frantz, 2008) the emphasis has shifted significantly towards health promotion. Studies conducted globally (Rea *et al* 2004, Hall 1999, Perreault 2008) and few in South Africa (Frantz and Maleka 2008, Ramklass 2009) are increasingly reporting on the changing participatory role of physiotherapy in health promotion, concluding that there is an important role for physiotherapists in health promotion.

Some of the various health promotional activities to be performed by physiotherapists would include: (1) being part of the "arrive alive campaign" which would predominantly involve the necessity of drivers and passengers to wear seatbelts and also forming a mandatory policy to use car seats for infants. This will be helpful in reducing the number of serious injuries from occurring. (2) participating in school programs to provide educational information regarding the importance of physical exercise and the risks of obesity (3) screening children for health related orthopedic problems at their schools (4) partake in developing health and safety regulations for the community with regard to ergonomics at work, respiratory infections in mining companies and the use of coal or paraffin at home to prevent burns.

"KAP" study measures the Knowledge, Attitude and Practices of a community. It serves as an educational diagnosis and the main purpose is to explore changes within the three above

mentioned variables towards the community, paramedical personnel and medical practitioners. KAP study will also inform us on what people know about certain things, how they feel and how they behave (Kaliyaperumal 2004). As a result this particular tool will guide my study in providing valuable information of physiotherapists regarding their role towards health promotion.

1.2 MOTIVATION OF THE STUDY

Understanding the levels of knowledge, attitude and practice of physiotherapists regarding their role towards health promotion will enable a more efficient process of awareness creation amongst physiotherapists. Due to the minimal scientific reported evidence, this will be an important study to determine whether physiotherapists have the knowledge and the necessary attitude to practice health promotion in South Africa.

1.3 RESEARCH QUESTIONS

1.2.1 What is the level of knowledge of physiotherapist regarding health promotion?

1.2.2 What are the attitudes of physiotherapists towards health promotion?

1.2.3 To what extent have physiotherapists integrated health promotion in their practices?

1.2.4 Was health promotion covered during their training in order to gain knowledge?

1.4 AIM OF THE STUDY

To determine the knowledge, attitudes and practices of physiotherapists regarding health promotion in Gauteng Province, South Africa.

1.5 OBJECTIVES

1.5.1 To assess the knowledge among qualified physiotherapists regarding health promotion in Gauteng Province.

1.5.2 To determine the attitudes of qualified physiotherapists towards health promotion in Gauteng Province.

1.5.3 To determine if physiotherapists are practicing health promotion on a day to day basis in Gauteng Province.

1.6 SIGNIFICANCE OF THE STUDY

1.6.1 This study will serve to evaluate the knowledge, attitude, and practices of physiotherapists in Gauteng Province regarding health promotion.

1.6.2 This study will contribute to health service institutions, universities and the Department of Health in South Africa by providing evidence of the involvement of physiotherapists in health promotion.

1.6.3 The study will serve to identify gaps (if any) between the accepted practice of health promotion and the actual practice thereof.

1.6.4 The study will serve as a platform to introduce the necessary changes into the curriculum of physiotherapy in order to integrate health promotion into the practice of physiotherapy.

CHAPTER 2

LITERATURE REVIEW

2.1 WHAT IS HEALTH PROMOTION?

According to the first international conference on health promotion, held in Ottawa, health promotion was defined as the process of enabling people to improve and increase control over their health. The five strategies set out in Ottawa Charter for Health Promotion namely (1) building health public policy (2) create supportive environment (3) strengthen community action (4) develop personal skills and (5) reorient health services are essential for achievement of success (WHO 1986). Therefore the responsibility for health promotion in health services should be shared among individuals, community groups, health professionals, health service institutions and government.

This highlights the need for stronger attention to health research as well as changes in professional education and training of physiotherapists as they are involved with promotion of health, well being and with prevention, treatment and rehabilitation of disorders of human movement (Higgs *et al* 2001).

2.2 INTERGRATION OF HEALTH PROMOTION AND PRIMARY HEALTH CARE

Understanding the differences and similarities between primary care and public health is important if an integrated cohesive and effective primary health care system is to become a reality. The goal of integrating public health and primary care into one system is to improve the health of populations and reduce health inequalities through a team approach (Ministry of Health, New Zealand 2003).

A package of essential Primary Health Care services has been developed by the National Department of Health in South Africa. This sets out all essential services that should be provided by the public sector in communities, clinics and health centers (Donaldson *et al* 2000). According to the Department of Health in Pretoria (2000), rehabilitation services are an integral part of the services provided at the primary level. This constitutes a re-orientation of rehabilitation from mainly institution based services to community oriented and community based services. Physiotherapists can play an active role in all five areas (Frantz, 2008) in health promotion programs, especially re-orienting health services which is regarded as a core element in the field of physiotherapy.

The role of physiotherapy is currently changing and will continue to change in the future. The new South African National health System has been prioritized by adopting the Primary Health Care approach because this particular approach was seen as the most cost effective means of improving the health of the population. This approach involves a health system led by Primary Health Care service to integrate with the district health system. The Primary Health Care services that is been provided through the district health system has identified rehabilitation and physiotherapy services as a greater role in Primary Health Care success (Mbambo 2005).

Fourie (2008) stated that the National Department of Health in South Africa prioritized Primary Health Care and developed a Primary Health Care Package (final draft) to assist health workers in the execution of their duties. Since the implementation of the 'community service' the quality of health care in South Africa has definitely improved. More health care workers, especially doctors, dentists and physiotherapists are serving the community.

However to implement the Primary Health Care package to its full potential more doctors, nurses, personnel and especially physiotherapists would be needed at the Primary Health Care level. Primary Health Care is considered a great idea but still requires a lot of development and changes.

2.3 PHYSIOTHERAPY AND HEALTH PROMOTION

In the last ten years, allied health care professionals (nurses and physiotherapists) have become increasingly aware of their important role in health promotion. Higgs *et al* (2001) stated that the physiotherapist's role also includes the education of the patient, and the family, about the condition and its management. Physiotherapists as health care providers interact with communities of patients which allow them to deal with health promotion issues in the performance of their occupations.

Ergonomic refers to the interaction between the workplace, job practices, equipment and the employee's physical, psychological and social well- being. It is closely related to health, safety and efficiency and plays an essential role in accident prevention, promotion of health and the prevention of ill health. (Hattingh *et al* 2003). Therefore understanding the development of work

related over-exertion and a repetitive strain injury is precisely an area of expertise of a physiotherapist (Jones *et al* 2001).

Physiotherapists also understand the broader determinants of health which impacts on individual and population health status and as such has the potential to form an integral part of the team of health care professionals advocating health promotion (Fricke 2005). Therefore it is important to evaluate the knowledge, attitudes and practices of physiotherapists with regard to health promotion.

2.4 PRACTICAL APPLICATION OF HEALTH PROMOTION PHYSIOTHERAPY

There are various conditions in which health promotion can be particularly applied by a physiotherapist. Examples include chronic obstructive pulmonary disease (COPD), diabetes, osteoporosis, physical inactivity and obesity, spinal cord injury, back injury, etc. Two examples, namely spinal cord injury and chronic obstructive pulmonary disease, will be discussed to illustrate the role of the physiotherapist in health promotion.

Spinal cord injury usually results in lifetime disabilities and is common in young people (Njoki *et al,* 2007). Furthermore, young people are at significant risk for secondary complication such as respiratory problems, heart disease and emotional disorders. These secondary problems are related to poor life style habits such as alcohol and drug use as well as sedentary life style (Njoki *et al* 2007). These patients need a health promotion intervention during the rehabilitation process with the aim to promote an active independent attitude.

Chronic obstructive pulmonary disease (COPD) is a combination of chronic bronchitis and emphysema and has a high prevalence amongst chronic smokers. Community based rehabilitation seemed to improve endurance and shortness of breath in these patients with COPD.

The physiotherapist can practice health education by providing leg training, strengthening exercise and pulmonary rehabilitation which have overall proven to have improved quality of life of patients with this condition (Fricke, 2005).

Even though the above examples refer to tertiary prevention, physiotherapists can play an active role by extending their expertise beyond tertiary prevention to avenues of primary and secondary prevention where physiotherapy is not yet engaged in (Fricke, 2005).

James (1999) stated that the emerging paradigm shift from disease and disability prevention to prevention of secondary conditions in people with disabilities, physical therapists and other rehabilitation professionals can play an important role in the integration of health promotion. Furthermore rehabilitation professionals are challenged to assume the roles of educators, researchers, program provider and having a strong potential as a collaborator in the process of making health promotion people centered.

As a result gaining knowledge in the field of health promotion may help physiotherapists to acquire a new understanding of the concept of health and of their role in intervening with people who present potentially complex conditions, such as low back pain which is served as a clinical example and can be applied in practice. However linking health promotion with physiotherapy may also be very helpful for other conditions or populations, such as people with disabilities due to different causes (Perreault 2008).

2.5 SCOPE OF PRACTICE ON HEALTH PROMOTION

Medical education is a continuously changing process in which curricula are developed or modified in response to changing societal needs and expectations. However new challenges were beginning to be faced towards the 21st century, suggesting that medical schools must provide physicians-in-training with skills that enable them to provide comprehensive health care competently and to master an expanding body of medical research. One area in medical education receiving increased attention is student's preparation and competency in the areas of disease prevention and health promotion.

Integrating disease prevention and health promotion at multiple points in the undergraduate medical curriculum is a more global solution and may also promote more effective learning for a broader range of students. This is useful in building students confidence to apply skills and knowledge in prevention and health promotion during their clinical rotations in primary care and in later practice(Litaker *et al* 2004).

The burden of chronic diseases continues to grow rapidly in Africa and a great number of new skilled health personnel are lacking behind in controlling the rate of diseases being spread to the nation. Training and increasing the number of health-care personnel, therefore remain a priority in African countries. The white paper for the transformation of the health system in South Africa highlighted the need to not only increase the number of health professionals, but to re-orient their training so that there is a significant shift and expansion of focus from curative measures to disease prevention and health promotion (Mokwena *et al* 2007).

Health promotion in higher education is a unique specialty in the field of public health and health education focuses on advancement of health from three perspectives which include school health, institution/community health and work sites. The best practice health promotion planning begins with evidence based needs assessment that enables health promotion or health education planner to identify the most cost effective uses of human and fiscal resources (Zimmer *et al* 2003).

A typical example can be back week held in South Africa. This is a national intervention program hosted by the South African Society of Physiotherapy targeting a large population group of all ages. However the effectiveness of this national program has not been evaluated and hence using the recommended out comes, the South African Society of Physiotherapy should consider evaluating back week program according to knowledge, environmental and behavioural changes (Frantz 2008).

2.6 HEALTH PROMOTION-EVIDENCE BASED

Evidence based medicine has become a fundamental concept in the practice of medicine in the 20^{th} century going into the 21^{st} century. However until the turn of the century, there have been very few scientifically based health promotional activities. This lack of support of evidence based health promotion activities could have a negative effect on evidence based policy efforts (Mc Queen, 2001) and this applies to the areas of physiotherapy. There is a belief that the success of any intervention needs to be scientifically demonstrated and this needs further forms of research and evidence collection (Frantz, 2008).

Evidence based medicine has been defined as the use of the current best evidence namely individual clinical expertise and external clinical practice (expertise gained by other health professionals) in making decisions on the care of individual patients (Sackett *et al*. 1996). This has been widely used in clinical decision making, but its application towards health promotion has been lacking. In order to unequivocally proof the benefits of health promotion, evidence needs to be gathered on the effectiveness of local health promotion interventions, impact of policy initiatives and the cost effectiveness of these initiatives (Rychetnik *et al* 2004).

In summary, towards the end of the 20th century / beginning of the 21st century, the focus of health care shifted significantly to that of health promotion. The development of health promotion has accelerated in the last two decades, with all members of the health care team, including the allied health care professionals, shifting their focus to health promotion. Evidence based health promotion has now become the standard and the physiotherapy role in this field has been growing in the last few years.

Studies related to knowledge, attitudes and practices done in other countries have yielded pertinent results to promote the role of health promotion in physiotherapy. Rea *et al.* (2004) studied the role of health promotion in physical therapy in California, New York and Tennessee, which confirmed the need for physiotherapists to address health promotion. However, the study also found that the practice of health promotion amongst physiotherapists was less than desirable and improvement in these practices would realize the full potential of physiotherapists' role in health promotion.

The knowledge, attitudes and practices of physiotherapists regarding their role in health promotion in South Africa, have not being researched extensively and therefore this study will serve as a baseline for identifying the gaps or shortfalls in health promotion.

2.7 MODELS OF HEALTH PROMOTION

The role of the health promotion practitioner is to improve the health of the community by encouraging people to increase health promoting behaviour and to decrease health damaging behaviour. One role of the health promotion researcher is to provide clear evidence based guidelines to assist practitioners in designing and implementing effective health promotion programs through the development and testing of models of attitude and behaviour change to guide the development of health promotion programs (Jones *et al* 2004).

The term model of moral reasoning refers to fundamental distinctions such as emotions, intuitions and conscious reasoning (Bucciarelli *et al* 2008). This particular model offers an expanded view of the human conditions that will enable researches to develop a more comprehensive body of knowledge and also appears to be relevant in applying to the field of health education. However the proposed model also helps to explain why health promotion has not been able to make significant progress in effecting health behaviour changes (Buchanan 2006).

Meanwhile Mazur *et al* 2000 stated that in the process of evaluation, it's very important for health promotion initiatives to focus on the changes in human knowledge, attitudes and behaviours. For that reason models like KAP analysis (knowledge, attitudes, practice) HBM (Health Belief Model) and TTM (Transtheoretical model) are commonly applied.

Health Belief Model refers to a view of rational decision making in situations of uncertainty. This model emphasizes the importance of perception in decision making which are influenced by a variety of factors including an individual's previous experience, personality, mood and the things of which a person is consciously aware at a given point in time. However HBM is frequently used as a framework for conducting needs assessment in preventive health behaviour and compliance studies as well as more significantly still continued to be used in many health promotion diagnostic studies (Ngcobo *et al* 2008).

Transtheoritical model is a model of intentional change which focuses on the decision being made by an individual. Other approaches of health promotion have focused primarily on social influences on behaviour or on biological influences on behaviour (Velicer *et al* 1998)

However there is still a need to develop and choose indicators, which could consider environmental aspects of health promotion and local actions with national health promotion policy (Mazur *et al* 2000).

Chernoff (2001) stated that changes in diet and exercise patterns are most effective in the prevention of nutrition-related conditions when they are instituted early which will eventually lead to a decrease or delayed onset of various health conditions. The use of a variety of adult education theories and models will enhance behaviour changes that lead to more healthful habits and enable a health educator to be successful in effecting change.

2.8 CHALLENGES OF MEASURING HEALTH PROMOTION PROGRAMS

Most studies (Frantz 2008, Perreault 2008, Hall 1999) have shown that health promotion is regarded as a vital tool in achieving the goals needed to improve global health. A majority of health care professionals, especially the involvement of physiotherapists are needed to lead and develop health promotion plans and strategies in the workforce in order assist the nation.

However implementing the concept of health promotion is an ongoing challenge among physiotherapist. Frantz (2008) stated that lack of evidence for intervention to promote health is not the only challenge facing health promotion, but also the lack of indicators for measuring health promotion effectiveness especially among physiotherapist is another challenge for successful health promotion programmes.

Examples of indicators which can be used in assessing the achievement of health promotion outcomes will include: (1) health literacy such as knowledge relevant to the problem of interest, self-empowerment, attitude and behavioural intention and participation in health promotion program (2) Social mobilization such as community empowerment, community competency, community ownership of health promotion programs (3) public policy and organizational practice such as policy statements, legislations and regulations, management practice, funding and resource allocation (Nutbeam 1998).

The absence of explicit guidelines for re-orienting physiotherapy curricula and practice for primary health care has been limited and this has implications for changing the practice of physiotherapists who remain grounded in the traditional physiotherapy practice model (Ramklass 2009).

Students need practical experience in developing and implementing health promotion and disease/injury prevention programs in the community to meet this practice expectation (Hall 1999). Such a program provides a great opportunity for students to experience firsthand health education activities (Boucaut 1998).

Ramklass (2009) stated that the curriculum design in South Africa is strongly aligned with the policy document for educating and training physiotherapy students that is predicated on the medical model, hence strategies for developing curricula within a primary healthcare philosophy are absent from the policy document.

This can be closely referred to an event that took place in 1994 when a group of physiotherapy students practicing in a South African community setting managed their clients according to the medical model in the absence of appropriate skills for primary health care and community-based practice (Ramklass 2009).

According to the biomedical model, health constitutes the freedom from disease, pain or defect thus making the normal human condition healthy. This particular model focuses on the physical aspect such as pathology, biochemistry and the physiology of a disease, but does not take into account the role of social factors (Annandale 1998).

There is no working model of good practice in capacity building for health promotion in developing countries. An increase in knowledge and skill levels of individual practitioners is a key success with regard to capacity building of health promotion. However the expertise of individual practitioners alone will not lead to effective health promotion practice without strong support from the organization within which they work as well as without the support from local political leaders and senior managers (Tang *et al* 2005).

Nyamwaya (2003) stated that lack of indicators for measuring health promotion is a major challenge in the development of health promotion in Africa.

The public health community in Africa has traditionally paid little attention to the health related needs of people with disabilities. Due to various reasons which may include lack of community –based health promotion interventions or indicators, many African countries have not managed to significantly implement programs that would help to improve the quality of life for people with disabilities (Amosun *et al* 2005). Therefore academic institutions in Africa need to take up this challenge to facilitate a full development of the field (Nyamwaya 2003).

There is a need for health promotion researchers to team up with epidemiologists, statisticians and other health system researchers to agree a minimum set of indicators for health promotion (Nyamwaya 2003) and research skills are essential amongst physiotherapists not only as part of the goal of striving for clinical excellence but also for ensuring that physiotherapy practices are based on sound research (Hunt *et al* 1998).

2.9 FUTURE OF HEALTH PROMOTION

Zimmer *et al* 2003 stated that the standards of practice for health promotion in higher education provide a quality improvement tool for strengthening the current and future health of the nation and linking academic success and the mission of higher education with national health priorities.

Xiangyang *et al* 2003 also states that through implementation of health promoting University project, health services were re-oriented to health promotion and improving health knowledge/behaviour among college students. As an intervention setting, the university community can benefit greatly from implementing health promotion campaigns based on the principles of Ottawa Charter for health promotion.

Recent research has indeed highlighted the interest of integrating health promotion in rehabilitation interventions and research. As rehabilitation professionals, physiotherapists, who can be consulted directly without medical referral, are well suited to integrate health promotion in their field of practice. However efforts should be made to further link and integrate principles and practices of health promotion in the field of physiotherapy to improve interventions at the individual, community and population levels (Perreault 2008).

This can be supported by Kennon (1999) stating that physical therapist is in a unique position to maximize patient adherence to physical activity and influence a number of CHD (Congestive Heart Disease) risk factors through counseling. This would indicate that physical therapist has the ability to change a patient's health behaviour effectively by integrating exercise counseling with regular patient care. This would conclude that there is a strong association between physical activity and optimal health and as a result physical activity and fitness was placed as the first priority of the health promotion goal.

CHAPTER 3

METHODOLOGY

3.1 STUDY DESIGN

This was a quantitative cross-sectional descriptive study using a self administered questionnaire (Appendix 1) to collect data on the knowledge, attitude and practices of physiotherapists in Gauteng Province regarding health promotion.

3.2 TARGET POPULATION AND SETTING

The target populations were qualified physiotherapists from Gauteng Province registered with the Health Professions Council of South Africa (HPCSA).

3.3 STUDY SAMPLE AND PROCEDURES

A list of qualified and registered physiotherapists from both Gauteng and Limpopo Province was obtained from HPCSA by written application (See Appendix 2). A total population size of 600 qualified and registered physiotherapists from Gauteng province, of which only 162 responded.
A pilot study was conducted on physiotherapists residing in Limpopo Province. Out of a total of 140 on the HPCSA registration list, 50 physiotherapists were randomly sampled.

3.4 INCLUSION CRITERIA

Only qualified physiotherapists practicing in Gauteng province and currently (2009-2010) registered with the HPCSA were included in the study.

3.5 EXCLUSION CRITERIA

Undergraduate physiotherapists, unregistered physiotherapists, unqualified physiotherapists and physiotherapy assistants were excluded from this study.

3.6 DATA COLLECTION METHOD AND INSTRUMENT

Accompanied by a consent form (Appendix 4) explaining the aims and objectives of the study the self-administered questionnaire (Appendix 1) with closed-ended questions was posted to all 600 potential participants in Gauteng Province. The questionnaire was divided into four sections. Section A collected the demographic data (e.g. age, gender and ethnic group) from the respondents. Section B asked questions on health promotion practice (e.g. Are you practicing health promotion at your work as a physiotherapist?). Section C asked questions on the attitude of the physiotherapist towards health promotion (e.g. How would you rate your attitude towards health promotion?) while section D had questions on the physiotherapist's knowledge regarding health promotion (e.g. if they are aware that health promotion activity involves early detection and treatment of disease).

3.7 RELIABILITY AND VALIDITY

The reliability and validity of the study was addressed by conducting a pilot study in Limpopo Province. The objectives of this pilot test were explained to the participants in the form of a covering letter (Appendix 3) and the physiotherapists were meant to assist the researcher in testing the clarity of the questions and its usability so that the necessary adjustments could have been made. The results of the pilot study were not included in the study.

3.8 BIAS

Response bias was present in this study which was regarded as a type of cognitive bias that the participants answer questions based on the way they feel that the researcher wants them to answer.

3.9 DATA ANALYSIS PLAN

The questionnaire was designed in such a way that, questions for Section B, C and D, were drafted specifically to test the KAP of the respondents. Each correct answer was given a credit. The scores for each section were calculated individually namely knowledge (Section D), attitude (Section C), practice (Section B) and a final KAP score was also obtained by calculating the total of the three sections.

The respondents were categorized according to their scores as below:

Table 4.1: Score Chart

PERCENTAGE	CATEGORY
>/ = 80%	Desirable- for knowledge, attitude or practice among physiotherapists
60-79%	Good- for knowledge, attitude or practice among physiotherapists
50-59%	Fair- for knowledge, attitude or practice among physiotherapists
</= 49%	Unsatisfactory- for knowledge, attitude or practice among physiotherapist

All data were analyzed by using the Epi info (version3.5) programme and results were displayed in the form of tables, bar graphs and pie charts.

3.10 ETHICAL CONSIDERATION

Ethical approval was sought from the MREC (Medical Research Ethics Council) on April 9th 2010 and a clearance certificate (NO: MREC/H/52/2010: PG) (Appendix 5) was obtained. Permission was sought from HPCSA (Appendix 2) to get a list of qualified and registered physiotherapists from Gauteng and Limpopo province. The aim and objectives of the study, as well as indicating that participation was voluntary, were explained to the potential participants with the inclusion of an edited version of the MEDUNSA (Medical University of Southern Africa) Informed Consent Form (Appendix 4) with the questionnaire.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

This chapter presents the results of the study. The aim of this study was to determine the knowledge, attitudes and practices of physiotherapists regarding health promotion in Gauteng Province, South Africa. A pilot study was conducted in Limpopo Province.

4.2 PILOT STUDY

A total of 43 questionnaires were returned out of the 50 that were distributed. Overall the respondents in Limpopo province understood and answered the questions very clearly with no difficulties. No corrections or modifications were made to the questionnaire.

4.3 RESPONSE RATE

Out of the 600 questionnaires that were distributed to physiotherapists around Gauteng province, 162 questionnaires (27%) were returned. Out of the returned questionnaires there were 46.3% (75/162) participants working in the public sector (Group A), 51.9% (84/162) working in the private sector (Group B), and 1.9% (3/162) from parastatal which is represented under "Others(Specify)" (Group C) (Figure 4.1).

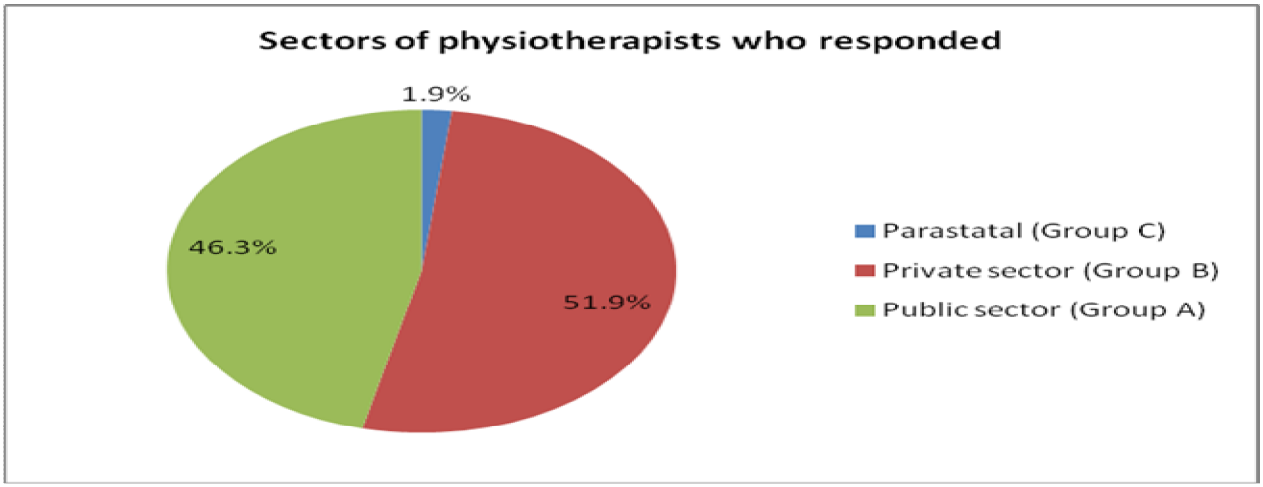

Figure 4.1: Sectors represented by physiotherapists

4.4 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

4.4.1 AGE and GENDER

The highest response rate of 45.1% (73/162) was from the age group 21-30 years (Group1); followed by 23.5% (38/162) from the age groups 31-40 years (Group 2); with 17.3% (28/162) from the age groups 41-50 years (Group 3) and 14.2% (23/162) were older than 50 years (Group 4) .When compared to males the biggest response 89.5% (145/162) was received from females while only 10.5% (17/162) of the male physiotherapists responded to this questionnaire (Table 4.2).

Table 4.2: Demographic characteristics of the respondents

	Variables	Frequency N=162	Percentages %
Age Group			
	21 - 30 (Grp1)	73	45.1%
	31 - 40 (Grp2)	38	23.5%
	41 - 50 (Grp3)	28	17.3%
	50+ (Grp4)	23	14.2%
	Total	**162**	**100%**
Gender			
	Female	145	89.5%
	Male	17	10.5%
	Total	**162**	**100%**

4.4.2 ETHNICITY

The overwhelming majority 67% (108/162) of the respondents were White followed by the African population with 16% (26/162), the Asian population by 11% (18/162) and the lowest response of 6% (10/162) was received from the Coloured population (Figure 4.2).

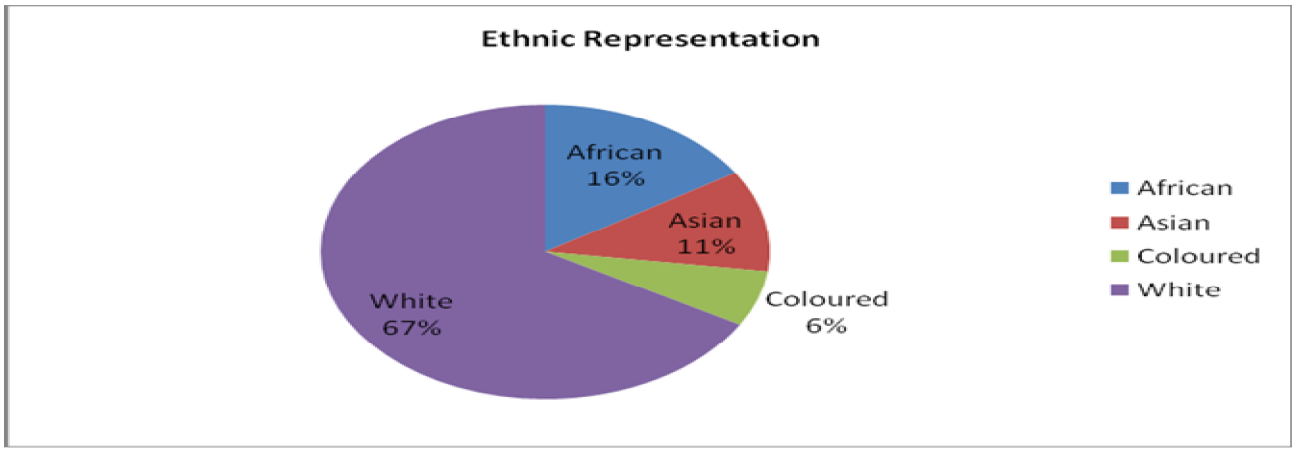

Figure 4.2: Ethnic representation of physiotherapists

4.4.3 INSTITUTION WHERE PARTICIPANTS QUALIFIED AS PHYSIOTHERAPIST

When identifying the academic institutions at which the physiotherapists obtained their initial qualifications results showed that 36.4% (59/162) of the physiotherapists qualified from University of Witwatersrand, 22.2% (36/162) from the University of Pretoria, 13.0% (21/162) from MEDUNSA (Medical University of Southern Africa), 9.9% (16/162) from the University of Free State, 6.2% (10/162) from foreign universities (Others), 4.3% (7/162) from the University of Western Cape, 3.1% (5/162) from both Stellenbosch and University of Cape Town and finally 1.9% (3/162)from the University of Durban Westville (Figure 4.3).

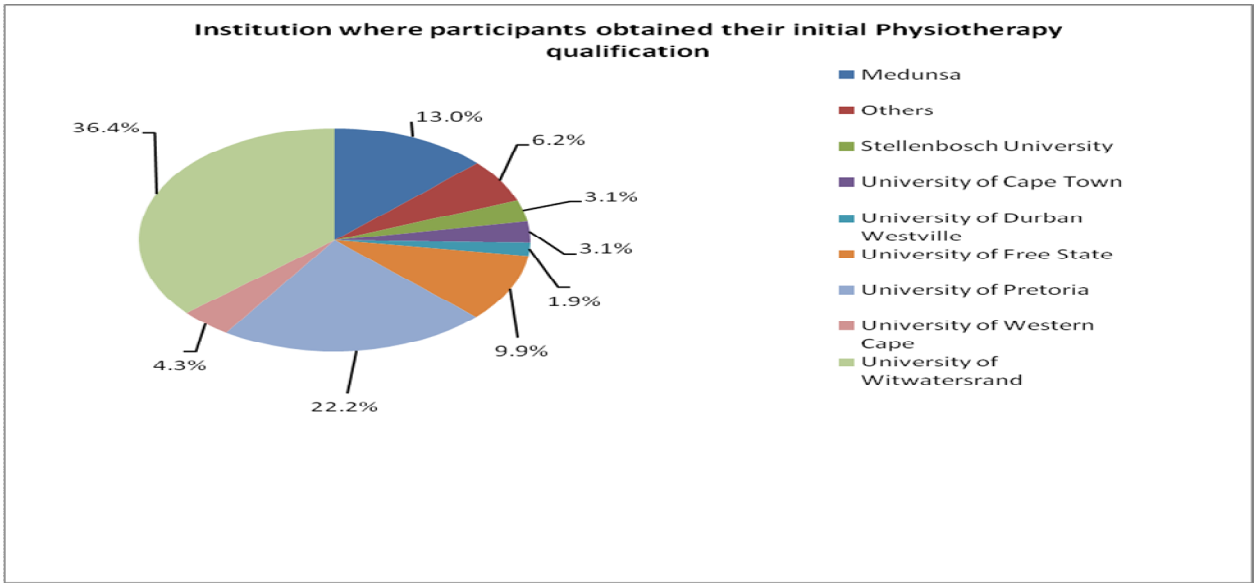

Figure 4.3: Institution where physiotherapist obtained qualification

4.4.4 COVERAGE OF HEALTH PROMOTION DURING TRAINING

Results have shown that 85.7% (6/7) of physiotherapists from the University of Western Cape, 81.4% (48/59) from University of Witwatersrand, 80.9% (17/21) from MEDUNSA, 80.0% (8/10) from foreign universities (Others), 66.7% (2/3) from the University of Durban Westville, 62.5% (10/16) from University of Free State, 61.1% (22/36) from the University of Pretoria and 40.0% (2/5) from both Stellenbosch and University of Cape Town have covered health promotion during their undergraduate years (Figure 4.4).

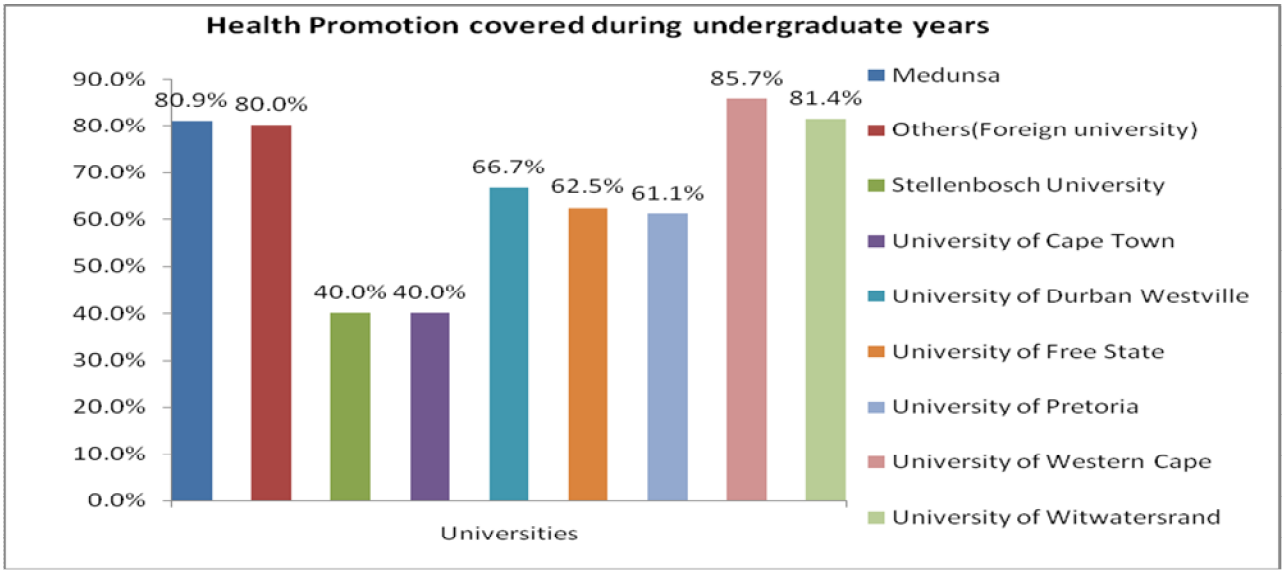

Figure 4.4: Coverage of health promotion during undergraduate years

Only 23.5% (38/162) had undergone formal training in health promotion, whilst 76.5% (124/162) had no formal training in health promotion (Figure 4.5).

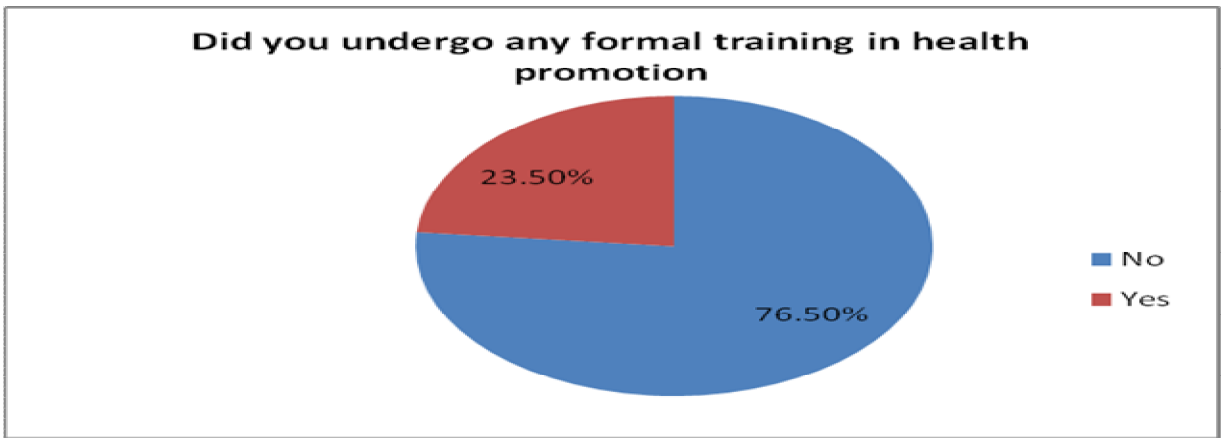

Figure 4.5: Formal health promotion training

Similarly only 32.1% (52/162) had informal training in health promotion, whilst 67.9% (110/162) had no informal training (Figure 4.6). Informal training refers to an indirect approach to improving employee skills and motivation through the practice of health promotion in a hospital or community based environment.

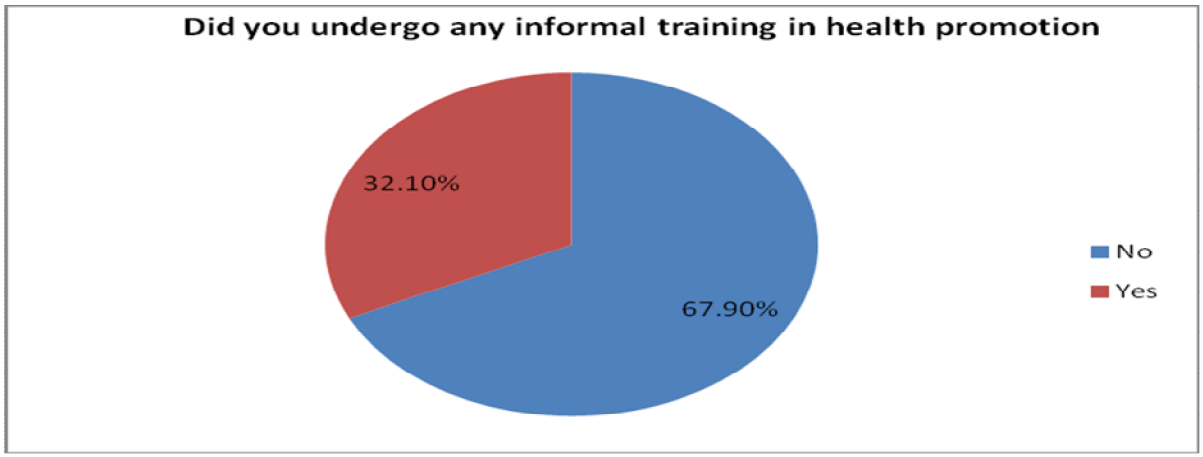

Figure 4.6: Informal health promotion training

4.4.5 OCCUPATIONAL INSTITUTION AND YEARS OF EXPERIENCE

According to the respondents, 33.3% (54/162) of physiotherapists are based in tertiary/ academic hospitals and only 51.9% (84/162) are located in private sectors. The remaining respondents are in regional hospital 3.1% (5/162) , district hospital 3.7% (6/162) , clinic 0.6% (1/162), community health center 1.2% (2/162), rehabilitation center 2.5% (4/162), University 2.5% (4/162) and special school 1.2% (2/162) (Figure 4.7).

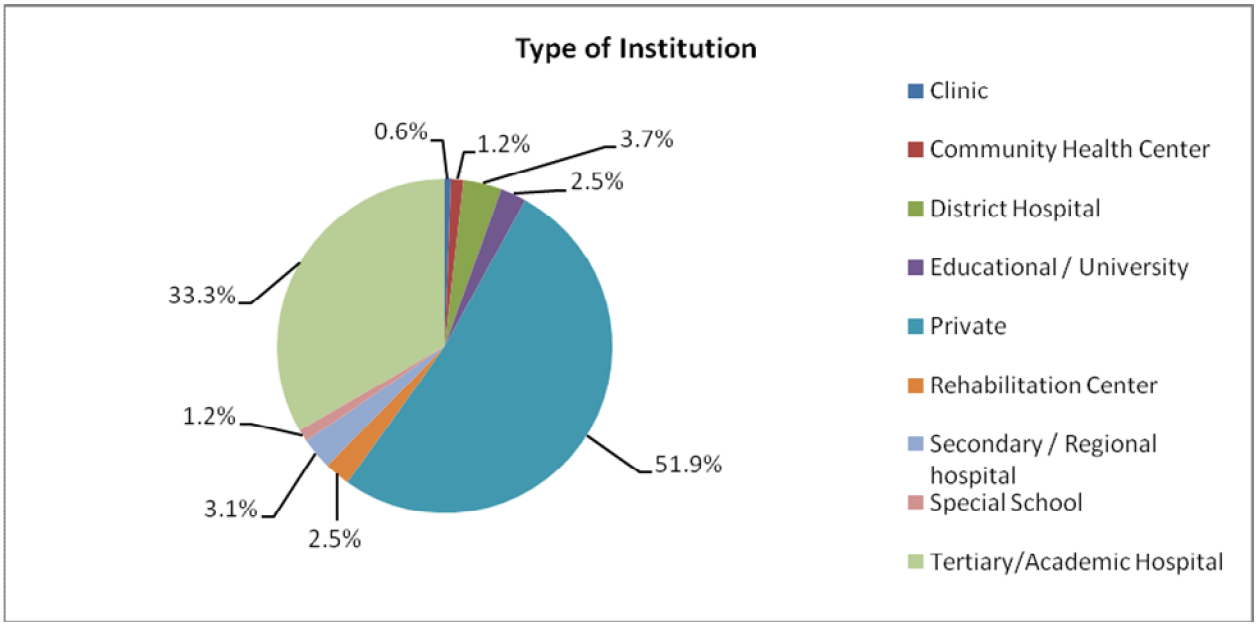

Figure 4.7: Institutions where physiotherapist were employed

With regard to the level of experience of physiotherapists that are currently working, 38.9% (63/162) of qualified physiotherapists have 0-5 years of experience, 24.1% (39/162) from 20 years and above, 16.7% (27/162) from 11-15 years, 13.6% (22/162) from 6-10 years and 6.8% (11/162) from 16-20 years (Figure 4.8).

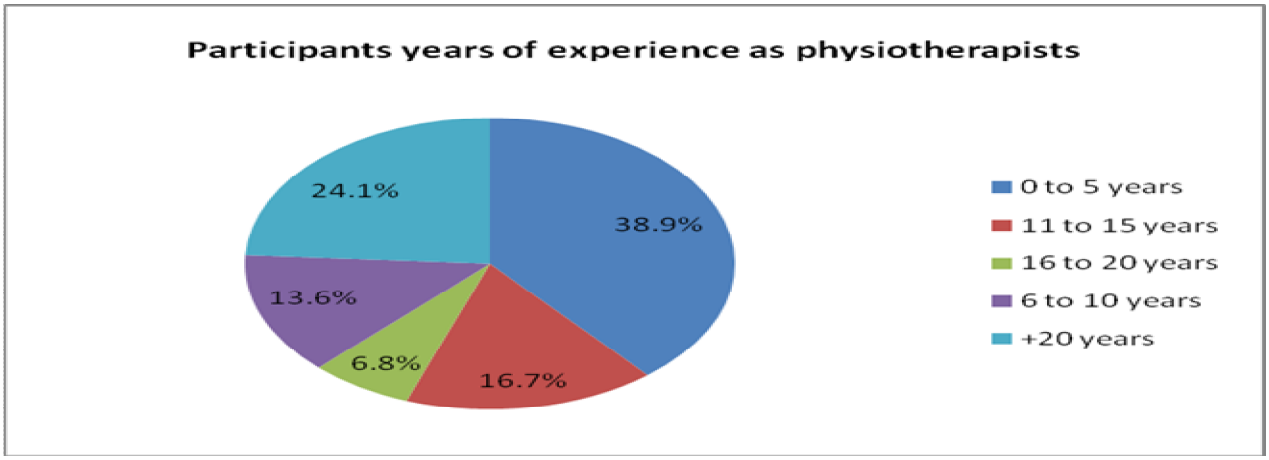

Figure 4.8: Years practicing physiotherapy

4.4.6 HEALTH PROMOTION EXPOSURE

Results have shown that 54.9% (89/162) of the physiotherapist came to know or hear about health promotion from lectures/teachers, 16.0% (26/162) from health workers, 7.4% (12/162) from news papers, 6.2% (10/162) from television (TV), 5.6% (9/162) from family and friends, 3.7%(6/162) from billboards, 1.9%(3/162) from Others which include workshops or continuing professional education (CPD) and finally 1,2% (2/162) from radio. Only 3.1% (5/162) of the physiotherapists stated none of the above from the mentioned list (Figure 4.7).

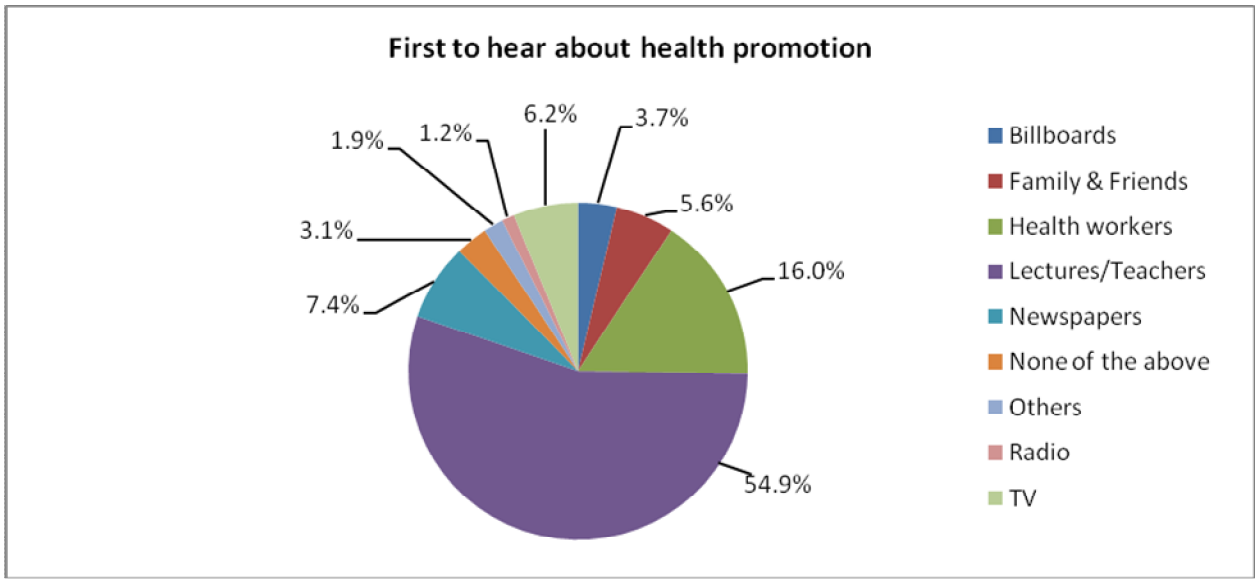

Figure 4.9: Exposure to health promotion

However 90% (146/162) were familiar with the concept of health promotion (Figure 4.8)

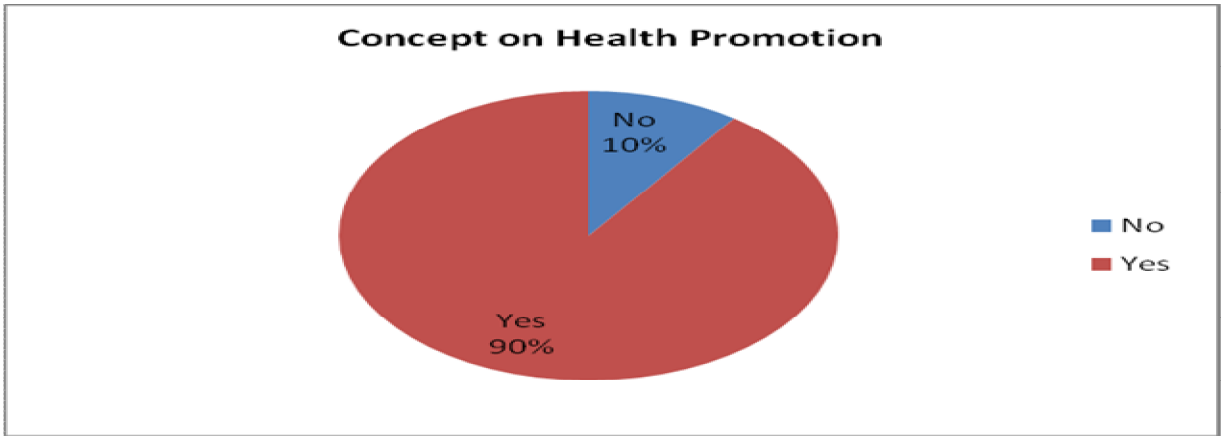

Figure 4.10: Familiar with health promotion

Surprisingly in the community service year, 54% (88/162) of respondents did not undergo any health promotional activities, while 46% (74/162) had undergone some health promotional activities (Figure4.8).

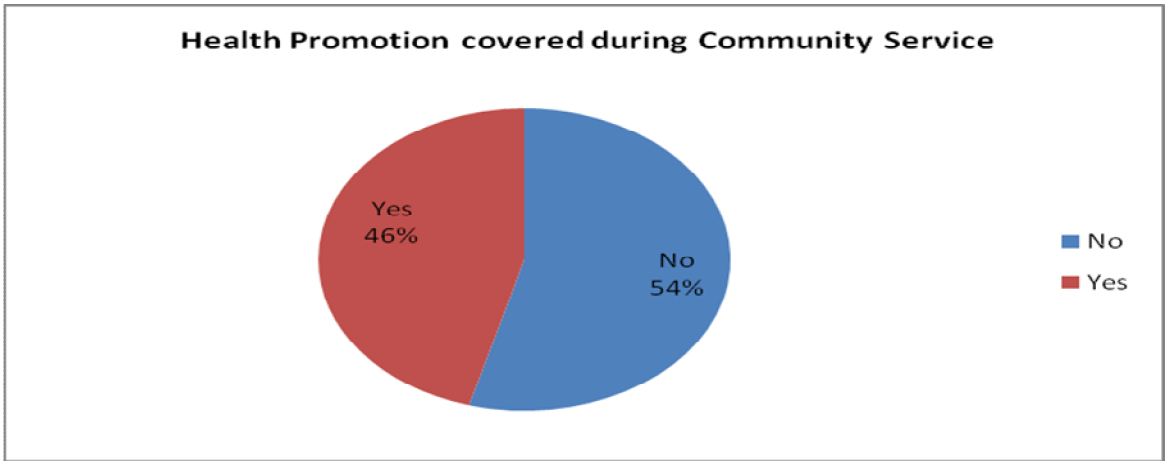

Figure 4.11: Health promotion during community service

4.5 PRACTICES TOWARDS HEALTH PROMOTION

In this section there were eight questions that the participants had to respond to. The results obtained are presented in Table 4.3

Table 4.3: Physiotherapy Practice on Health Promotion (N=162)

		Yes	**No**
1	Are you practicing health promotion at your work as a physiotherapist?	146(90%)	16(10%)
2	Do you advice others to make use of seatbelt to prevent serious injuries?	118(73%)	44(27%)
3	Are you involved in providing ergonomically appropriate work environment in your workplace?	114(70%)	48(30%)
4	Are you educating your clients on correct posture and method of lifting heavy objects?	154(95%)	8(5%)
5	Are you educating your clients on not to use sweetened beverages in order to prevent diabetes?	76(47%)	86(53%)
6	Physiotherapy services include: planning, organization and evaluation of health promotion activities.	115(71%)	47(29%)
7	Physiotherapy intervention includes training of patients, caregivers and family to apply: preventative, curative and promotive measures.	156(96%)	6(4%)
8	Exercises are the only means of promoting health in all conditions treated.	29(18%)	133(82%)

From Table 4.3, the first question in the table provides a general idea on whether physiotherapists practice health promotion at their work station and results showed that 90% (146/162) of the respondents practiced health promotion at their workplace.

From questions 2-7 the response that received a scoring was ‘yes’ and for the eighth question ‘no’ received a scoring. Each correct answer was given a credit of one mark and the credits in the section were added up to give a total score on practice on health promotion.

When asked if they were involved in providing an ergonomically appropriate work environment (Question 3) 70% (114/162) responded ‘yes’ and 30% (48/162) responded ‘no’. Only 47% (76/162) responded by indicating that they are educating their clients not to use sweetened beverages (Question 5) while 53% (86/162) responded by answering ‘no’. The majority, 82% (133/162) responded correctly by saying that exercises are not the only means of promoting health (Question 8) while only 18% (29/162) responded incorrectly (Table 4.3).

4.6 ATTITUDE TOWARDS HEALTH PROMOTION

Each question had an ‘intended’ response. The first question was analyzed separately as indicated in Table 4.5 which provides a general view on how physiotherapists rate their attitude towards health promotion. 37% (60/162) of the respondents felt that their attitude was excellent, 62% (100/162) felt their attitude was good and 1% (2/162) felt that their attitude was poor (Table 4.4).

Table 4.4: Attitudes towards Health Promotion

1. How would you rate your attitude towards health promotion?

Practice	Total
	N=162
Excellent	60(37%)
Good	100(62%)
Poor	2(1%)

The results for the other questions on this section regarding the attitude of the physiotherapist towards health promotion are summarized in Table 4.5.

Table 4.5: Physiotherapists Attitude on Health Promotion (N=162)

		Yes	No
2	Would you get involved in the efforts to improve physical exercise for school children to reduce the prevalence of obesity and related diseases?	133(82%)	24(15%)
3	Would you participate in an advocacy activity to electrify households to reduce burns by the use of coal and paraffin?	104(64%)	58(36%)
4	Would you educate all your clients on healthy diet and need for exercise?	154(95%)	8(5%)
5	Would you play a part in the arrive alive campaign of the government?	110(68%)	52(32%)

6	Would you educate people on ergonomics in the community where you practice?	149(92%)	13(8%)
7	Would you partake in developing health and safety regulation to prevent silicosis?	103(64%)	59(36%)
8	The most appropriate role for physiotherapist is that of a health educator.	73(45%)	89(55%)
9	There is a need for physiotherapy to shift from a biomedical approach to a model ensuring health promotion.	112(69%)	50(31%)
10	Physiotherapy should only concern itself with curing the symptom on a patient.	10(6%)	152(94%)
11	Physiotherapists working within the district health system should include health promotion in their services.	155(96%)	7(4%)
12	Physiotherapists have no role to play in health promotion.	12(7%)	150(93%)

Question two, three, four, five, six, seven, nine and eleven the intended response was ‘yes’ and for the eighth, tenth and twelfth question was ‘no’. Each intended answer was given a credit and the credits in the section were added up to give a total attitude score.

The majority of participants, 95% (154/162) indicated that they would educate their clients on a healthy diet and the need for exercise (Question 4) and 92% (149/162) responded by indicating that they would educate the community on ergonomics (Question 6). When asked what if a physiotherapist should also be a health educator (Question 8) 55% (89/162) responded negatively to that question and 45% (73/162) responded by answering ‘yes’. Sixty nine percent (112/162) felt that there is a need for physiotherapy to shift from a biomedical approach to a model

ensuring health promotion (Question9). In general there was a positive attitude towards health promotion where 94% (152/162) felt that there is a need for physiotherapists to do more than just cure the symptoms of the patient (Question 10). Overall the attitude of physiotherapists towards health promotion was very positive as 96% (155/162) indicated that physiotherapists working within the district health system should include health promotion in their services (Question 11) and 93% (150/162) responded by saying physiotherapists have a role to play in health promotion (Question 12) (Table 4.5).

4.7 KNOWLEDGE TOWARDS HEALTH PROMOTION

Table 4.6: Physiotherapists Knowledge on Health Promotion (N=162)

		Yes	**No**
1	Health promotion activity involves building healthy public policy to promote health of the population.	152(94%)	10(6%)
2	Health promotion activity involves distribution of prophylactic medication to prevent disease.	112(69%)	50(31%)
3	Health promotion activity involves early detection and treatment of disease.	147(90%)	15(9%)
4	Health promotion activity involves strengthening community action to prevent disease and improve health.	159(98%)	3(2%)
5	Health promotion activity involves developing personal skill to stay healthy.	152(94%)	10(6%)
6	Healthy promotion is implemented by treating the diseases of	88(54%)	74(46%)

	people in the community.		
7	Health education is a process of implementing health promotion.	154(95%)	8(5%)
8	Health promotion can be achieved through environmental modification.	152(94%)	10(6%)
9	Disease prevention program such as vaccination is a method of health promotion.	153(94%)	9(6%)
10	Health promotion includes the implementation of lifestyle and behavioural change program.	160(99%)	2(1%)
11	Provision of basic services such as housing, clean water, sanitation, and adequate nutrition is part of a health promotion program.	159(98%)	3(2%)
12	Health promotion calls for re-orientation of health services beyond the clinical and curative services.	160(99%)	2(1%)

Question one, four, five, seven, eight, ten, eleven and twelve received a score of 1 mark, while for the second, third, sixth and ninth question the answer was 'no' and marks were given. The credits in the section were added up to give a total knowledge score.

Sixty nine percent (112/162) responded by indicating wrongly that health promotion involves the distribution of prophylactic medication to prevent disease (Question 2). On the statement that health promotion involves early detection and treatment of disease and only 9% (15/162) responded correctly by saying 'no'(Question 3).

For the statement that health promotion is implemented by treating the disease of people in the community (Question six) the correct answer was 'no' and 46% (74/162) responded to that

question and 54% (88/162) responded with a 'yes'. Only 6% (9/162) of the respondents indicated that vaccination is not a method of health promotion while 94 % (153/162) responded with a 'yes' (Question 9). A staggering 99% (160/162) of the respondents felt that health promotion calls for re-orientation of the health services beyond the clinical and curative services (Question 12) (Table 4.6).

4.8 KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) TOWARDS HEALTH PROMOTION

The participant's knowledge, attitude and practice were rated as 72%, 79% and 76% (Table 4.7) which is regarded as good according to the score chart (60-79%) (Table 4.1).

Table 4.7: Knowledge, Attitude and Practice scores chart

Category	Score chart %
Knowledge	**72**
Attitude	**79**
Practice	**76**
Average	**76**

The overall percentage of all the physiotherapists' knowledge, attitude and practice (KAP) was 76% (Table 4.7) which is also regarded as good according to the score chart (60-79%) (Table 4.1).

CHAPTER 5

DISCUSSION

5.1 RESPONSE RATE

Of the 600 questionnaires, 162 questionnaires were returned which represents a 27 %(162/600) response rate. The time pressures of day-to-day work may impede the participation of physiotherapists. This combined with lack of incentives for participation may have been partly responsible for the low response rates. However from the total population size of 600 qualified physiotherapists from Gauteng province, at an expected frequency of 50% and a worst expected frequency of 40% at a 95% confidence level, a sample of 83 participants were needed to be statistical significant. The sample size of this study however was 162.

5.2 RESPONSE BY SECTOR

A study conducted by Maleka (2008) stated that more physiotherapists worked in the public sector in Limpopo than in Gauteng Province. Similarly more physiotherapists in Limpopo worked in district hospitals (32.35%) than in Gauteng Province (3.26%) and with regard to private sectors, there were more physiotherapy assistants in Gauteng Province than in Limpopo.

However in this study there was an almost equal distribution of qualified physiotherapists between the private (Group B) and public sector (Group A), 51.9% (84/162) and 46.3% (75/162) respectively, which provides a fair reflection of the two main sectors of practicing physiotherapists in Gauteng Province (Figure 4.1).

5.3 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

It is interesting that the highest number of participants were from the age group 21-30, which accounted for 45.1% (73/162) (Table 4.2). A keen interest is therefore shown by recent graduates in participation of studies which is encouraging as they will form the future backbone of research.

The gender breakdown of participants showed that 89.5% (145/162) were females (Table 4.2) which could be a reflection of the gender disparity within the profession or a remarkably increased willingness to participate in this study by females. The actual explanation is probably a combination of the two.

The ethnic distribution of respondents showed that the majority of the respondents were Whites 108/162 (67%) followed by Africans 26/162 (16%), Asian 18/162 (11%) and lastly Coloured10/162 (6%) (Figure4.2). These demographic characteristics are contrasted by Maleka (2008) which was conducted in Gauteng and Limpopo province, stating that a total response of 171 was divided into the following population groups which include Black 49%(83), White 47% (80), Indian 3% (5) and Coloured 2% (3).

Majority of the physiotherapists 116/162 (71.6%) graduated in the three universities within Gauteng Province, namely University of Witwatersrand 59/162 (36.4%), University of Pretoria 36/162 (22.2%) and Medical University of Southern Africa 21/162 (13%) (Figure4.3). This is attributable to the fact that the study was conducted in Gauteng Province.

5.4 COVERAGE OF HEALTH PROMOTION

5.4.1 Health promotion during training

72% (116/162) of the physiotherapists covered health promotion during their undergraduate years in various academic institutions (Figure 4.4). This is encouraging because there seems to be an emphasis on health promotion at an undergraduate level.

Integrating disease prevention and health promotion at multiple points in the undergraduate medical curriculum is a more global solution and may also promote more effective learning for a broader range of students. This is useful in building students confidence to apply skills and knowledge in prevention and health promotion during their clinical rotations in primary care and in later practice(Litaker *et al* 2004).

Hall (1999) stated that participation in the health promotion courses in the Physiotherapy curriculum has made a significant contribution to the development of entry-level physical therapists who will be prepared to assume their health promotion professional role.

Training and increasing the number of health-care personnel, therefore remain a priority in African countries. The white paper for the transformation of the health system in South Africa highlighted the need to not only increase the number of health professionals, but to re-orient

their training so that there is a significant shift and expansion of focus from curative measures to disease prevention and health promotion (Mokwena *et al* 2007). Therefore academic institutions in Africa need to take up this challenge to facilitate a full development of the field (Nyamwaya 2003).

54.9% (89/162) of the physiotherapists indicated that they came to know or hear about health promotion from lectures/teachers (Figure 4.7). This is inconsistent with the finding of 72% (116/162) of respondents responding by saying they have been exposed to health promotion as an undergraduate student (Figure 4.4).

One would have expected more participants to have been exposed to health promotion through lectures or teachers. This would clearly indicate that the different percentages regarding the exposure of health promotion during their undergraduate years, reflects an absence of guidelines during the training period of the physiotherapist in promoting proper physiotherapy health promotion practice towards primary health.

5.4.2 Health promotion Exposure

The majority of physiotherapists 90% (146/162) were aware of the concept of health promotion (Figure 4.10). This is despite the fact that only 23.5% (38/162) of respondents did undergo formal training (Figure 4.5) and 32.1% (52/162) had undergone informal training in health promotion (Figure 4.6). Therefore the awareness of health promotion does not necessarily depend on the training whether it's formal or informal. It may be a combination of undergraduate training, post- graduate studies and exposure through the media (i.e. newspaper, television and radio) as well as fellow health care workers.

Despite the level of awareness only 45.7% (74/162) had undergone health promotional activities during their community service (Figure4.8). This shows a lack of practical application of knowledge acquired during undergraduate training.

Ramklass (2009) stated that the curriculum design in South Africa is strongly aligned with the policy document for educating and training physiotherapy students that is predicated on the medical model, hence strategies for developing curricula within a primary healthcare philosophy are absent from the policy document.

This can be closely referred to an event that took place in 1994 when a group of physiotherapy students practicing in a South African community setting managed their clients according to the medical model in the absence of appropriate skills for primary health care and community-based practice (Ramklass 2009).

This would overall in my opinion affect the building capacity of health promotion with regard to implementation as well as the development of proper skills in practicing health promotion in creating a healthy nation.

5.5 PRACTICE TOWARDS HEALTH PROMOTION

The majority, 90% (146/162) of the respondents are practicing health promotion at their workplace, whereby clients are being educated on the prevention of diabetes and knowing that prescribed exercise by physiotherapists are not the only means of promoting health which is reflected as 82%(133/162) (Question1 and 12) (Table 4.3).

This can be supported by Kennon (1999) stating that there is a strong association between physical activity and optimal health and as a result physical activity and fitness was placed as the first priority of the health promotion goal.

Ergonomic refers to the interaction between the workplace, job practices, equipment and the employee's physical, psychological and social well- being. It is closely related to health, safety and efficiency and plays an essential role in accident prevention, promotion of health and the prevention of ill health (Hattingh *et al* 2003). The high positive response of 70%(114/162) recorded in this study is an indication that the application of ergonomic principles is very crucial and practiced among physiotherapists by restoring normal functional activities as a basis of promoting health (Question3) (Table 4.3).

Therefore understanding the development of work related over-exertion and a repetitive strain injury is precisely an area of expertise of a physiotherapist (Jones *et al* 2001). As a result physiotherapy is concerned with promotion of health and wellbeing as well as prevention or dysfunction of human movement (Higgs *et al* 2001).

The results indicate that more physiotherapists 53% (86/162) are putting emphasis in restoring the function of diabetic clients by applying physiotherapeutic methods rather than encouraging early interventions of behaviour change with regard to dietary patterns as part of a health promotion programme (Question 5) (Table 4.3).

Chernoff (2001) stated that changes in diet and exercise patterns are most effective in the prevention of nutrition-related conditions when they are instituted early which will eventually lead to a decrease or delayed onset of various health conditions.

The use of a variety of adult education theories and models will enhance behaviour changes that lead to more healthful habits and enable a health educator to be successful in effecting change (Chernoff 2001).

Therefore in my opinion practicing the right dietary patterns, introducing exercise as a daily life routine and improving ergonomic condition in everyday life activities will reduce health risks among individuals or communities through the participation of physiotherapy by implementing proper health promotion programmes.

5.6 ATTITUDE TOWARDS HEALTH PROMOTION

Kaliyaperumal (2004) states that attitude refers to the participants feelings toward a particular subject or any preconceived ideas that they may have towards it. The majority of the physiotherapists who took part in this study rated their attitude towards health promotion between excellent 37% (60/162) and good 62% (100/162) (Question1) (Table 4.4). Although 95% (154/162) of the physiotherapists are involved in educating clients on healthy diet and need for exercise (Question 4) (Table 4.5), there is a need for physiotherapist to shift from a biomedical approach to a model ensuring health promotion as 32% (52/162) are not partaking in the arrive alive campaign (Question 5) (Table 4.5).

The perceived positive attitude of the physiotherapists towards health promotion was also confirmed by their responses were 92% (149/162) showed a positive attitude in educating people on ergonomics in the community where they practice; and 64% (104/162) would participate in an advocacy activity to electrify households to reduce burns caused by the use of coal and paraffin (Question 6 and 3) (Table 4.5).

Higgs *et al* 2001 stated that the role of the physiotherapists includes education of the patient and the family about the condition and its management to promote maximum quality of life. However the role of physiotherapy thus includes promotion of health and wellbeing of individuals and the general public /society.

The results of this study showed a disparity on the role of a physiotherapist as only 55% (89/162) of the participants portrayed a positive attitude towards the role of a physiotherapists indicating that they are not just regarded as health educators but also as health promoters (Question 8) (Table 4.5).

Rehabilitation professionals are challenged to assume the roles of educators, researchers, program provider and having a strong potential as a collaborator in the process of making health promotion people centered (James 1999). In this study results have indicated that 69% (112/162) of the physiotherapists had a positive attitude in practicing health promotion as another concept by leading the public/society to a healthier lifestyle (Question 8) (Table 4.5).

Recent research (Perreault 2008) has indeed highlighted the interest of integrating health promotion in rehabilitation interventions and research.

As rehabilitation professionals, physiotherapists, who can be consulted directly without medical referral, are well suited to integrate health promotion in their field of practice. However efforts should be made to further link and integrate principles and practices of health promotion in the field of physiotherapy to improve interventions at the individual, community and population levels (Perreault 2008).

Rea *et al,* (2004) studied the role of health promotion in physical therapy in California, New York and Tennessee, and results confirmed the need for physiotherapists to address health promotion.

However, this study of Rea *et al* (2004) also found that the practice of health promotion amongst physiotherapists was less than desirable and improvement in these practices would realize the full potential of physiotherapists' role in health promotion.

James (1999) stated that the emerging paradigm shift from disease and disability prevention to prevention of secondary conditions in people with disabilities, physical therapists and other rehabilitation professionals can play an important role in the integration of health promotion. Physiotherapists can play an active role by extending their expertise beyond tertiary prevention to avenues of primary and secondary prevention where physiotherapy is not yet engaged in (Fricke, 2005).

The results of this study showed that physiotherapists had a positive attitude as well as the potential in extending their skill and expertise by promoting health through primary and secondary prevention before curing the symptom of diseases which is regarded tertiary prevention as 94% (152/162) responded by indicating that physiotherapy is more than just curing the symptoms of the patient (Question 10) (Table 4.5).

This positive attitudes was also confirmed where 96% (155/162) of the respondents indicated that health promotion should be introduced and implemented within the public sectors especially at a district level to target a larger community that would benefit from the programme (Question 11) (Table 4.5).

The role of physiotherapy is currently changing and will continue to change in the future. The new South African National health System has been prioritized by adopting the Primary Health Care approach because this particular approach was seen as the most cost effective means of improving the health of the population. This approach involves a health system led by Primary Health Care service to integrate with the district health system. The Primary Health Care services that is been provided through the district health system has identified rehabilitation and physiotherapy services as a greater role in Primary Health Care success (Mbambo 2005).

This study showed that amongst 93% (150/162) of the physiotherapists, there was the believe of not just regarding themselves as health educators in the biomedical field but that they can also play a crucial role in health promotion (Question 12) by further planning and strategizing programmes to promote a healthy lifestyle to the community or public (Table 4.5).

5.7 KNOWLEDGE TOWARDS HEALTH PROMOTION

The absence of explicit guidelines for re-orienting physiotherapy curricula and practice for primary health care has been limited and this has implications for changing the practice of physiotherapists who remain grounded in the traditional physiotherapy practice model (Ramklass 2009). Hall (1999) reported that students need the important knowledge and practical experience in developing and implementing health promotion and disease/injury prevention programs in the community to meet this practice expectation.

This study also identified gaps in the knowledge of physiotherapists in that 69% (112/162) responded incorrectly by saying that health promotion involves the distribution of prophylactic medication to prevent disease (Question 3) (Table 4.6). This is an indication that physiotherapists still require further training in implementing and understanding their role towards health promotion. As a result health promotion training can be introduced at a tertiary level by developing skills required in implementing such a programme that will benefit the community as expected.

According to the biomedical model, health constitutes the freedom from disease, pain or defect thus making the normal human condition healthy. This particular model focuses on the physical aspect such as pathology, biochemistry and the physiology of a disease, but does not take into account the role of social factors (Annandale 1998). The results of this study also showed that there are some physiotherapists who don't understand how health promotion differs from a biomedical perspective and that further education and training activities are also part of health promotion (Table 4.6) (Question 3,6 and 9).

As the overwhelming majority, 99% (160/152) of the physiotherapists indicated that health promotion calls for re-orientation of health services beyond the clinical and curative services (Question 12) (Table 4.6). The results of this study would conclude that according to their knowledge and basic understanding of health promotion, majority of physiotherapists are aware and keen in shifting as well as expanding their services one step ahead from a biomedical perspective to a health promotive aspect to improve the health of the nation.

Zimmer *et al* 2003 stated that the standards of practice for health promotion in higher education provide a quality improvement tool for strengthening the current and future health of the nation and linking academic success and the mission of higher education with national health priorities.

There is no working model of good practice in capacity building for health promotion in developing countries. An increase in knowledge and skill levels of individual practitioners is a key success with regard to capacity building of health promotion. However the expertise of individual practitioners alone will not lead to effective health promotion practice without strong support from the organization within which they work as well as without the support from local political leaders and senior managers (Tang *et al* 2005).

5.8 KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS HEALTH PROMOTION

Knowledge and correct attitude are pre-requisites for the practice of health promotion. Of the respondents, 72% were assessed to have good knowledge while 79% were assessed to have good attitude towards health promotion (Table 4.7). However 76% of the respondents practiced health promotion appropriately. This level of practice was considered good even though there is still

room for improvement (Table 4.7). Overall 76% were deemed to have good knowledge; attitude and practice (KAP) towards health promotion under the guidance of the score chart (60-79%) (Table 4.1).

However efforts should be made to further link and integrate principles and practices of health promotion in the field of physiotherapy to improve interventions at the individual, community and population levels (Perreault 2008).

CONCLUSIONS

In conclusion physiotherapists have good knowledge, attitude and practice towards health promotion in Gauteng Province, South Africa. However there is still room for improvement in acquiring more in- depth knowledge about health promotion principles and if this can be achieved, more physiotherapists will be able to practice health promotion correctly. Many studies being conducted globally have shown an important use of health promotion especially addressing health promotion advocated by Ottawa Charter. As a result many researchers still believe that physiotherapy as a profession plays a pivotal role in leading and developing health promotion plans and strategies in the workforce by contributing promotive, preventative, curative and rehabilitative services to the nation. Still the challenge for physiotherapy professional growth relies in developing evidence based health promotion activities as well as developing indicators in measuring health promotion in providing a successful health promotion program especially in South Africa. But one of the greatest challenges being faced is inadequate amount of research being conducted and literature search regarding the growth and implementation of physiotherapy towards health promotion in South Africa.

Also there is a lack of proper guide lines in determining the impact physiotherapy has towards the South African community with regard to health promotion. However this cannot be achieved in a short period of time but can be reinforced through further education and training activities.

RECOMMENDATION

In order to equip physiotherapists with the necessary knowledge and attitude to allow them to practice health promotion correctly, the following is recommended:

- More emphasis in health promotion in the undergraduate curriculum.
- Practice of health promotion must be mandatory in the community service year.
- In- service training must be provided to physiotherapists who were trained in the bio-medical model in both private and public sectors.
- Multidisciplinary team empowerment with regard to health promotion in both the public and private sectors.
- Involving local political leaders of the country and senior managers from the Department of Health to introduce the significance and application of health promotion.
- More extensive research should be emphasized by young graduates (undergraduate and post graduate) in conducting and planning evidence based approach in the line of health promotion among physiotherapists.

- The use of health promotion models should be implemented for research purposes in physiotherapy profession when practicing health promotion or primary health care in order to discover indicators as a measuring tool and to provide constant follow-ups in developing the program.

- More media involvement to educate masses in both rural and urban areas as part of capacity building with regard to health promotion, education and disease prevention.

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APPENXID 1: QUESTIONNAIRE

KNOWLEDGE, ATTITUDES AND PRACTICES OF PHYSIOTHERAPISTS REGARDING THEIR ROLE IN HEALTH PROMOTION IN GAUTENG PROVINCE, SOUTH AFRICA

General Guidelines:

1. Please attempt to answer all questions as honestly and consistently as possible. Your personal identity will not be disclosed in this study.
2. Please remember **not** to reveal your name on the questionnaire as this exercise is confidential.
3. Please give one answer per question.
4. On completion of the questions, please post to PO BOX 3585, GIYANI, 0826, LIMPOPO PROVINCE
5. Please do not write in the shaded cells on the right of the questions, it is for researcher's use.
6. Please write clearly or indicate with "✓" against appropriate response as applicable.

Section A: Demographic Data

1	Age Group	21 to 30 (1)		
		31 to 40 (2)		
		41 to 50 (3)		
		Above 50 (4)		

2	Gender	Male (1)		Female (2)		

3	Ethnic group	African		
		Asian		
		Coloured		
		White		

4	Where did you first hear about health promotion	Newspapers (1)		
		Radio (2)		
		TV (3)		
		Billboards (4)		
		Health workers (5)		
		Family & Friends (6)		
		Lectures/Teachers (7)		
		None of the above (8)		
		Others (Specify) (9)		

5	Where did you obtain your **initial** physiotherapy qualification?	University of Pretoria (1)		
		University of Western Cape (2)		
		Stellenbosch University (3)		
		University of Cape Town (4)		
		University of Durban Westville (5)		
		University of Witwatersrand (6)		
		Medunsa (7)		
		University of Free State (8)		
		Others(Specify) (9)		

6	Do you have any post graduate qualification/education in health promotion?	Yes (2)	No (1)	
7	If yes, Specify:			

8 As part of your practice, have you been practicing health promotion?

8.1 Practicing health promotion as part of your patient management	Yes (2)	No (1)	
8.2 Practicing health promotion as a full time basis	Yes (2)	No (1)	

Occupation or employment status

9	How many years of experience do you have as a qualified physiotherapist?	0 to 5 years (1)		
		6 to 10 years (2)		
		11 to 15 years (3)		
		16 to 20 years (4)		
		More than 20 years (5)		

10	Please indicate in which sector you work.	Public sector (1)		
		Private sector (2)		
		Other (Specify) (3)		

Please answer only one of the following statements below based on your answer to question 10

10.1 If public sector	Rural (1)	Urban (2)	
10.2 If private sector	Rural (1)	Urban (2)	
10.3 Other(Specify):	Rural (1)	Urban (2)	

11	Select the type of institution you are currently working.	Tertiary/Academic Hospital (1)		
		Secondary / Regional hospital (2)		
		District Hospital (3)		
		Community Health Center (4)		
		Clinic (5)		
		Rehabilitation Center (6)		
		Special School (7)		
		Educational / University (8)		
		Others (Specify) (9)		

12	Have you undergone any health promotional activities during your community service?	Yes (2)	No (1)	
13	Are you familiar with the concept of health promotion?	Yes (2)	No (1)	
14	Was health promotion covered during your undergraduate years?	Yes (2)	No (1)	
15	Did you undergo any formal training in health promotion?	Yes (2)	No (1)	
16	If yes, specify:			
17	Did you undergo any informal training in health promotion?	Yes (2)	No (1)	
18	If yes, specify:			

Section B: Practice on Health Promotion

1	Are you practicing health promotion at your work as a physiotherapist?	Yes (2)	No (1)	
2	Do you advice others to make use of seatbelt to prevent serious injuries?	Yes (2)	No (1)	
3	Are you involved in providing ergonomically appropriate work environment in your workplace	Yes (2)	No (1)	
4	Are you educating your clients on correct posture and method of lifting heavy objects?	Yes (2)	No (1)	
5	Are you educating your clients on not to use sweetened beverages in order to prevent diabetes?	Yes (2)	No (1)	
6	Physiotherapy services include: Planning, Organization & Evaluation of health promotion activities	Yes (2)	No (1)	

7	Physiotherapy intervention includes training of patients, caregivers and family to apply: preventative, curative & promotive measures	Yes (2)	No (1)	
8	Exercises are the only means of promoting health in all conditions treated	Yes (2)	No (1)	

Section C: Attitude towards Health Promotion

As a physiotherapist:

1	How would you rate your attitude towards health promotion?	Excellent (1)	Good (2)	Poor (3)	
2	Would you get involved in the efforts to improve physical exercise for school children to reduce the prevalence of obesity and related diseases?	Yes (2)	No (1)		
3	Would you participate in an advocacy activity to electrify households to reduce burns caused by the use of coal and paraffin?	Yes (2)	No (1)		
4	Would you educate all your clients on healthy diet and need for exercise?	Yes (2)	No (1)		

5	Would you play a part in the arrive alive campaign of the government?	Yes (2)	No (1)	
6	Would you educate people on ergonomics in the community where you practice?	Yes (2)	No (1)	
7	Would you partake in developing health and safety regulation to prevent silicosis?	Yes (2)	No (1)	
8	The most appropriate role for physiotherapist is that of a health educator	Yes (2)	No (1)	
9	There is a need for physiotherapy to shift from a biomedical approach to a model ensuring health promotion	Yes (2)	No (1)	
10	Physiotherapy should only concern itself with curing the symptom on a patient	Yes (2)	No (1)	
11	Physiotherapists working within district health system should include health promotion in their services	Yes (2)	No (1)	
12	Physiotherapists have no role to play in health promotion	Yes (2)	No (1)	

Section D: Knowledge On Health Promotion

1	Health promotion activity involves building healthy public policy to promote health of the population	Yes (2)	No (1)	
2	Health promotion activity involves distribution of prophylactic medication to prevent disease	Yes (2)	No (1)	
3	Health promotion activity involves early detection and treatment of disease	Yes (2)	No (1)	
4	Health promotion activity involves strengthening community action to prevent disease and improve health	Yes (2)	No (1)	
5	Health promotion activity involves developing personal skill to stay healthy	Yes (2)	No (1)	
6	Health promotion is implemented by treating the diseases of people in the community	Yes (2)	No (1)	
7	Health Education is a process of implementing health promotion	Yes (2)	No (1)	

8	Health promotion can be achieved through environmental modification	Yes (2)	No (1)	
9	Disease prevention program such as vaccination is a method of health promotion	Yes (2)	No (1)	
10	Health promotion includes the implementation of lifestyle and behavioral change program	Yes (2)	No (1)	
11	Provision of basic services such as housing, clean water, sanitation and adequate nutrition is part of a health promotion program	Yes (2)	No (1)	
12	Health promotion calls for re-orientation of health services beyond the clinical and curative services	Yes (2)	No (1)	

Any other comments:

_____

_____

_____

_____

_____

_____

Thank you for your participation

APPENDIX 2: REQUESTING PERMISSION FROM HPCSA

To

Ms. Daffue

Physiotherapy Department

HPCSA

Pretoria

Dear Madam:

REF: Requesting permission to obtain a list of qualified and registered physiotherapists in both Gauteng and Limpopo Province

I am a final year MPH (Masters in Public Health) student at The University of Limpopo (MEDUNSA Campus). Currently I am pursuing in my research as one of the criteria in completing my masters program.

My research topic is **Knowledge, Attitude and Practice of physiotherapists regarding their role in health promotion in Gauteng Prov. South Africa.** Previously the role of health promotion in physiotherapy was not well understood to the extent where there was no emphasis on the practice of health promotion. However in the last twenty years, the emphasis has shifted significantly towards health promotion and more studies have been conducted globally on the role of physiotherapy in health promotion. Most of the research conducted has concluded that there is an important role for physiotherapists in health promotion. Still it remains to be seen whether physiotherapists have the knowledge and the necessary attitude to practice health promotion in South Africa.

In view of the above, I would be grateful if you could furnish me with a recent list of qualified and registered physiotherapists (2009 - 2010), in Gauteng and Limpopo province. This project was approved by the MEDUNSA Research and Ethics Committee, project number: MREC/H/52/2010:PG. Attached is a copy of the clearance certificate.

For any enquires regarding the study, you can contact me via e-mail at joseph.tharun9@gmail.com or phone my supervisor (Mrs. Fernandes) at 012 521 5031.

Thanking You

Philip Mathew Joseph

MPH Student

19759239

APPENDIX 3: INFORMATION TO PARTICIPANT

Dear Participant:

I am a final year MPH (Masters in Public Health) student at the University of Limpopo (MEDUNSA Campus). I am pursuing my research as one of the criteria in completing my masters program.

My research topic is **Knowledge, Attitude and Practice of physiotherapists regarding their role in health promotion in Gauteng Prov. South Africa.** Previously the role of health promotion in physiotherapy was not well understood to the extent where there was no emphasis on the practice of health promotion. However in the last twenty years, the emphasis has shifted significantly towards health promotion and more studies have been conducted globally on the role of physiotherapy in health promotion. Most of the research conducted has concluded that there is an important role for physiotherapists in health promotion. Still it remains to be seen whether physiotherapists have the knowledge and the necessary attitude to practice health promotion in South Africa.

In view of the above, I would like to conduct a pilot study at Limpopo province to test the knowledge, attitudes and practices of qualified and registered physiotherapists. The objective of the pilot study is to assist the researcher in testing the clarity of the questions and its usability, so that necessary modifications can be made. A questionnaire and an informed consent and consent form will be issued in determining the study. The questionnaire contains of four sections:

Section A: Demographic data

Section B: Practice on Health Promotion

Section C: Attitude towards Health Promotion

Section D: Knowledge on Health Promotion

This project was approved by the MEDUNSA Research and Ethics Committee, project number: MREC/H/52/2010: PG

The attached copies will be enclosed in an A4 envelope together with a self addressed envelope. On completion please place ***only the questionnaire*** in the enclosed self addressed envelope.

Thank you for your participation.

Philip Mathew Joseph

Physiotherapist

MPH student

19759239

APPENDIX 4: INFORMED CONSENT

INFORMED CONSENT

University of Limpopo: MEDUNSA Campus

Date:

Dear participant

This letter is an invitation to consider participating in a study I am conducting as part of my Master's degree in the National School of Public Health at the University of Limpopo: MEDUNSA Campus. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

This study will focus on **Knowledge, Attitude and Practice of physiotherapists regarding their role in health promotion in Gauteng Prov. South Africa.** Previously the role of health promotion in physiotherapy was not well understood to the extent where there was no emphasis on the practice of health promotion. However in the last twenty years, the emphasis has shifted significantly towards health promotion and more studies have been conducted globally on the role of physiotherapy in health promotion. Most of the research conducted has concluded that there is an important role for physiotherapists in health promotion. Still it remains to be seen whether physiotherapists have the knowledge and the necessary attitude to practice health promotion in South Africa.

Objectives

- To assess the knowledge among qualified physiotherapists regarding health promotion.
- To determine the attitudes of qualified physiotherapists towards health promotion.
- To determine if physiotherapists are practicing health promotion on a day to day basis.

Participation in this study is voluntary. It will involve the completion of a questionnaire. You may decline to answer any of the questions if you so wish. Further, you may decide to withdraw from this study at any time without any negative consequences. All the information you provide is considered completely confidential. Your name will not appear in thesis or report resulting from this study.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me via e-mail at **joseph.tharun9@gmail.com** I would like to assure you that this study has been reviewed and received ethics clearance through the Medunsa Research and Ethics Committee at the University of Limpopo. However, the final decision about participation is yours.

I hope that the results of my study will be of benefit to those organizations directly involved or organizations not directly involved in the study, as well as to the broader research community.

Yours Sincerely,

Philip Mathew Joseph

MPH Student

19759239

CONSENT FORM

By signing this consent form, you are not waiving your legal rights or releasing the investigator from their legal and professional responsibilities.

_____

I have read the information presented in the information letter about a study being conducted by **Philip Mathew Joseph** of the National School of Public Health at the University of Limpopo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

This project has been reviewed by and received ethics clearance through, the Medunsa Research and Ethics Committee at the University of Limpopo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the researcher via e-mail, or the supervisor at 012 521 5031.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant Signature: _____

Date: _____

APPENDIX 5: CLEARANCE CERTIFICATE

UNIVERSITY OF LIMPOPO
Medunsa Campus

MEDUNSA RESEARCH & ETHICS COMMITTEE

CLEARANCE CERTIFICATE

P O Medunsa
Medunsa
0204
SOUTH AFRICA

Tel: 012 - 521 4000
Fax: 012 - 560 0086

MEETING: 03/2010

PROJECT NUMBER: MREC/H/52/2010: PG

PROJECT :

Title: Knowledge, attitudes and practices of Physiotherapist regarding their role in Health Promotion in Gauteng Province, South Africa

Researcher: Mr PM Joseph
Supervisor: Mrs L Fernandes
Department: Public Health
School: Health Care Sciences
Degree: MPH

DECISION OF THE COMMITTEE:

MREC approved the project.

DATE: 09 April 2010

RESEARCH & PARTNERSHIP
2010 -04- 09
MEDUNSA CAMPUS

PROF GA OGUNBANJO
CHAIRPERSON MREC

Note:
i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
ii) The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

African Excellence - Global Leadership