ASSESSMENT OF HEALTH PROMOTION CONTENT IN UNDERGRADUATE PHYSIOTHERAPY CURRICULA IN SOUTH AFRICA

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ASSESSMENT OF HEALTH PROMOTION CONTENT IN UNDERGRADUATE PHYSIOTHERAPY CURRICULA IN SOUTH AFRICA

By

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DECLARATION

I hereby declare that the dissertation hereby submitted to the University of Limpopo for the degree of Master of Public Health has not been previously submitted by me for a degree at this or any other university, that it is my work in design and execution, and that all material contained herein has been duly acknowledged.

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SUMMARY

Assessment Of Health Promotion Content In Undergraduate Physiotherapy Curricula In South Africa.

Background
The need for health promotion in health service provision was acknowledged and promoted by the White Paper on the Transformation of Health in South Africa (1997), which states that training of health professionals should incline towards prevention of disease and promotion of good health, and not only on curative measures. However, anecdotal evidence suggests that not much has been done to effect this expectation, because not many professional training programs have done an extensive overhaul of the training syllabus to respond to these recommendations.

The objective of this study was to assess the extent to which health promotion content is included in undergraduate Physiotherapy training programs in South Africa.

Study design and data collection
A descriptive study using both quantitative and qualitative methods was conducted to collect data from seven of the eight universities which offer undergraduate Physiotherapy training programmes. Two self-developed data collection tools were used for the study. A checklist, which was developed from the Principles of Ottawa Charter for Health Promotion, and an inventory list were used to collect quantitative data, while an interview guide was used to collect qualitative data.

Results: All seven institutions which participated in the study taught some amount of health promotion, at different levels of the physiotherapy study program. Emphasis on health education for individual and groups cut across all institutions, and only three of the seven institutions include community needs assessment and participation. The weighting of health promotion in the curricula ranged between 12 – 40 %, and the participating institutions expressed limitations on the students’ skills on the practical aspect of health promotion. For practical purposes, students
are placed in urban and rural settings which include schools, hospitals, clinics, old age homes, health organizations and in communities and three of the institutions teach health promotion under a multidisciplinary module. Only three out of the eleven lecturers who teach health promotion have post-graduate qualifications related to health promotion.

**Conclusion:** Using the Principles of the Ottawa Charter as a reference, gaps have been identified in the teaching of health promotion in undergraduate physiotherapy training. Lack of curricula review, skills, academic qualifications, human resource and guidance from the regulatory body have been identified as contributory to these gaps.

**Recommendations**
It is recommended that **as a regulatory body, the Physiotherapy Professional Board, play a more active role in guiding the inclusion and spelling out of minimum standards of health promotion in the undergraduate curriculum.** Physiotherapy departments are to promote post graduate studies amongst academic staff in the area of health promotion, to enable an integration of health promotion in the curriculum. Future studies are needed to determine the appropriate level of introducing health promotion in theory and practice, to provide evidence of practice in the teaching of health promotion and to integrate the Principles of Ottawa Charter across the undergraduate physiotherapy curriculum.

**Key words:** Health, promotion, Ottawa charter, Physiotherapy, undergraduate, training, restructuring health services
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CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

Introduction

Internationally, countries are acknowledging the value of health promotion and disease prevention as health resources continue to shrink, resulting in the growth of global health promotion movements. Health promotion and disease prevention are the two key components of primary health care. Health promotion has been defined as the “science and art of helping people to change their lifestyle and move toward a state of optimal health” (1). In this regard, health professional boards provide practical guidance and ensure acceptable standards in specific health professions. The role of health professionals in the promotion of health must be guided by these profession-specific boards in order to ensure that they play an active role in responding to health issues in their particular regions.

Promotion of health includes the provision of information or education to individuals, families and communities to encourage the positive decision making that will contribute to improved health status. Health promotion initiatives involve consultation and public involvement, information dissemination, education, tools for personal skills development, and the building and reorienting of health services. It includes the provision of information about leading healthier lifestyles to patients, and how to make the best use of health services, with the intention of enabling individuals to make rational health choices and ensuring an awareness of the factors determining the health of the community.

The need for health promotion in health services was acknowledged by the White Paper on the Transformation of Health in South Africa (1997) (2), which states that training of health professionals should incline towards prevention of disease and promotion of good health, and not only towards curative measures. However, anecdotal evidence suggests
that not much has been done to effect this expectation, because not many professional training programmes have made an extensive overhaul of their training syllabi.

The South African Society of Physiotherapy (SASP) states that physiotherapy is concerned with the assessment, treatment and prevention of human movement disorders, the restoration of normal function or the minimisation of dysfunction and pain in adults and children with physical impairment, in order to enable them to achieve the highest possible level of independence; the prevention of recurring injuries and disability in the workplace, at home, or during recreational activities; and the promotion of community health among all age groups. In its position paper on primary health care (November 1993), SASP stated its objectives as providing appropriate, accessible, acceptable, affordable, effective and equitable physiotherapy services to all people in South Africa on a cost-effective basis. The society therefore acknowledges that physiotherapy services should extend beyond symptomatic treatment of diseases to include health promotion. However, the extent to which this expectation is met by the training institutions is not known.

Physiotherapists are uniquely qualified to assume roles in inter-professional teams in an effort to prevent injury, disability and disease by promoting fitness, health and wellness. As they form part of the broader field of rehabilitation which is concerned with human function and movement and aims to decrease disability and to maximise potential (WCPT 2007) (8), they also have a role to play in enabling individuals and communities to make choices conducive to good health by providing information and education and by promoting enhanced life skills. Physiotherapists spend a lot of time with patients and caregivers and can use these platforms to identify problems that are common in communities and which can be addressed by health promotion intervention in the case of both individuals and communities.

Physiotherapy as a profession can address different levels of prevention, namely the promotive, preventative, curative, rehabilitative and educational levels. All these levels of care include health promotion to a certain extent. Promotive care includes educational programmes directed at achieving and maintaining healthy living and an
efficient and optimal quality of life. The preventative role played by physiotherapists involves identifying risk factors and implementing appropriate screening procedures. Physiotherapists can play a key role in the prevention of acquired injury or impairment which occurs at home, school, work or during recreation. The curative role of the physiotherapist lies in the facilitation of swifter recovery from neuromuscular, skeletal and respiratory disorders. Within communities, physiotherapists play a rehabilitative role by raising awareness of health issues and educating communities in the context of their environment. Furthermore, physiotherapists act in a consultative and advisory capacity towards patients, families, caregivers, policy makers and other health care providers on issues related to promotion of health and the prevention of disease, injury, impairment and disability.

The role of the physiotherapist in health promotion therefore includes all activities performed at an individual or community level; for instance, treating a patient for back pain is as much part of health promotion as educating the community on a specific health topic. In addition, treating a patient’s back pain is a curative service. One the other hand, a physiotherapist may address the respiratory system of a patient who has been bedridden for a prolonged period in order to prevent secondary respiratory complications which could arise from prolonged bed rest. The rehabilitative role involves the management of a patient aimed at restoring him or her to the community. It is addressed in the long term by educating the patient and the family in preventative and curative intervention. Education is provided as part of health promotion in order to prevent secondary complications or the recurrence of illness and also to educate the family and caregivers on disease prevention. This role highlights the importance of the physiotherapy profession in promoting health.

Whether physiotherapists work in a private or public hospital, in a clinic or on the sports field, they bear the responsibility of protecting their patients against injury and disease, as well as against secondary complications. Physiotherapists are therefore expected to create the kind of relationship with patients that will allow teaching them about their health in a way that goes beyond the scope of physical/manual techniques.
The extent to which South African physiotherapists are involved in health promotion is unknown, and it is therefore not clear whether they are fulfilling their roles at the various levels of care in health promotion. In addition, there is not much evidence of health promotion in the training of undergraduate physiotherapy students. In order to answer the question of whether physiotherapists are doing enough to promote health, it is necessary to assess the content of the curriculum followed in the training of physiotherapy students. Are they are given enough training in terms of skills and knowledge to promote health effectively? It is not clear how much content on health promotion is included in the undergraduate physiotherapy curriculum. Furthermore, there are fewer physiotherapists in primary health care settings where their role in health promotion could be maximised, which may be due to a lack of awareness of their role in health promotion.

In addition, it is not clear what informs the physiotherapy training institutions in terms of the focus on health promotion in the teaching curriculum. The scarcity of literature in the area of health promotion in physiotherapy is likely to hamper the advancement of the training of physiotherapists in this aspect of their discipline. It is hoped that this study will identify gaps in health promotion content within tertiary institutions, thus assisting the profession in reviewing its role in health promotion.

**Health Promotion within Health Services**

As stipulated in the White Paper on Restructuring of Health Services in South Africa (1997) (2), the delivery of comprehensive primary health care is essential in meeting the health needs of communities. The objective of this paper is to ensure accessible and equitable health care for all. Plans for the restructuring of these services include the development of health promotion activities and the fostering of community participation across the health sector.

Health care providers play an important role in the restructuring of services and therefore their training should equip them to participate effectively in the transformation. The White Paper suggests that the focus of the training of health
social, economic and personal development as part of quality of life. Through advocacy, therefore, we need to make the social, economic and personal environment favorable for health and therefore for an improved quality of life. Enabling is concerned with achieving equity in health. By reducing the disparities in health status and ensuring equal opportunities and resources, we are empowering people to achieve their fullest health potential. These disparities may be racial injustices and gender inequalities amongst communities. The role of mediation acknowledges that the prerequisites for health cannot be achieved by the health sector alone; coordinated action by government and other social and economic sectors is required. The Ottawa Charter also highlights the strategies that are to be followed in order to achieve the actions discussed above. These strategies include building health policies, creating a supportive environment, strengthening community action, developing personal skills and reorienting health services.

**Physiotherapists and Health Promotion**

Physiotherapists have a role to play in these strategies discussed above. As clinicians and public servants, their clinical experience and participation can influence policy formation. The interaction between Physiotherapists and the community can assist Physiotherapists in making contribution towards policy development. As Physiotherapists interact and assess different communities they are able to identify gaps which may be and are usually common amongst communities. The interventions need financial means and hence the contribution that Physiotherapists make is important for sustainable solutions, which are usually policy formation. A supportive environment can be achieved by ensuring the accessibility of services within communities and relevant groups. But the government will have to provide the financial means to make it possible
for physiotherapists to maximise this role in building a health policy. In addition when an existing policy is not effective, health care workers who interact with communities intensely are at a better position to identify the gaps and make their contribution. Physiotherapists are able to create a supportive environment for the community by educating them and providing the environment that they need to make the desired change. One can raise awareness on back care and emphasise the education by putting posters and pamphlets regarding back care. Visiting the workplaces within the community to ensure that the employers comply with the occupational health regulations and providing the local clinic with the necessary information and treatment regarding back care. Home visits conducted by health care providers to families with particular health needs and who cannot, for various reasons access care, also create a supportive environment. Strengthening community action can be achieved by involving community members in health promotion campaigns. Community health workers and key informants in the community should play a central role in such campaigns, in order that the community takes ownership of its own health. When promoting healthcare in communities, physiotherapists should try to pass this responsibility on to members of the community in order to ensure continuity in their absence. By developing skills in the community is also an important aspect of strengthening the community. Patients who have suffered from stroke usually needs long term physiotherapy intervention and many in poor communities cannot afford, for one reason or the other to have treatment all the time. Therefore Physiotherapists can transfer some of the skills to the patient’s care givers in order to maintain the progress that has been achieved.

In this way, community members will develop the skills they need to take ownership of health campaigns. Again, physiotherapists have a role to play in educating and training members of communities in their role as caregivers. The reorientation of services can be achieved by implementing the changes that are needed in health structures in order to maximise access to physiotherapy services. Physiotherapists should endeavour to increase awareness of their profession, in particular the understanding that theirs is a first line profession which the public can approach directly, saving money and time, rather than being referred to the profession after visits to other health care providers.
It is clear, then, that the roles discussed above should be part of health promotion training provided to physiotherapists in our country if we are to achieve the goals of the Ottawa Charter. This study will assess whether this aspect is covered in the content of the curriculum, that is, it will investigate whether the content on health promotion in the curriculum is sufficiently comprehensive to comply with the guidelines defined by the Ottawa Charter.

**Physiotherapy training in South Africa**

Currently, eight universities in South Africa offer training in physiotherapy. Information on how these institutions approach health promotion is essential. This would help to determine whether curricula are aligned with the White Paper on the Transformation of Health Services in South Africa (1997). Furthermore, the strengths and weaknesses of what is currently available at various institutions can be identified, assisting in the development of a stronger and more uniform model for all institutions. The inclusion of content on health promotion in the training of health science students aims to build skills which will enable them to deal effectively with the diverse health needs of individuals and communities. Participation in such health promotion will raise students’ awareness of the importance of multidimensional approaches when addressing health problems.

Most practice philosophies are developed through training, making the training component of physiotherapy a determinant of what graduates will do in their own practices. The White Paper on the Transformation of Health Services in South Africa (1997) remains a guiding document, however, and does not have the mechanisms to implement or enforce these recommendations; there is no evidence on the contribution of South African physiotherapy society on the contribution to the guidance in the curriculum. It is therefore incumbent on universities and professional bodies to enforce the principles of health promotion and disease prevention. But it must be acknowledged that the overhaul of curricula demands much in terms of time and resources, and this may result in universities opting for an easy way out, that is to maintain the status quo. This fact has prompted the researcher to conduct this study on the extent to which
health promotion is integrated in the curriculum and assessment of undergraduate physiotherapy students.

**Objective of the study**
The objective of this study is to assess the extent to which content on health promotion is included in undergraduate physiotherapy training programmes offered by South African universities.

**Research question**
The study will answer the following question: To what extent is health promotion included in undergraduate physiotherapy training programmes?

**Justification for the study**
The results of this study will be useful for the following:

a) Academic departments of physiotherapy: the findings may assist them in assessing their curricula in relation to health promotion. Academics can use the health promotion checklist in the review of their curricula.

b) The physiotherapy profession: the results of the study may reveal to this profession the extent to which it has succeeded in integrating health promotion in practice, thus responding to the guidelines of the White Paper on the Restructuring of Health Services (1997) and the requirements of the Health Professions Council of South Africa (HPCSA).
CHAPTER 2: LITERATURE REVIEW

Health Promotion in Physiotherapy

Health promotion is an area of increasing growth for health care professionals internationally, including physiotherapists, but it is relatively new in South Africa. As health care providers, physiotherapists are in an ideal position to address health promotion issues as they spend considerable time with patients, and can thus address the health of the patient in general. Physiotherapists also involve patients in decision making with regard to the goals and management of their condition. In addition, rehabilitation often requires a change in lifestyle which may include adjustments in nutrition and physical activity. However, not much has been documented by physiotherapists about their involvement in this regard. Several questions can be asked: Are physiotherapists involved in health promotion activities conversant with issues encountered or not? Is the training in health promotion provided in the training of physiotherapists sufficient to encourage them to be active in health promotion? Clinical education is one of the components of the undergraduate allied health curriculum and is regarded as essential to the development of clinical skills. The challenge for physiotherapists is, therefore, introspection in terms of health promotion training and practice in relation to the priority areas of the Ottawa Charter.

It is widely accepted internationally that clinical education is integral to physiotherapy curricula, as evidenced by statements from the Australian Council of Physiotherapy Regulating Authorities (ACOPRA 2004), the Commission on Accreditation in Physical Therapy Education (CAPTE 2004), the Canadian Physiotherapy Association (CPA 2002), the Chartered Society of Physiotherapists (CSP 2002a) and the World Confederation for Physical Therapy (WCPT 2004). However, the manner in which clinical education is conceptualised and delivered varies. One of the core outcomes of physiotherapy training in South Africa is the development of professionals who can demonstrate the ability to provide health promotion awareness and intervention
programmes to individuals, families, groups and communities \(5\) but the effectiveness of preparing physiotherapy students to promote health has not been investigated. A recent review found that conceptualisation of health differs between the field of health promotion and physiotherapy practice, although there are common points. The review established that patient empowerment is a central concept in the field of health promotion, but that this is probably not facilitated in physiotherapy interventions because the practice is based mainly on the biomedical model. Considering as an example health promotion in the management of lower back pain, Perrault et al. concluded that health education is the most used health promotion strategy \(6\). This plays a very important role as back pain is due mainly to musculoskeletal structures: posture must be corrected to achieve good results and educating the patient about body positioning and ergonomics, a health promotion aspect, is one way of ensuring that posture is addressed. He recommends the up-scaling of health promotion for long-term management to assist physiotherapists in gaining knowledge of health promotion, and in acquiring better understanding of health and of their role when intervening in the clinical setting. He makes a strong case for linking physiotherapy to health promotion as he believes this will have a positive effect on disability conditions that are seen at community levels. This emphasises the increased efforts made to link the principles and practices of health promotion with physiotherapy.

**Health Promotion in South Africa**

Health promotion was formally introduced to the South African health system in 1990 and is now part of the Social Sector Cluster within Primary Health Care of the National Department of Health. The first policy on health promotion appeared in the country in the African National Congress (ANC) health policy document of 1997\(4\). Health promotion service delivery is the shared responsibility of national, provincial and local government. Funding of health promotion activities comes from the Department of Health budget. One of the challenges currently facing the development of health promotion is infrastructure, however community participation is significant, as is health promotion policy and strategy document development. Research and evaluation of health promotion is still limited, and this is underlined by a lack of an evidence-based
approach and the poor infrastructure highlighted earlier. The National Department of Health considers the health facilities to be crucial in driving the progress of health promotion, but this is hindered by poor infrastructure development. This is exacerbated by the lack of qualified health professionals in the primary health care setting. In addition, there are very few trained health promotion specialists who are able or in the position to inform stakeholder about health and social determinants and the evidence of effectiveness of health promotion actions.

**Health promotion in community settings**

Increasingly, physiotherapists are working in community-based settings where they are involved in community participation, in partnership with clients and their families. These primary health care contexts can produce both dilemmas and benefits for therapists. In a study conducted to gain insight into professional issues facing physiotherapists in family-centred and community-based settings, the findings indicated that physiotherapists encounter many barriers, including practical dilemmas, policy dilemmas and career dilemmas (7). The study suggests that these challenges may be due to the fact that family-centred approaches involve policies and programmes that combine family support principles with appropriate practice. Furthermore, the study recommends more research to assist academic institutions in creating capacity for physiotherapists to adopt family-centred practices. Involving undergraduates in the community environment will familiarise them with the challenges that the setting holds and will assist in improving their training by adjusting it to address aspects that are not academic.

**Health promotion in the training of undergraduates**

A study undertaken at a South African university examined the discrepancies between physiotherapy education and training and the expectations of health care (8). It identified shortcomings in the physiotherapy undergraduate curriculum, despite the considerable value and progression in physiotherapy and health care. This highlights the value of student and practitioners' feedback to inform the curriculum and its
development in the light of socioeconomic changes and health care expectations. However, the study is not specific to any physiotherapy area and was conducted on a small scale at only one of eight tertiary institutions currently training undergraduates in physiotherapy. Concerns about issues relating to physiotherapy theory were linked to the lack of construction of relationships in the curriculum. This can also be related to health promotion as it plays an essential role in other aspects of physiotherapy: failure to incorporate health promotion may result in gaps in meeting the demand for its inclusion in the health care system, as in most cases health promotion is attached to community health.

A further study conducted to identify the training needs in the area of public health also supports the notion that universities must collaborate with organisations to offer ongoing training to public health educators and to seek ways of delivering cost-effective training. In addition, it is important that training be guided by emerging issues and changing trends in public health (9). Although this study was focused on educators in public health programmes, the findings could be used to assist educators in undergraduate training. Studies of workforces do emphasise the importance of identifying the educational needs of undergraduate students; strategies are required to provide stronger links between undergraduate students and the public health force.

Inter-professional education (a multidisciplinary approach) in training and educating health professionals has had a number of positive outcomes, including an increase in mutual understanding of the roles and values of other health professionals, raised awareness of the importance of collaborative team working skills, enhanced communication and improved patient care and outcomes. In a study done to evaluate a rural inter-professional learning module for final year undergraduate health science students, the results indicated the importance of developing a sustainable and embedded inter-professional rural learning module within the undergraduate health science curriculum (10). This is also relevant to the demand for health services in our country, especially in the primary health care setting, where health care professionals must refer to others in order to promote health effectively as the knowledge of health services is
still low. For instance, stroke patients may not be aware of dietetics services and physiotherapists may not promote patients' health effectively if such interventions are not incorporated in patient management. However, there is not enough information on multidisciplinary education in health studies conducted in this country.

Undergraduate inter- and multi-professional education has traditionally aimed at developing health professionals who are able to collaborate effectively in comprehensive health care delivery, according to a review conducted at the University of Cape Town (11). The aim of the multi-professional course should be to lay an integrated foundation; pan-professional refers to curriculum content that is core and has critical relevance to all participating profession. This can also be seen in the light of the restructuring of health services according to the White Paper (2). Again, a comprehensive approach to health promotion is a response to the definition of health, i.e. all aspects of health are addressed when promoting health. A review of the outcomes of early exposure to clinical and community settings in medical education concluded that this early experience motivated and satisfied health professional students and helped them to acclimatise to clinical environments, to develop professionally, interact with patients with more confidence and less stress, to develop self-reflection and appraisal skills as well as a professional identity. In addition, the article highlights that early exposure strengthens students' learning and makes it more real and relevant to clinical practice. It also exposes students to the structure of the health care system and gives them information about preventative care and the role of health professionals. However, there is no evidence on the level of study at which students are sent to communities or the uniformity between training institutions in this respect.

The article strongly supports the institutions that choose to expose students to the practical aspect of health promotion in the early phases of their training, for instance in the first or second year, regardless of the theory aspect at that particular level. This early exposure also assists students in acquiring communication and basic clinical skills.
In recent years, the use of portfolios as learning and assessment tools has become more widespread across a range of health professions. Evidence of the educational effects of their use in undergraduate education suggests that the main advantages of using portfolios include an improvement in students' knowledge and understanding, greater self-awareness and encouragement to reflect, the ability to learn independently and the ability to integrate theory and practice (19). Higher quality studies also suggest that the use of portfolios improves feedback to students and allows the educator a greater awareness of students' needs. Portfolios may also help students to cope with strange or emotionally demanding situations, according to this report. However, the report also suggests that whilst portfolios encourage students to engage in reflection, the quality of this reflection cannot be taken for granted, and that the time commitment required for portfolio completion may detract from other learning or deter students from engaging with the process unless required to do so by the demands of the assessment. Further work is clearly needed to strengthen the evidence base for portfolio use.

Teaching Models In Health Studies

In a study to determine the most effective teaching model in undergraduate training, the results indicated that no model of clinical education for physiotherapy students is superior to another, and that there is no 'gold-standard' for clinical education (14). All models, i.e. the different teaching approaches, depending on their settings and the availability of the resources, have their advantages and disadvantages, according to lecturers who were interviewed in the study. A study carried out in Australia to compare two models revealed that most institutions (78.4%) used a model that involved physiotherapists and lecturers sharing the responsibility for the clinical education of students, while only a minority employed the designated clinical educator module, where one educator was responsible for teaching students (15). The teaching approach used in health promotion will be part of this study, as the approaches used by the universities are not known.

In yet another study, conducted to identify areas of need within clinical education and to describe various models and tools that could be utilised in clinical education, the extent
to which these models and tools might meet the identified needs of clinical education was explored. The results suggest that the clinical education process in physical therapy is currently characterised by seven primary needs and that 10 models exist at present to guide the general process or to provide specific tools and practices to enhance its effectiveness (16). Roles and relationships are critical components in successful clinical education. Theory suggests that clinical educators and students should engage in an intentional, structured process of changing roles during the course of the clinical education experience and that non-technical competencies such as communication, collaboration and reflection are crucial for effective practice and may be developed in the clinical education setting. In addition, this study highlights the gaps in direct evidence on the advantages or otherwise of stand-alone models and the benefits of pre-qualification communication training. Evidence suggests that effective training requires substantial teaching time, expertise and a body of empirical research on specific communication practices and their effects. Developing a clearer understanding of the current status of physical therapy in clinical education may assist clinical educators in the use of the available models and tools or in the development of new models that address potentially unique needs.

**Practical aspects of training in health promotion**

Field trips that form part of the fourth year physiotherapy undergraduate curriculum, in which students are given activities within the framework of the health promotion model, stimulate students' interest in following careers in rural areas after graduation and inform them about rural health issues (17). In an Australian study, activities chosen by students met four of the five criteria of the model, with further work needed to align activities with local health promotion infrastructure. Undergraduate students in the health disciplines in Sydney acknowledged the value of rural placements and the majority had positive perceptions and experiences.

Most health promotion activities involve transferring knowledge to the target group, therefore communication skills are an essential part of the training. It is recommended that curriculum designers and educators strive to maximise the training in
communication modules such as health promotion, in order to be more experimental and to provide training when students have already had some contact with patients (18). Challenges that educators are faced with include strategies used to encourage the students’ engagement. Provision of authentic experience is another challenge that is highlighted in both studies, with reasons including the lack of interest of physiotherapists in health promotion in the setting to which students are sent and the lack of qualified physiotherapists in other settings. Students are therefore limited to what they learn from universities rather than gaining from the practical aspect of health promotion.

The appearance of physiotherapist students in the primary health care setting may increase awareness of the role of physiotherapy services; but access is inconsistent as there are very few qualified physiotherapists in this setting in South Africa. This has a negative impact on both the role of physiotherapists in the community and on their training, as the lack of expertise in this field limits them to their lecturers’ insights. In addition, in settings where there are no physiotherapists their services are unavailable, creating inconsistency in the availability of and accessibility to physiotherapy services in primary health care situations.

The Way Forward For Health Promotion In Physiotherapy

One article in particular by Dean (19) highlights the practice of physiotherapy in the 21st century. This article places emphasis on the epidemiological basis and the rationale for evidence-informed physiotherapy in addressing health priorities. This is supported by the definition of health provided by the World Health Organisation (WHO) and the International Clarification of Function (ICF).

According to the study epidemiological data and evidence support the effectiveness of non-invasive intervention related to physiotherapy in addressing health priorities. These include health education and exercise for lifestyle conditions such as ischemic heart disease, smoking-related conditions, hypertension and stroke, obesity, diabetes and cancer. In addition, conditions that are not directly linked to physiotherapy are also
addressed through health education. According to this article, when physiotherapists commit to exploiting non-invasive interventions, they are in the pre-eminent position to focus on preventing these disabling conditions in every patient, and can focus on cure as well as management of these conditions. Therefore, physiotherapy must include assessments of smoking and basic nutrition and counselling, recommendations for physical activity and exercise, basic stress reduction and basic sleep hygiene recommendations in order to build clinical competencies in the 21st century (19).

This may raise concerns about the scope of practice that governs physiotherapy; however, students visiting communities without other disciplines face challenges where health education intervention is needed in terms of nutrition, for example. This aspect may be excluded because of the absence of dietetics students, or because physiotherapy students are more focused on physical activity. This means that the promotion of health does not qualify according to the WHO definition of health, as health must be addressed holistically. The article concludes that when the physiotherapist has made a general health assessment according to the elements mentioned above, he or she is then able to determine whether the patient should be referred to another discipline, or whether the prolonged periods that physiotherapists spend with patients will lead to the amelioration of the lifestyle condition. This may ultimately reduce the need for invasive health interventions, including drugs and surgery (19).

Another article by Dean (20) focuses on evidence of physiotherapy curbing lifestyle conditions and its role in global health care. The author emphasises the point that physiotherapy by its definition, its practice, professional education and research needs to reflect 21st century health priorities and to align itself with global and regional public health strategies (20). Guidance from literature on health promotion activities is essential in evidence-based practice. This article supports the previous in promoting clinical competencies including assessments of health, lifestyle, health behaviour, lifestyle risk factors, and the prescription of intervention to promote health and wellbeing in every patient. According to this article, such an approach will raise the
threshold of chronic conditions over the lifecycle and reduce their rate of progression, thereby preventing, delaying or minimising the severity of illness and disability.

The article goes on to say that physiotherapists should be able to practise such competencies within the context of a culturally diverse society in order to effect positive behaviour change. This is supported by the role of a community needs assessment, which is an essential element of health promotion. In a study conducted in South Florida on the knowledge of access to physiotherapy services in primary health care, the majority of respondents (67.3%) indicated no knowledge of access to physiotherapy in primary health care, with 57.4% of the sample never having visited a physiotherapist. The results of this study highlight the point that the public has a limited understanding of access to and the role of physiotherapy. Physiotherapists could be very useful in primary health care if the public became more aware of this option (21). A recent report on the burden of disease in South Africa revealed that HIV/AIDS, Non-communicable, communicable diseases and injuries are the main cause of mortality and morbidity in the country. The role of physiotherapy in prevention of morbidity and mortality; and in promoting and improving the quality of life in regard to the four categories of disease mentioned is evident and hence it is empirical for Physiotherapist to play an active role in reducing mortality and morbidity in our country22.

Chapter Summary

Although the literature has revealed aspects of training that form an important part of the role of the physiotherapist in health promotion, only a few articles are South African. The following aspects which are not evident in the literature are important in determining the progress which physiotherapy as a profession has made in restructuring health services:

* The status of health promotion in physiotherapy in this country: what constitutes health promotion in the physiotherapy curriculum and what approaches are used to train students in health promotion?

* The main focus of the teaching of health promotion and related activities of students.
• Challenges that could account for the lack of participation in health promotion.

• The ideology that informs content on health promotion
CHAPTER 3: RESEARCH METHODOLOGY

Research design

This is a descriptive study, using both quantitative and qualitative methods.

Study setting
The study was conducted at South African universities that train physiotherapy students. The universities are located in four of the nine provinces.

Study population and sample
There are currently eight universities in South Africa offering a physiotherapy programme. The study population comprises physiotherapy departments of all these eight universities. The intention was to include all the institutions since the study population is small, however, only seven institutions took part in the study. The study setting included the following universities: Limpopo (Medunsa Campus), Pretoria, Free State, Stellenbosch, Western Cape and Cape Town. All these institutions gave their consent to be part of the study. Participation was voluntary and the departmental head gave permission in each case.

Participant Recruitment

All eight academic physiotherapy departments were recruited to participate in the study. A letter of invitation was sent to the Heads of Department, requesting them to participate and to nominate a designated person as a point of contact with the researcher. Although all the institutions gave their consent, one did not respond to attempts to make an appointment and was therefore excluded. All the institutions that took part in the study named a representative who was the respondent to the checklist, inventory and the interview. Six of these representatives were facilitators of the module teaching health promotion at their university.
Sample size
The sample size was seven (75% of the population) out of the population of universities that offer undergraduate training in physiotherapy.

Data Collection Methods
Three self-developed data collection instruments were used in the study. An inventory and checklist were used to collect quantitative data and an interview guide was used to collect qualitative data.

Data collection was divided into two stages.

Stage 1:
In Stage 1 a health promotion checklist (see appendix A), which was developed from the Principles of the Ottawa Charter for Health Promotion (1986), was mailed to the respondent in each academic department of physiotherapy, together with the inventory list (appendix B). The checklist was used when responding to the inventory. Upon completion of the inventory, the respondents mailed them back to the researcher. Appointments for interviews were set once the completed inventory checklist had been received from respondents. Only seven of the inventories and checklists sent to the institutions were returned. Hence the sample size of the study was seven. Respondents were given a period of a week in which to return the completed checklists. One institution delayed in returning this as the relevant staff member was unavailable at the time.

Stage 2:
In Stage 2, the researcher conducted interviews with the designated person in each department, using an interview guide (see appendix C) to probe more deeply into the health promotion content of each institution's curriculum. The interview guide was modified to suit the specifics of each institution, depending on the response from the inventory. An audio recorder was used to capture the interviews and each interview took between 45 minutes and an hour. Although the initial plan was to conduct all
interviews face-to-face, two of the seven interviews were conducted telephonically owing to financial constraints.

**Data management**

Quantitative data was entered on a spreadsheet. The interview recordings were transcribed electronically. The electronic transcripts were uploaded into the NVIVO program according to source. The themes were identified after reading through all the transcripts.

**Data analysis**

**Quantitative data analysis**

Epi-info software was used to analyse the quantitative data. This yielded descriptive statistics. The results are presented in percentages. The analysis revealed which content was covered by most universities and which was covered least. The analysis further highlighted the differences in training offered by the universities.

**Qualitative data analysis**

NVIVO software was used to analyse qualitative data. The analysis identified themes and similarities and differences in the responses from the seven universities.

**Trustworthiness of the data**

**Reliability**

The reliability of the findings was assured by the use of both quantitative and qualitative data in the interpretation of the results.

**Content Validity**

Content validity was assessed by the pre-testing of the data collection tools. A pre-test of the questionnaire was conducted by distributing it to five qualified physiotherapists,
three of whom work in the clinical sphere and two in academic institutions, although they are not directly involved in teaching health promotion. This was done in order to identify defective items in the questionnaire so that they could be rephrased or deleted, and to ensure the relevance of the questionnaire in addressing the objectives of the study. No faults were found in either the inventory or the checklist, and no changes were made.

**Ethical considerations**

Clearance was sought from the School of Public Health Research Committee and the Medunsa Research Committee (MREC) of the University of Limpopo before the study commenced (see Appendix G). Permission was obtained from all the physiotherapy departments at all the universities which took part in the study. Informed consent was obtained from participants, both for the inventory and the interviews.
CHAPTER 4: RESULTS

Introduction
This chapter presents the results obtained from the analysis of the data from the inventory of health promotion content, the checklist for health promotion content and the interviews with representatives from seven South African universities offering undergraduate training in physiotherapy. In this section I will refer the Universities with alphabets A to G.

Quantitative results
The quantitative data which was collected using the checklist and inventory was analysed using Epi-info software. These instruments included aspects of health promotion noted in the Ottawa Charter. The institutions were asked to indicate which aspects were applicable to them. All seven included some aspects of health promotion in their curricula. Common aspects which were included are the following:

- educating patients and caregivers about prevention of disease and maintaining a healthy lifestyle,
- training family and caregivers to apply prevention measures,
- training caregivers in the role they could play in the rehabilitation process,
- identifying role players in communities to assist in interventions,
- identifying community needs to ensure relevant interventions,
- rehabilitation of patients within the community, and
- referral to other health providers.

Each of the following aspects were excluded by University D
- Planning, organising and evaluating health promotion projects,
- Involvement of community in ownership of their development,
• Involving stakeholders in the community in supporting interventions.

The aspect of improving health and wellness through community development and mobilisation of resources was excluded by two institutions, namely D and E. Advocacy for implementation of health promotion in the health as well as other sectors, and the reinforcement of partnerships, networks and alliances were excluded by three of the seven institutions, which are A, D and G.

The inclusion of health promotion content in teaching curricula was as follows:
• University F included teaching on one level, that is the second year.

• Three institutions covered the teaching of health promotion content in two levels; in second and third year at two universities A and D, and at first year and second year levels at University C.

• Two other institutions covered the teaching of health promotion content at three levels, University G from second to fourth year and University E from first to third year levels

• University B covered the content at all four levels.

The three main aspects of health promotion, advocate, mediate and enable, were included as follows in the teaching curricula:
• Universities B, C, E and F covered all aspects.

• Universities A and D excluded advocacy.

• University G excluded mediation.

Strategies of health promotion, which include developing personal skills, strengthening community action, creating supportive environments and reorienting health services, were included by all institutions, except for the reorienting of health services which was excluded by University F. Students' involvement in the community included activities such as health screening, health education, home visits, training of caregivers, needs
assessment and working with role players. These aspects were included by all institutions with the exception of health screening which was excluded by University G.

**Weighting of health promotion content**

Most institutions expressed the weighting of the content on health promotion in percentages. This content was weighted between 20% - 40% by Universities A, B and E. University C was specific and indicated that the module comprised 70% of the health promotion module and in University G, the first year covered 10% of the content on health promotion in its curriculum, and the second and third year levels covered 20% and 40% respectively. University F indicated that the health promotion module carried 10 of the 120 credits at that level. Only University G did not know the weighting of its health promotion content. All institutions indicated the inclusion of health promotion content in other physiotherapy subjects although the extent of this inclusion was not known.

**Qualitative results**

Qualitative data was analysed using NVIVO 8. The analysis identified themes and similarities and differences in the interview data from the seven universities.

Nine themes were identified from the analysis:

**Content of HP in curriculum**

The content on health promotion covered by the undergraduate physiotherapy curricula was measured against the content identified in the Ottawa Charter. This content was then contextualised within the role, responsibility and expectations of physiotherapy practice. All seven universities offered some content on health promotion and this covered the following elements of the Ottawa Charter: mediation, advocacy, strengthening of community action, developing personal skills, creating a supportive environment and reorienting health services.
Specific focus was given to the role of physiotherapy in the community, i.e. primary health care and health advocacy. The inclusion of this content is a determinant of expectations of the students. All the participants indicated the inclusion of some health promotion content in their curricula and some preparation in health advocacy. This content is taught in various forms, including through projects that are implemented in the community. Students are also taught the role of mediation in influencing health in areas of occupationally related conditions, as one of the lecturer respondents stated:

They must be able to write a letter to the factory manager and say I am a physio working in the area and today I saw so many people from the factory with lower back pain ... give the employer the facts of occupational health and discuss possible intervention.

Another aspect that is covered in the teaching of health promotion, as identified by three of the seven institutions, is community participation, including identification of role players in the community. Health promotion project planning, including strategies that are used in various health projects, is also included in the training. Five of the seven institutions also highlighted the inclusion of community needs analysis, indicators of the aims and objectives of health projects and the use of different methodologies that are supported by the literature in conducting health promotion. One institution indicated disability and the rights of disabled people in their health promotion teaching. Another institution included patient education, learning plans and the delivery of health education as the main focus of the teaching of health promotion. Designing health promotion posters and pamphlets was highlighted by six institutions, and the use of educational material was included by all institution as part of health promotion. In three of the institutions the health promotion module is taught as a multi-disciplinary course to highlight the holistic approach of health promotion in physiotherapy training.

**Practical Aspects Of Health Promotion In Physiotherapy Training**

Activities that are conducted by the students differ between institutions, depending on which communities students visit. Students are placed in a community for a period
varying from one to five weeks to implement health projects. Two of the institutions in the study indicated that they ran projects in conjunction with other associations, including cancer and burns foundations. Students are guided and expected to implement their own projects with the help of these foundations. All institutions mentioned the creation of posters on health education and individual and group therapy provided by the students. All institutions indicated that they conduct health talks with various groups. Groups addressed by students include stroke victims, the elderly, school children, factory employees, antenatal classes, sufferers of arthritis, diabetics and HIV/AIDS patients. At one institution, students were involved in the training of home-based carers (community rehabilitation workers) in the handling and position of cerebral palsied children and in the caring for the ill such as stroke patients.

They train home-based carers using the manual that I mentioned earlier (the home-based care rehabilitation manual) and they do home visits with the home-based carers. They also visit schools for children with disabilities and old age homes.

Students also conduct health promotion on an individual level by screening patients in primary health care settings. Home visits are also conducted during which students promote health on an individual level, for instance, providing advice on taking tablets and a healthy lifestyle. This is incorporated as part of management and relates education of patients to their medical history. The three institutions following a multidisciplinary approach also noted that they placed students in communities together with other allied health discipline students, including students of occupational therapy, dietetics, speech therapy and audiology and psychology. Groups undertake home visits together and each student will address health promotion in relation to his or her particular discipline.

Challenges to the integration of health promotion in the curriculum

One institution highlighted the challenge posed by the lack of qualified physiotherapists in primary health care settings. This limits students' training to what they are taught by lecturers, and they lack an external view which would widen their scope. In addition,
the rehabilitation workers in the same communities lack knowledge, relying in most cases on students to guide them. Hence, the little progress that is made while students are in the communities is lost when they are on vacation. Safety was also a concern for three of the institutions, limiting the students' scope of practice to situations where the community rehabilitation workers were present, with students having to be driven to specific areas and travelling in groups rather than individually.

One of the institutions faced a challenge related to accommodation for students while they were in the communities; the area to which they send students can only provide accommodation for two students. This limits the institution to sending two students of the same gender only, which is not always convenient. In addition, because of safety issues, students can only visit areas close to a hospital. Another challenge that was identified is the general lack of interest in health promotion on the part of qualified physiotherapists who supervise students in their community work. They often fail to impart adequate information in this regard. One lecturer respondent felt that physiotherapists in these placements did not always see health promotion as an important aspect of physiotherapy and in some cases did not understand the concept. The inadequate treatment of health promotion in other physiotherapy subjects was raised as a concern by two institutions, as it made it difficult for some students to integrate health promotion into physiotherapy as a whole. Three of the institutions highlighted students' initial lack of interest in health promotion, suggesting that the inclusion of this content demanded creativity on the part of lecturers.

**Human resources in health promotion training**

Of the seven institutions taking part in the study, five had only one lecturer facilitating the course; the other two had two lecturers working together on facilitating the content dealing with health promotion. With regard to post-graduate qualifications related to health promotion, three institutions had lecturers with post-graduate qualifications related to health promotion, two institutions had lecturers who had a strong interest in community work and who had been involved in community health promotion. The remaining two institutions alternated their staff according to the modules they teach.
As far as the involvement of the lecturers in the content on health promotion is concerned, one lecturer introduced the module including this content and developed the health promotion content manual; she was also one of the lecturers with a post-graduate qualification related to health promotion. At another institution, one of the two lecturers facilitating health promotion content was introduced to the department in order to review the content and make recommendations on making the content more comprehensive. The five remaining institutions use manuals which were developed prior to the involvement of the current lecturers; however, they had made minor changes, mainly additions. Six of the institutions had clinical supervisors in the clinical areas in which students are placed.

**Logical level at which to introduce health promotion to students**

Four of the seven institutions felt that content on health promotion should be introduced in the first year to lay the foundation for the role of physiotherapy in health promotion; however, only one of the four institutions provided theoretical teaching at first-year level, while the other three introduced activities for first years that involve promotion of health without the theory background. This was to stimulate an awareness of health promotion before its introduction in the second year. One institution believed strongly that health promotion theory and practical aspects should be introduced in the second year while two others felt that the third year was the most appropriate level as by that time students had already covered basic life sciences at the lower levels, and at third year they were also involved in practical aspects which would help them to better understand and integrate health promotion.

**Aspects that are excluded from training in health promotion**

According to the responses, aspects are excluded mainly because of the limitations imposed by the practical areas and the time that students are in the placement, although such aspects are covered theoretically, according to the respondent lecturers. In one
institution the mediation aspect could not be conducted by students owing to time constraints:

*Let's just say in practice the time allocated for projects is too short to allow them to play the mediation role as it is a very long process and students are only out for one week. They will not be able to see any results in that period, but it is covered in the theory. The big project we did was with the gay and lesbian association; the main aim that the people (community) identified was mediation. They wanted services from the government which are not provided for them; however, the students went with the intention to educate the group on HIV/AIDS and other health related issues, but they did not address the need that the community wanted. The other project was with the Disability Association, where the students had gone to educate the community on social grants, however the group wanted access to taxis and so forth, but the time allocation and at that level they can’t do mediation with the people responsible, so they also did education.*

One of the institutions that excluded the practical aspect of advocacy indicated that, in its true sense, advocacy requires students to influence policy and decision makers, and this only comes with experience; students do not have the skills to fulfil this role. The respondent added that the aim of the school was to help students understand advocacy at a theoretical level. Students do advocate for patients' health at an individual level. Furthermore, this is an area in which students experience difficulty. The students from this particular institution were not able play the role of reorienting health services for the following reason:

*Students are taught to understand the health system and to understand the community needs for health promotion and education within the health system. They are not able to reorient for health service as the environment is already provided for them and the focus is on the student understanding how the health system works.*
One institution excluded the aspect of community participation in ownership of community development because the staff members were involved with the community at that level. They assess the community needs and have consultation with the community before and after the students' visit on behalf of the student. They believe that, owing to the low socio-economic status of communities, students have difficulty playing this role.

**Main focus of teaching**

All institutions indicated that the focus of their teaching was on health education for individuals and groups, and the integration of health promotion while managing back pain, for example, or advising a patient on exercise and healthy eating. Students must be able to create health education materials that are appropriate for the relevant age group. Four of the seven institutions also highlighted their focus on community needs assessment and engaging with role players, in addition to interventions that students make according to the needs identified by both students and community. One of the institutions also included the analysis by third year students of second-year students' posters in terms of layout and appropriateness.

One of the institutions emphasised the independence of students in their community block:

*We want students to be independent in creativity; students plan their activities from the first day of their block after their orientation. We want them to be able to diagnose, to assess community needs and once they have done that they need to speak to relevant people so that they can address the needs. They must be able to make posters and pamphlets, information leaflets and use tools like overhead projectors if they need to in order to make their presentations in the community, depending on the creativity of the group and the community they are working with. For example, if they are educating teachers they may use laptops or overhead projectors.*
Two of the institutions also highlighted the role they expected students to play in developing skills in the community, by working hand in hand with volunteers and community health workers in health promotion talks, and training them to educate patients about medication, exercise and healthy eating. All the institutions emphasised the inclusion of all health promotion aspects included in the Ottawa Charter in their teaching, although the focus was placed where they felt students would be able to play the role according to the needs of the particular community.

Assessment of content on health promotion

Six of the institutions had a similar approach in that students are assigned tasks to be completed at the end of the block. They compile a portfolio on all the projects in their block and they are assessed based on the contents of this portfolio. The portfolio includes their experiences and challenges and how they dealt with these, and is thus also a form of reflection. They present their portfolios in a discussion forum to fellow students and lecturers. Two institutions also required case reports apart from the portfolios. These are presented at the end of the block when students present the literature supporting the intervention they implemented. In addition, one of the institutions provides web-based learning where a group of students discusses topics that are related to health promotion and their lecturers assess them in their responses.

Two of the institutions have an end of block examination at fourth year level. It is compulsory for all the students in the block to pass this. In addition, the clinicians who supervise students in the blocks assess them throughout the duration of the block. All the institutions assess health promotion in both the theory and the practical examinations of all physiotherapy subjects, as they are required to integrate this aspect in all the modules. One of the lecturer respondents highlighted the fact that other lecturers are able to evaluate the lecturer responsible for a subject based on the outcome of the portfolios and presentations by students and to make recommendations.

Recommendations for improving the teaching of health promotion
One respondent identified the need for more practicality in the area of health promotion and the inclusion of the determinants of health status in the curriculum as students are placed in communities with varying socio-economic status. This would assist students in understanding the needs of different communities. She added that the role of physiotherapy in individual management should be emphasised across the board. Three of the respondents emphasised the need for increased content on health promotion in the curriculum, especially in other physiotherapy subjects. Another respondent raised the absence of an occupational aspect, specifically ergonomics, in health promotion in the institutions and the need for this. He added that institutions should encourage students to be more proactive in the promotion of health; for example, they should be encouraged to approach companies to teach them about ergonomics and to discuss the benefits of increased productivity and decreased absenteeism to which this might lead.

One respondent felt that the council for health professionals should play a role in encouraging health care providers to become involved in public health; this could be achieved by requiring physiotherapists to spend a number of hours in the community each year. She added that the curriculum also requires a shift from individual treatment to the promotion of group interventions. Another respondent recommended that the application of health promotion be relevant to the current problems in our health care system, and for physiotherapists to address conditions such as diabetes, hypertension and HIV/AIDS.

With the integration of health promotion becoming a concern in some institutions, one of the lecturers felt that mainstream subjects should include health promotion as an important aspect of management. She also believed that clinical placements should have better health promotion programmes in order to inform students about health promotion at an operational level.
CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This chapter outlines the findings on current health promotion content and suggests a way forward in terms of recommendations for institutions training undergraduate physiotherapists to align their health promotion curricula with the Ottawa Charter for Health Ottawa.

Discussion

Content on health promotion in curricula

The study revealed that only a minority of the institutions that are training undergraduate physiotherapists cover health promotion comprehensively in their curricula. Aspects that are covered currently include health education, group therapy and community needs assessment. The aspects that are outlined by the Ottawa Charter, such as advocacy, mediation, enablement, strengthening community action, developing personal skills and reorienting health services are covered adequately by few institutions and the practical aspect is lacking. This means that the content is insufficient and deviates from the principles of the Ottawa Charter. The inclusion of these elements in theory and in practice must be part of the focus of the content on health promotion at all institutions.

The focus of health promotion in undergraduate physiotherapy curricula at the seven institutions under study is focused on health education; although aspects of advocacy, mediation and enabling are also included to a certain extent, these are not the main focus of teaching. By virtue of the fact that these institutions are not applying some important aspects in practice, learning is also limited. The weighting of the content, varying from 20% - 40 %, does not indicate how much each of the health promotion aspects contribute to the percentage. The integration of health promotion in physiotherapy as a whole, in terms of other physiotherapy subjects is not always clear as an objective as most lecturers indicated that it was expected of students to cover aspects of health promotion in all areas of physiotherapy. However, the inclusion of content on health promotion is not evident in all physiotherapy subjects and two of the respondents
were concerned about the lack of emphasis on health promotion in other physiotherapy subjects. The role of health promotion may therefore be overlooked in other subjects, which results in inconsistencies in the integration of health promotion. A review of course content is an important element in improving the training processes involved, but the frequency of such reviews is not clear.

The general lack of interest in health promotion among physiotherapists also contributes to the fact that not much progress is being made by physiotherapy as a profession in terms of health promotion; we need to find new ways of including training in health promotion in the physiotherapy curriculum. The multi-disciplinary approach to training which was indicated by some of the institutions seems to be promising in this respect. If physiotherapists become aware of the role of other health professionals in health promotion, this approach may be effective as health promotion requires a holistic approach. This can also be related to the literature review which emphasises that the physiotherapist should conduct a comprehensive assessment of a patient that includes physical activity, nutrition and stress levels. This also addresses the needs analysis component of health promotion and ensures that the physiotherapist has the relevant education and is able to refer when necessary. Physiotherapists, like other service providers, need to assess all patients before treating them, and this also applies to health promotion interventions; the need for any intervention should assessed beforehand.

**Level of study at which health promotion should be taught**

As far as the level of study at which health promotion should be introduced to the students is concerned, the responses indicated two perspectives. One group expressed the importance of laying the foundation of health promotion at first year level as one of the critical roles of the health professional. This would mean that when students reached the practical levels they would be able to translate that knowledge into action. The other group felt that the first year of study is focused on basic life science subjects and as students are not exposed to the practical aspect at that stage it would be difficult for them to grasp the concepts of health promotion. However, there is no evidence in terms of the outcome from either group. It is logical for the subject to be introduced at
the early levels of study as students will be able to build on the knowledge they have already gained and this will help them to integrate it in other areas. The longer they are aware of the concepts, the better their understanding and application. On the other hand, reasons that were highlighted by the institutions which prefer introduction of health promotion at second and third year level were mainly to do with time constraints, as the first year curriculum is taken up by life sciences subjects. Introducing the subject later does not give the student sufficient time to understand and integrate it effectively. The subject should be introduced in first year as a foundation. It does not have to include the practical aspect, but students can build on the knowledge throughout their four years of study. Knowledge and awareness of health promotion can help build a foundation that the curriculum can improve on in subsequent years. In addition, health promotion has various levels, which can be addressed at various stages by the four levels of physiotherapy training. This is also likely to help in integrating health promotion into other related subjects. In addition, improving the content may demand more hours of teaching and training, which may suggest inclusion of the subject at all study levels.

**Human resources**

At the seven institutions that took part in the study, there were only nine lecturers who were directly involved in teaching health promotion, most of whom did not have postgraduate qualifications related to the subject. This is a concern and one might question the employment criteria. It also suggests that the majority of our human resources training the subject lack the skill or are not qualified to teach this aspect. The lack of interest in health promotion at post-graduate level is also evident from the dearth of research on the subject. One institution indicated that there was a multi-disciplinary team with post-graduate qualifications related to health promotion which informed the content of the health promotion curriculum and reviewed the content manual every three years. This means that those who inform the content are better informed and more aware of developments in the area of health promotion and could improve the curriculum.
Consultation was not mentioned by other institutions which raises the question of what informs health promotion content. It is crucial that departments avail themselves of the resources that are needed to improve the content. Only two institutions were specific on the changes that took place in integrating health promotion content into the curriculum. In the case of institutions with only one lecturer for the subject, teaching is limited to what that particular person has been exposed to as far as health promotion is concerned. Two or more staff members ensures a team effort in the writing of teaching materials and the absence of one person does not impose drastic changes on the training. At one of the institutions, the only lecturer concerned with the subject was on sabbatical during the interview stage and the temporary replacement was involved in overseeing the students in the practical settings. However, because this lecturer had his own area to cope with, time constraints limited his effectiveness in both roles.

There is still a great deal to be done to increase skills and personnel in this area; this will also ensure that all aspects of health promotion are included, irrespective of what is covered in the practical aspects. In addition, the lack of specific focus on the content reveals gaps in the curricula; the suggestion is that insufficient effort goes into what should be included, particularly in aligning curricula with the principles of the Ottawa Charter. The shortage of post-graduate qualifications in this area may also contribute to this state of affairs. In the past, institutions may have been able to address topics in health promotion in two or three years, but now it is necessary to expand this content as in most cases it is not comprehensive enough. The Ottawa Charter addresses more strategies and actions than are currently covered by South African institutions. Some activities that students are involved in do indicate that they are capable of playing their role in promoting health, however it seems that in many instances students are not aware of that role. For example, students do provide some training in their role of developing personal skills; however, this role is not always labelled in the particular activity.

As much as we advocate for academic personnel with postgraduate qualifications, most physiotherapists do not further their studies as master’s and doctoral qualifications in
the area of physiotherapy are not credited. This discourages individuals from studying further, hence the lack of understanding of health promotion by clinicians as highlighted by one of the respondents. Most physiotherapists work in the clinical arena; there are fewer physiotherapists in tertiary institutions which can accommodate only a certain number. The majority is happy with an undergraduate degree, however, because even if they obtain a master’s degree in physiotherapy, they will earn the same salary as other physiotherapists who do not have post-graduate qualifications.

Institutions have the opportunity to adopt and develop communities and this will enable students to acquire skills in aspects of advocacy, mediation and enabling. Training institutions rely too on the skills of physiotherapists in the clinical placement; hence, the support of the community of physiotherapy is critical in promoting active health promotion.

**Challenges**

The results highlight the challenges in the teaching of health promotion in physiotherapy, including a lack of interest in and understanding of health promotion among physiotherapists in clinical settings, as well as a lack of qualified physiotherapists in community settings. This has a direct and negative impact on students’ learning and hence what they learn in the practical setting is limited. In addition, the role of aspects such as mediation, advocacy and enabling could be successfully learnt in these settings if qualified physiotherapists understood their role and transferred their skills. These challenges are probably the result of the training received by clinicians and the clinical setting. The limitations of practice are a result of the limited number of physiotherapists who play their advocacy role in clinical settings. The roles of advocacy, mediation and enabling can only be fulfilled if the setting allows it and the leadership promotes it; regulatory bodies such as the HPCSA also have a role to play in influencing training of physiotherapists.

The lack of guidance from regulatory bodies such as the HPCSA and the Physiotherapy Society might also be contributing to these gaps. Physiotherapy as a profession must
respond to the current demands of the health care system and there is a need for physiotherapists to advocate for health promotion. The Physiotherapy Society must promote and guide post-graduate training in subjects related to health promotion and in their settings physiotherapists should be making a contribution to evidence-based health promotion. It is incumbent upon the current curricula to exercise a greater influence on training to ensure that the next generations of physiotherapists becomes sustainable in health promotion and contributes to providing skills to future students. Furthermore, the HPCSA also has a role to play in identifying the demand for physiotherapy in areas of public health and advocating this. As the demands of care change, so physiotherapists need to remain relevant in health promotion activities, as health promotion remains at the centre of health provision.

**Assessment of health promotion content**

The assessment of the content is made by various methods, one of which is assessing students' performance in the subject. However, because the objectives of the content are not always clear, it becomes difficult to assess when goals are not set prior to the training. Setting goals in advance is essential as it ensures that lecturers focus on the objectives of teaching the content, and this is reflected not only in the performance of students, but also in the projects they complete and their inclusion of all aspects of health promotion in these projects. Assessment is also made according to external reviews from similar institutions, which was not mentioned by any of the institutions in this study. This method addresses the element of consultation, which is important in improving a curriculum, but which is lacking at most institutions. Lecturers from other physiotherapy departments can make recommendations based on the students' performance in the subject. It is the norm for physiotherapy departments to invite lecturers from other universities when they conduct their practical examinations. The visiting lecturer may have higher expectations of the students based on what aspects of health promotion his or her curriculum includes as there is no uniformity in the curricula in this country. This may create imbalances when assessing students according to external views; however, currently assessment of content does not involve external examiners.
Another form of assessment takes the form of feedback given to students at the end of their blocks by their clinical placement supervisors. Written remarks on the feedbacks should be reviewed by the lecturing team in order to assess the strengths and weaknesses of students in the particular area. Students should also be given the opportunity to evaluate the subject in terms of the lecturers' sessions, the practical settings, the tutorials and the study materials, to give feedback that highlights the strengths and weaknesses of the course in contributing to the improvement of content.

At one of the institutions in the study, third-year students are involved in the assessment of posters and pamphlets made by the second years. The group that evaluates must have a good understanding of what the second years should know in order to assess them. The main objective of assessing the course is to improve the content, including teaching and clinical placement, that is, both academic and logistical processes.

**Practical aspects of health promotion**

Most of the activities in which students engage in the practical settings are limited to health education; there are few community development projects. This means that physiotherapy students promote health from one point of view only; they provide the knowledge needed for groups and communities to improve their health without providing the environment that is conducive to healthy choices. Thus one finds various groups of students visiting the same area and addressing the same health topics without addressing other determinants of health. By addressing issues that are related to community skills development, the information they impart becomes easier for communities to implement and sustain. Community needs assessment is an important determinant of health promotion, but one which is covered by only a few institutions. This means that students may address perceived needs rather than the needs of the community. In addition, repetition of projects occurs, which suggests a lack of progress in these projects and a failure to evaluate them.

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Physiotherapy students could also play a crucial role in referring patients to relevant structures; however, this was not indicated by the institutions. In addition, the period that students are placed in the community should be informed by the objectives of the content. In the findings of this study, one institution placed fourth-year students for a week while another placed them for five weeks. In other words, these two groups will not cover the same volume of work. At fourth-year level, one might expect students to be reasonably involved in the processes of mediation, advocacy and enabling, thus students should be in the placement for at least four to five weeks. Even if they do not see the results of their efforts themselves, the next group will be able to continue where they left off. If an institution has four groups of students in the same placement for five weeks at a time, the first group can initiate a process that can then be completed in a year by these groups. In this way, different groups of students are involved in various stages of the project. In addition, the focus on the higher levels of study needs grow from health education to the strategies included in the Ottawa Charter.

Institutions should address communities from different angles; if students tend to do the same things repeatedly it becomes easy for them to go through clinical blocks without any real challenges, as their classmates may tell them all they need to do in particular communities. In contrast, when projects change regularly students are more challenged and can explore other roles in health promotion. Multidisciplinary learning in the practical aspect also increases the awareness of skills development in the community. Community needs may vary and social aspects can be addressed by introducing activities such as gardening, which addresses physical activity. Dietetics students could focus on the importance of vegetables in the diet and physiotherapy students could teach back care during this activity. In this way, the dietician becomes more aware of the role of the physiotherapist and is able to identify the need to refer to physiotherapist.

Another aspect that was not mentioned was the benchmarking of students in clinical placement with students from other institutions. This might not be the case in health promotion activities, however, as students are placed mostly in communities where it is unlikely that they will encounter students from other institutions as they would in a
hospital, for instance. The benefit of such benchmarking is that students are able to transfer knowledge and expand their scope. One of the challenges that was mentioned was that students who are not supervised by qualified therapists are limited in their scope of learning, but by sending students from institutions to the same placement one increases their learning opportunity as they learn new things from other groups. Again, it must be remembered that as much as the objectives of the subject may not necessarily be the same for each institution, they should not be contradictory either. External examiners play a role in the practical examinations and this is another way of evaluating content. Students may be able to identify aspects that other students address and that they are less familiar with, and the university could work on improving this situation. Although mentioned by institutions, the extent of the evaluation of health projects is not known. Students should be able to evaluate the effectiveness of their interventions. Lastly, because the physiotherapy profession is governed by the HPCS A and the Physiotherapy Society, it is important that discrepancies in training and practice be reduced, as if there is no uniformity this may result in the negative labelling of universities.

Limitations

The limitations of the study were as follows:

- At one of the institutions the representative was a temporary replacement who was unsure of some of the curriculum content. Although he knew what was being taught, the information he provided was limited to the period that he was employed there.

- The study could have gone further and considered the content manual on health promotion to determine the extent to which each aspect was covered. This was, however, beyond the scope of this study.

- Students were not part of this study, although their understanding of the content would have helped the researcher to assess the perspectives they had of health promotion and its alignment with their role. This should be considered for future studies.

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Recommendations

The following recommendations were made:

Curriculum content

- A minimum requirement for content on health promotion in physiotherapy training should be set in terms of credits or percentages.

- The weighting of this content should also be informed by the literature and the current demands of physiotherapy. Most of the institutions estimated the weighting and hence this was not accurate; however, one institution was correct by weighting according to the number of credits the module carried in the overall curriculum.

- It is recommended that the physiotherapy society plays an active role in supporting the inclusion of health promotion in the curriculum. As the regulatory board, its input would guide the profession as far as the relevance of health promotion is concerned. The support of the professional board of physiotherapists in promoting health in the clinical setting is of utmost importance as it will encourage physiotherapists to be more involved in this area and will also provide a supportive environment for students’ learning.

- However, there is a need for a South African health promotion model in physiotherapy that can be used by all institutions to inform their curriculum content.

Curriculum review

- As the study highlighted the fact that there is no clear indication of the process and frequency of curriculum review it is recommended that health promotion content be routinely reviewed to improve training and to align the role of physiotherapy with the current demands of care.
• Institutions should consider consultations with related organisations, such as the Public Health Association of South Africa, to inform content on health promotion.

• The evaluation of the course should include students, clinical supervisors, external examiners and staff, in order to improve all aspects of the content

Clinical placements
• There is an opportunity for institutions to collaborate with clinical placements and communities in order to make the environment more conducive to learning. Some of the gaps that were identified were the knowledge of community rehabilitation workers. This knowledge could be used to the advantage of students as they could provide training in these areas and develop skills at the same time.

• There should a multi-disciplinary approach to teaching and practice at higher levels to facilitate learning and community development.

• The placement of students from different institutions in the same clinical settings would allow for benchmarking that would assist all institutions in improving the content and transfer skills.

Human resources
It is recommended that institutions and physiotherapy departments increase human resources in health promotion, perhaps at different levels of employment such as junior lecturers, clinical supervisors and part-time supervisors. This will ensure that, in the absence on course co-coordinators, learning is not disrupted. The advantage of having supervisors who are employed by the university is that objectives of the institutions are met and there is accountability, instead of relying on personnel who are not accountable to the institutions. This will also improve the interests and knowledge of students and supervisors, as the latter will strive to know more about the area and impart further knowledge to the former.
• Institutions must make it mandatory for lecturers to pursue post-graduate studies in the area and should also provide the necessary resources for the growth of the lecturer and the improvement of the content. Moreover, health promotion must be specifically mentioned in staff development and/or advertisements. This will compel academics to regard health promotion as an essential aspect of physiotherapy training.

Recommendations for future studies
• Future studies should assess the manual contents to determine the extent to which each aspect is covered and relate this to the practice of health promotion in physiotherapy.

• Students' perceptions of health promotion should be investigated.

Conclusion

The content dealing with health promotion in the undergraduate physiotherapy curriculum should be made more comprehensive by aligning teaching with the principles of the Ottawa Charter. Currently, all institutions are focused on health education while only a few concentrate on community needs assessment and development. The factors that contribute to the gaps in the curriculum which were identified by this study include a lack of curriculum review, a dearth of skills, qualifications and human resources and a lack of guidance from the regulatory bodies. The practical aspects of training pose greater challenges as the learning of the content seems to be limited to clinical settings. Training should place more emphasis on supervision, increased clinical settings, continuation of projects and greater duration of clinical blocks.
REFERENCES


APPENDICES

Appendix A: Health Promotion Checklist

Checklist for Health Promotion Content: Please use a cross to indicate the correct answer according to what is applicable to your university.

5.1 HEALTH PROMOTION INTERVENTION:

5.1.1 Conducting health promotion intervention

Yes | No

5.1.2 Educating patients and caregivers about prevention of disease and healthy lifestyle

Yes | No

5.1.3 Planning, organizing and evaluation of health promotion.

Yes | No

5.2 DEVELOP PERSONAL SKILLS:

5.2.1 Training family and caregivers to apply prevention measures

Yes | No

5.2.2 Training caregivers on role that they can play in the rehabilitation process

Yes | No

5.3 STRENGTHEN COMMUNITY ACTION:

5.3.1 Identify role players in communities to assist in intervention

Yes | No

5.3.1 Involve community to have ownership of their development

Yes | No
5.3.2 Advocacy for implementation of health promotion in the health as well as other sectors, as well as the reinforcements of partnerships, networks and alliances.

Yes | No

5.4 CREATING SUPPORTIVE ENVIRONMENTS:

5.4.1 Involving stakeholders in the community to support interventions

Yes | No

5.4.2 Identify community needs for interventions to be relevant

Yes | No

5.4.3 Improving health and wellness through community developments
Mobilize resources

Yes | No

5.5 RE-ORIENT HEALTH SERVICES:

Rehabilitate the patient within the community with available resources
Referral of patients to other health providers

Yes | No
Appendix B: Inventory

Please use a cross to indicate the correct answer according to what is applicable to your university.

1. Does your curriculum have Health Promotion content?

| Yes | No |

2. Which levels of study is health promotion taught? (Tick all applicable)

| 1st | 2nd | 3rd | 4th |

3. Aspect of health promotion included in the teaching

<table>
<thead>
<tr>
<th>Included</th>
<th>Not included</th>
</tr>
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<tbody>
<tr>
<td>Advocate</td>
<td></td>
</tr>
<tr>
<td>Mediate</td>
<td></td>
</tr>
<tr>
<td>Enable</td>
<td></td>
</tr>
</tbody>
</table>

4. Strategies of health promotion action included in teaching

<table>
<thead>
<tr>
<th>Included</th>
<th>Not included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop personal skills</td>
<td></td>
</tr>
<tr>
<td>Strengthen community action</td>
<td></td>
</tr>
<tr>
<td>Creating supportive environments</td>
<td></td>
</tr>
<tr>
<td>Re-orient health services</td>
<td></td>
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</tbody>
</table>

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5. Student involvement in communities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Involved</th>
<th>Not involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health screening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training caregivers</td>
<td></td>
<td></td>
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<tr>
<td>Needs assessments</td>
<td></td>
<td></td>
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<tr>
<td>Working with role players, e.g. family members</td>
<td></td>
<td></td>
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Appendix C: Interview Guide

1. Can you tell us about the curriculum changes effected in your department to integrate health promotion in your physiotherapy training? When were these changes made?
2. Does the department have a dedicated person who teaches health promotion and what skills does this person have?
3. What is the weighting of health promotion content in the whole curriculum?
4. At what level of study is it most logical to include health promotion to students?
   At what level is it most convenient?
5. What is the main focus in your teaching health promotion and what are the main aspects of health promotion that you cover in training?
6. From the inventory provided for this study, are there any aspects of health promotion that the school excluded, and what are the reasons for exclusion?
7. Practical aspect of health promotion:
   7.1 Are students exposed to the practical part of health promotion, and what kind of settings are students sent to and at what level of study?
8. What are the main activities that students are involved in at community level?
9. What challenges has the Department encountered in the integration of health promotion in the curriculum?
   9.1 Academic
   9.2 logistical
10. What would be your recommendations for improving the teaching of health promotion in physiotherapy training?
11. How is health promotion content assessed?
Appendix D: Participant Leaflet

Assessment of health Promotion content in undergraduate Physiotherapy curricula in South Africa

Dear Potential Respondent

My name is Koketso Phetlhe. I am a Student at the University of Limpopo, studying Masters of Public Health. I would like to conduct a Research study for my degree. In this study I would like to find out about the topics related to Health Promotion that are covered in the universities training Physiotherapy students. The results of the study can be used to benefit both the universities and the students. All the topics related to Health Promotion that are covered by the universities to train Physiotherapy students can be consolidated into one improved model that will be a contribution from all universities that can be used in training physiotherapy students in future. In this study there are no potential risks that may pose harm to the participants.

Furthermore Participation in this study is voluntary and all the participants have the right to withdraw from the study at any point. The results of the study may be published in professional journals or presented in meeting. However information obtained from the participants will be kept confidential. This study does not require you as the participants to pay any money and the Researcher will not pay participants to be part of the study. The study will require the participants to fill in a 2 page questionnaire (will take at most 15 minutes) and the research will also conduct a short interview (will take at most 1 hour). Before Participation in the study you will be asked to sign a consent form as proof of your agreement to be part of the study.

Thank you

Researcher: K. J Phetlhe

Signature:.............................  Date:.............................

For more information, please contact 0798443209.
Appendix E: Consent Form

UNIVERSITY OF LIMPOPO (Medunsa Campus) CONSENT FORM

Assessment of Health Promotion Content In Undergraduate Physiotherapy Curricula In South Africa

I have read the information on the aims and objectives of the proposed study and was provided the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized to participate in any way. I understand that participation in this Study is completely voluntary and that I may withdraw from it at any time and without supplying reasons. This will have no influence on the regular treatment that holds for my condition neither will it influence the care that I receive from my regular doctor.

I know that this Study has been approved by the Medunsa Campus Research and Ethics (MCREC), University of Limpopo (Medunsa Campus. I am fully aware that the results of this results of this Study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this Study

.................................................................  .................................................................
Name of patient/volunteer                                    Signature of patient or guardian.

Place.    Date.    Witness

Researcher: K.J Phetlhe
I provided verbal and written information regarding this Study

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I agree to answer any future questions concerning the Study as best as I am able. I will adhere to the approved protocol.

<table>
<thead>
<tr>
<th>Name of Researcher</th>
<th>Signature</th>
<th>Date</th>
<th>Place</th>
</tr>
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</table>
Appendix F: Permission Request Letter

Head of Department
Physiotherapy Department
Name of University

Dear Sir/ Madam

My name is Koketso Phetlhe. I am a Physiotherapist currently studying Masters of Public Health. I would like to do research in Health promotion, particularly in the curricula of undergraduate physiotherapy. The objective of my study is to assess the health promotion content in the curricula of undergraduate training; this is to give light as to whether what is covered in the institutions is in line with the Ottawa charter and is adequate to equip graduates in enabling them to respond to the health promotion needs in communities.

The study will require one participant from the Physiotherapy department who has knowledge of the health promotion content in the training. The data collection is divided into two sections, the participant will be asked to complete an inventory and a checklist and in the second part the Researcher will conduct a short interview based on the response of the checklist and inventory to probe more into the details of the Health promotion content. The result of the study will be made available to all institutions as they can be used to advocate for a uniform Health promotion model that can be used by all institutions. It will bring me great pleasure to be given this opportunity, which I will use not only to complete my studies, but to also give input in improving the training of our wonderful profession.

Hoping that my request will be granted.
Yours truly

K. J Phetlhe(Koketso)
UNIVERSITY OF LIMPOPO
Medunsna Campus

MEDUNSA RESEARCH & ETHICS COMMITTEE
CLEARANCE CERTIFICATE

MEETING: 04/2009

PROJECT NUMBER: MREC/PH/43/2009: PG

PROJECT:
Title: Assessment of health promotion content in undergraduate physiotherapy curricula in South Africa.

Researcher: Ms K Phejfe
Supervisor: Dr K Makwana
Department: Social and Behavioural Health Science
School: Public Health
Degree: MPH

DECISION OF THE COMMITTEE:
MREC approved the project.

DATE: 06 May 2009

PROF N EBRAHIM
DEPUTY 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.