

**HEALTH EDUCATION NEEDS AMONG INDIVIDUALS
WITH LOW BACK PAIN**

BY

JULIUS NYAGAH NG'UURAH



**A minithesis submitted in partial fulfilment of the
requirements for the degree of Masters of Science
(Physiotherapy) in the Department of Physiotherapy,
University of the Western Cape.**

Supervisor: Mrs. José Frantz

November 2004

KEY WORDS

PREVALENCE

LOW BACK PAIN

PATIENT-EDUCATION

MEDICAL MODEL

HEALTH PROMOTION

NEEDS

NAIROBI HOSPITAL

INFORMATION

PHYSIOTHERAPY

QUALITATIVE RESEARCH.



DECLARATION

I hereby declare that **“HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LOW BACK PAIN”** is my own work, that it has not been submitted for any other degree or examination in any other university, and that all the sources I have used or cited have been indicated and acknowledged by means of complete references.

Julius Nyagah Ng'uurah



Signature _____ dated 21st January 2005.

Witnesses: _____ dated 21st January 2005.

DEDICATION

To my wife Goretti who took care of the family while I was away. To our son Kimathi Jr. and our daughter Doreen for their obedience and hard work during my long absence from home. To you three, I am very grateful.



ACKNOWLEDGEMENTS

I would like to acknowledge and express my sincere gratitude to the following whose immense support and contributions made this thesis possible:

Heartfelt gratitude to the Almighty for granting me the strength and the will to persevere and to whom I am grateful for all the blessings and guidance all through.

To the board of management of the Nairobi Hospital for the financial support towards my study. The training and education committee of the Nairobi Hospital for approving my application towards this programme.

The Human Resource Department of the Nairobi Hospital for their support throughout my study period. I in particular appreciate the role played by Mrs. Sally Gitoho, the Human Resource Manager and the personal assistant to the Human Resource Manager Evelyne Wafula for their constant support.

My supervisor Mrs. José Frantz for her encouragement, guidance and patience. I particularly thank her for the academic guidance she offered during the entire duration of the project without showing any signs of fatigue despite the substantial workloads.

I am grateful to Prof. Nelek Bak, Prof. Andre Gouws, and Dr. Andrew Martin for the role each one of them played in the research especially on the Qualitative Research Methods.

To Dr. Ina Diener for introducing me to the programme, I am very grateful to you Dr. Ina.

Special thanks go to my family for allowing me pursue my goals when they needed me most and above all for their encouragement. I am very grateful to my parents, brother, sisters, uncles, aunts, nieces, nephews, in-laws, friends and colleagues for the role each one of them may have played at one stage or the other during my study period.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Many thanks go to my fellow students at U.W.C for their individual support. In particular Emma Mwangi who read my final proposal, Robert Wamurunga for the immense assistance with the computer technicalities and Karanja from the linguistic Department for reading my chapter five.

My colleagues at the Rehabilitation Unit for keeping in constant touch throughout the entire period and for their encouragement.

Finally I take this opportunity to thank the participants who took part in the long interviews despite their busy schedules. I am particularly grateful to them for allowing me into their world, to learn and to perceive as they perceive LBP problems without whose contributions, this thesis would not have seen the light of the day.



ABSTRACT

The prevalence of low back pain has assumed an upsurge trend in the last five decades despite the many interventional strategies. One interventional strategy that has been unsuccessful has been patient education. Lack of positive results from many of the existing patient education programmes is probably due to the type of health information that has been presented and the method that has been used. Many of the health education programmes have been planned according to what the medical professionals assumed the individuals' needed to know, assumptions that could have ignored some crucial aspects. Prior to the current study, no efforts had been made to identify the perceived health education needs among the individuals with low back pain at the Nairobi Hospital Rehabilitation Unit in Kenya. The study therefore explored the perceived health education needs of this group of individuals, the method used to educate the individuals, the appropriateness of the method according to the individuals in addition to identifying the source of the health education that the individuals had. The research design was located within a qualitative paradigm using semi-structured in depth interview schedules and one focus group discussion. Participants were individuals attending physiotherapy treatment as a result of a non-specific low back pain that was conservatively managed at the Rehabilitation Unit. A purposive sample was taken to select ten individuals for in depth interviews who also participated in the focus group discussion. All interviews were audio recorded, transcribed verbatim and thematically analysed. The study among other findings identified four main health education needs among the participants. Although most aspects expressed were not clinically related,

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

they required attention. The study in particular identified participants as deficient in knowledge in some aspects of low back pain, education as well as coping strategies. In addition, participants lacked appropriate support from important sources, while communication methods and skills among medical professionals were found to be unsuitable to the participants. To successfully address the needs and concerns of individuals with low back pain, a more all-encompassing model of health education was required that would present health education information on as many topics as possible. It is expected that, the insights gained from the study will be utilised in planning urgently a more patient-centred health education programme at the Nairobi Hospital Rehabilitation Unit so that, all those aspects and dimensions expressed by the participants are incorporated in the new health education programme for individuals with low back pain.



TABLE OF CONTENTS

TITLEPAGE	i
KEY WORDS	ii
DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
ABSTRACT	vii
TABLE OF CONTENTS	ix



CHAPTER ONE

INTRODUCTION

1.0	INTRODUCTION	16
1.1	BACKGROUND OF THE STUDY	16
1.2	STATEMENT OF THE PROBLEM	25
1.3	AIM OF THE STUDY	25
1.4	SPECIFIC OBJECTIVES	25
1.5	SIGNIFICANCE OF THE STUDY	26
1.6	DEFINITION OF TERMS	26

CHAPTER TWO

REVIEW OF LITERATURE

2.0	INTRODUCTION	28
2.1	HEALTH EDUCATION AND HEALTH PROMOTION	28
2.2	HEALTH SEEKING REASONS	32
2.3	COPING STRATEGIES	34
2.3.1	Fear-Avoidance Behaviours	36
2.3.2	Self-Efficacy and Counselling	38
2.4	COMMUNICATION METHODS AND EDUCATION CONTENT	39
2.5	COMMUNICATION SKILLS	41
2.6	HEALTH EDUCATION PROCESS	43
2.7	CONFLICTING HEALTH INFORMATION	44
2.8	ECONOMIC FACTORS	46
2.9	PATIENT-CENTRED CARE	48
2.10	SOCIAL SUPPORT AND USE OF HEALTH SERVICES	50
2.10.1	Structural Social Support in Health Service Utilisation	51
2.10.2	Functional Social Support in Health Service Utilisation	53
2.11	MEDICAL INSURANCE COVER	54

2.12	SUMMARY	57
-------------	----------------	-----------

CHAPTER THREE

METHODOLOGY

3.0	INTRODUCTION	58
3.1	METHODOLOGY	58
3.2	RESEARCH SETTING	59
3.3	INCLUSION CRITERIA	60
3.4	STUDY POPULATION AND SELECTION OF PARTICIPANTS	60
3.5	STUDY DESIGN	62
3.6	PILOT STUDY	63
3.7	DATA COLLECTION AND INSTRUMENTS	64
3.7.1	PROCEDURE	66
3.7.1.1	Face-to-Face Interviews	66
3.7.1.2	Focus Group Discussion	67
3.8	VALIDITY AND RELIABILITY	68
3.8.1	Credibility	68
3.8.2	Transferability	69
3.8.3	Dependability	70
3.8.4	Confirmability	70



3.9	DATA ANALYSIS	71
3.9.1	Procedure	71
3.10	ISSUES OF ETHICAL CONSIDERATIONS	74
3.11	REFLEXIVITY	75
3.12	SUMMARY	76

CHAPTER FOUR

RESULTS

4.0	INTRODUCTION	77
4.1	SOCIO-DEMOGRAPHIC CHARACTERISTICS	78
4.2	EXPRESSED HEALTH EDUCATION NEEDS	79
4.2.1	KNOWLEDGE	80
4.2.1.1	Knowledge on the Cause of LBP	80
4.2.1.2	Knowledge on the Diagnosis	80
4.2.1.3	Knowledge on Prognosis	81
4.2.2	EDUCATION	82
4.2.2.1	Education on Sex and LBP	82
4.2.2.2	Education on Exercise and Healthy Lifestyles	83
4.2.2.3	Education on Health Service Utilisation	84
4.2.2.4	Health Education Regarding Alternative Therapies	85
4.2.3	COPING STRATEGIES	85
4.2.3.1	Fear-Avoidance Behaviours	86

4.2.3.2	Self-Efficacy	86
4.2.3.3	Counselling and Psychological Support	87
4.2.4	SOCIAL SUPPORT	88
4.2.4.1	Family Support	89
4.2.4.2	Support at The Workplace	89
4.2.4.3	Social Systems and Structures	90
4.2.4.4	Medical Insurance Support	91
4.2.4.5	Work Related Issues	92
4.2.5	COMMUNICATION PROTOCOLS	93
4.2.5.1	Health Education Methods	93
4.2.5.2	Health Education Content	94
4.2.5.3	Health Education Progression	94
4.2.5.4	Source of Health Education	95
4.2.5.5	Conflicting Health Education Information	96
4.2.5.6	Communication Skills	97

CHAPTER FIVE

DISCUSSION

5.0	INTRODUCTION	99
5.1	SOCIO-DEMOGRAPHIC PROFILE	99
5.2	HEALTH EDUCATION NEEDS	100
5.2.1	LACK OF KNOWLEDGE	101
5.2.2	LACK OF EDUCATION	105

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

5.2.2.1	Lack of Education regarding Sex and LBP	105
5.2.2.2	Lack of Education on Exercise and Healthy Lifestyles	107
5.2.2.3	Lack of Education on use of Health Services	110
5.2.3	LACK OF COPING STRATEGIES	113
5.2.3.1	Fear-Avoidance Behaviours	115
5.2.3.2	Lack of Self-Efficacy	117
5.2.3.3	Lack of Counselling and Psychological Support	120
5.2.4	LACK OF SUPPORT	123
5.2.4.1	Lack of Social Support	124
5.2.4.2	Lack of Support from the Medical Insurance	126
5.2.4.3	Lack of Support from Work and Related Issues	129
5.2.5	LACK OF APPROPRIATE COMMUNICATION PROTOCOLS	132
5.2.5.1	Lack of Suitable Education Methods and Contents	132
5.2.5.2	Lack of Appropriate Communications Skills	137
5.2.5.3	Lack of Reliable Source of Health Education	140
5.2.5.4	Conflicting Health Education	141
5.3	LIMITATIONS OF THE STUDY	143
5.4	SUMMARY OF FINDINGS	143

CHAPTER SIX

SUMMARY, CONCLUSION, IMPLICATIONS, FURTHER RESEARCH AND RECOMMENDATIONS

6.0	INTRODUCTION	145
------------	---------------------	------------

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

6.1	SUMMARY	146
6.2	CONCLUSION	148
6.3	IMPLICATIONS	151
6.4	RECOMMENDATIONS	152
6.4.1	Future Research	152
6.4.2	Recommendations Based on the Findings	153
	REFERENCES	155
	APPENDICES	165



CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

The aim of this chapter is to provide background information that will shed light on the problem of the current health education needs among individuals with low back pain (LBP), including some important issues that need to be considered before implementing any health education programme for the individuals. The chapter will further justify the significance of the study with special emphasis as to why the study is essential. Finally the aim and the specific objectives of the study are clearly laid down.



1.1 BACKGROUND OF THE STUDY

Low back pain has been a widespread health problem for some time now (Granger, Lackner, Kulas & Rushell, 2003). The extensive prevalence of LBP is equally widely published and has not really reduced over the last five decades (Hult, 1954; Gyntelberg, 1974; Spitzer, 1987; Rosen, 1994; Papageorgiou, Croft, Ferry, Jayson & Silman, 1995). According to the authors, the prevalence during the last five decades from different societies has been constantly on the rise. In recent years though, LBP has become a considerable economic and a social burden universally (Spitzer, 1987; Rosen, 1994; Carey, Evans, Hadler, Kalsbeek, McLaughlin & Fryer, 1995). The increased prevalence in modern times has the epidemiological studies of different populations reveal current prevalence as

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

varying from 7.6% to 37% (Andersson, 1997; Borenstein, 1997). It is also estimated that, 50% to 80% of any given population as experiencing LBP at some time in their life (Kopeck & Esdale, 1998). In the United States alone for example, the prevalence is said to account for over 156 million lost working days along with 5.2 million people being disabled by LBP, of which 2.6 million is permanently disabled (Borenstein, 2000). In addition, other estimations show that, 5 million adults in the USA consult medical practitioners due to LBP every year (Maniadakis & Gray, 2000). This has led Waddell (1996) to declare the prevalence of people consulting medical practitioners with LBP as having increased so drastically in recent years that it has been referred to as a 'twentieth-century healthcare disaster'. In sub-Saharan Africa, hospital based statistics have revealed LBP as the main cause for 30% to 40% of visits to rheumatologists (Mijiyawa, Oniankitan, Kolani & Koriko (2000).



In addition to the high prevalence levels of LBP, successful management of the problem has been faced by considerable difficulties (Harland & Lavalley, 2003). Since LBP is a multifactorial phenomenon it is not surprising that many therapeutic efforts and approaches in its management exist (Mosley, 2002). These approaches and efforts however, have in most cases proven largely fruitless (Linton & van Tulder, 2001). In the light of this phenomenon, guidelines (protocols) have been developed to provide a template for a standard, more effective clinical practice in dealing with the problem (Li & Bombardier, 2001). The development of these guidelines started with the work of the Quebec Task Force on Spinal Disorders (Quebec Task Force on Spinal Disorders, 1987) that

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

was subsequently updated by multidisciplinary panels in the United States (Bigos, Bowyer & Brean, 1994). In the United Kingdom, the Clinical Guidelines for the management of Acute Low Back Pain (1996) and in the New Zealand, Guide to assessing Psychosocial Yellow Flags in Acute Low Back Pain, (New Zealand Guidelines Group Inc (1999) were formed to create the guidelines. The guidelines recommend patients' education as the way to limit LBP problems as experienced by the patients (Bigos et al., 1994).

Employing a health education approach in LBP management may however sound and appear surprising because for some time now, there has been a consensus that, there were no clinically significant achievements in health education programmes for individuals with LBP (Cohen, Frank, Bombardier, Peloso & Guillemin, 1994). Reviews on education-based back schools also appear convincing that no meaningful success could be realised through patient education (Koes, vanTulder, van derWindt & Bouter, 1994). However, latest evidence imply that, lack of any meaningful achievements among most health education programmes on LBP was probably due to the type of education that had been presented to patients (Mosley, 2002). According to the author, current health education may have failed to produce any positive effects due to the methods and contents that had been presented. This is because, the information presented has normally been planned without taking the views and contributions from the consumers of the health information on what they perceived as their health education needs (Glenton, 2002). For example, written patient health education has generally been based on the medical professionals' assumption of

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

what the individuals needed to know, assumptions that have been alleged to be incompatible with the individuals' needs (Axelsson, Nilsson & Coles, 1995; Coulter, Entwistle & Gilbert, 1998).

Moreover, medical professionals, physiotherapists included work principally within a biomedical paradigm, in which health is seen as an absence of disease and where affective or cognitive parameters of health are usually ignored (Richardson & Eastlake, 1994). This is typical of the Medical Model of Health Education approach which views LBP as a predicament of the individual, clearly caused by a disease, trauma or other health situation requiring therapeutic care provided in the form of the individual's treatment medically, surgically or physically by the professionals (WHO, 2001).



Furthermore, according to Bardin (2002), published research on LBP has similarly utilised a Biomedical Model and tissue dysfunction that focuses on disease and tissue pathology rather than on the illness or on the problems the individuals experience as they deal with LBP. The alleged link is characteristic of the Model of Assessment and Health Education, which view the cause as resulting or related to only the individual's wrong actions (Waddell, 1998). According to the Model, various factors have been acknowledged as precipitating LBP. These have been rigorously advanced and include physical factors, injury compensation, cumulative vertebrae loading, aging and lifestyles, occupation, marital status, education level, body structure, smoking, familial factors and static positions (Bergquist-Ullman & Larsson, 1997; Leboeuf-Yde, Lauritsen &

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Lauritzen, 1997). Although these factors may play some role in the development of LBP, they are singly incapable of sustaining LBP problem to the levels witnessed in modern times. Consequently, placing too much prominence on these factors disregarding other psychosocial factors may be a misplaced approach, not in the best interest of the individuals and may lead to poor treatment outcomes.

Furthermore, the World Health Organisation (2001) states that, by focusing health education efforts on biological causes for disease control separately merely leads to a 'maintenance' or 'restoration' approach to health, with no scope for improvement beyond the point of freedom from the disease. Indeed, Foster, Pincus, Underwood, Vogel, Breen & Harding (2003) are of the view that, the Pathoanatomical Model may be ineffective in addressing the individuals' health education needs when aspects leading to and complicating the problem are not isolated and minimised.

Moreover, Waddell (1996) views the development of LBP as an interaction of biological and social factors. He further considers psychological and psychosocial factors as participative in the production and sustenance of LBP complicating its management. These factors may include problems associated to the individual's emotional life, certain personal behaviours, relationships with colleagues at work, work related issues, social pressures and problems encountered while accessing health care (Richardson & Eastlake, 1994). The two authors further maintain that, inappropriate social systems, such as pathetic

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

infrastructure and lack of financial access as frequently defined negatively in the Biomedical Model. These factors furthermore tend to be ignored during health education programme planning and are subsequently grouped into a 'something else' category when nothing definite is found on examination and assessment of the problem (Thornquist, 1994). However, studies that have employed different approaches to educate the individuals such as those that emphasise on cognitive-behavioural (Burton, Waddell, Tillotson & Summerton, 1999), neurophysiological (Mosley, 2002) and psychosocial aspects (Mosley, 2002), have reported better education outcomes leading to reduced care utilisation, normalisation of pain cognitions and increased self-efficacy (Mosley, 2002). In view of the fact that a complex bio psychosocial situation exists in most LBP problems, a multifactorial model of illness was as a result principally relevant when addressing health education needs of individuals with LBP (Bardin, 2002).



Certainly, one of the vital challenges in the management of LBP is in gaining better understanding of the individuals' health education needs, and to use the information to assist health professionals plan and meet those needs during the implementation of any health education programme (Cherkin, 1998). After all, in a patient-centred health care, patients' needs are considered first and foremost at every point in the planning, implementation, and evaluation of service delivery (Thornquist, 1994). Patients are always said to be experts in their own personal circumstances and desires while their preferences guide every aspect of service delivery, from clinic hours of operation to counselling techniques asserts the author.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

To adequately address health education needs for individuals with LBP therefore, their needs must be realistically known by those delivering the education. The consumers' of the health education must be understood and views about their health education needs taken into consideration before any significant programmes are planned and commissioned. By identifying their views, needs and desires from the individuals, it is possible to realise a number of benefits in their management. These may include improved patient satisfaction, programme adherence, and reduced lawsuit risks among dissatisfied individuals (Levinson, 1994), improved treatment outcomes, decreased rates of re-hospitalisation, fewer complications and reduced costs on treatment (Payton, Nelson & Hobbs, 1998). Furthermore, patient-centered care has been an important component of the physiotherapist-patient interaction (Thornquist, 1994).

Meeting health education needs for this group of individuals has however, been an enormous obstacle and has been an area the individuals have frequently expressed dissatisfaction in due to the inadequate provision of the needed information (May, 2001). The lack of adequate provision of health information has been generally due to lack of appropriate ways of obtaining the individuals' views.

According to May (2001), over the last few decades for example, no signs of new trends to explore the views from the individuals so as to establish the best methods of getting their views in order to incorporate them in health education programmes. In a few studies concerning individuals' health education needs that have been attempted, the individuals' judgements were hardly ever used to

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

construct the dimensions investigated and generally it was the researchers who determined which aspects of care to be integrated into the studies (Wensing, Grol & Smits, 1994). In a study that directly sought to identify patients' information needs conducted in Norway by Glenton (2002), participants were interviewed long after completing their treatment sessions. The information that was volunteered therefore was based on memory, as participants did not experience the need as it unfolded.

Furthermore, when the individuals simply tick boxes in a questionnaire for example, which clinicians and researchers have designed, accurate views from the individuals may not be obtained (Wensing et al., 1994). Thus, when the tool produced to measure individuals' needs for health education is defined and created by the clinicians and researchers rather than expressed by the individuals' in their own terms and words, the end result may be distorted. The responses may basically duplicate the measuring instrument in use rather than reflecting the individuals' true concerns (Williams, 1994). Furthermore, Avis (1997) allege that, such tools may have led to some patients 'expressing' their needs but in unfamiliar medical terms with the results being influenced by the clinicians' and researchers inputs other than the individuals' true expressions. This has resulted in some general reports of overall patient satisfaction rates of as high as 90% (Williams, 1994).

To date, few studies on health education needs on LBP individuals have been conducted to explore areas of deficit or inappropriateness (Gahimer & Domholdt,

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

1996). This, the authors continue, has been in total disregard of the significance of health education within health care initiatives and the requirements on new physiotherapy graduates that they be conversant with patient health education practice. Literature search prior to the current study revealed no previous studies that had as their primary objective the identification of expressed health education needs among this group of individuals other than a study by Glenton (2002) that sought to identify patients' information needs. However, earlier studies among other disease groups indicated a person's stage of disease, age, socio-economic status, and education level as influencing their need for information (Harris, 1998).

In that regard, Coulter et al. (1998) view an effective patient health education program as planned and modelled according to the patients' expressed needs, easy to understand, responsive and able to take care of the individuals' desired medical, social, psychological and economical needs. Accordingly, to understand what the individuals considered as important in any aspect of the health care service, they must be asked directly. By asking the individuals directly, the dimensions that were key to the individuals would be established. The simplest method of determining the individuals' health education needs would therefore be to ask them openly about their health education needs during a consultation and to pursue those needs throughout their treatment period (Potter, Gordon & Hamer, 2003).

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

At the Nairobi Hospital Rehabilitation Unit, similar to other health facilities in Kenya, no efforts had earlier been made to explore the expressed health education needs of individuals with LBP other than through the standard hospital questionnaires. It was therefore essential to attempt and find out what the individuals with LBP perceived as their health education needs directly.

Consequently, the present study aimed to identify the expressed health education needs among the individuals with LBP at the Nairobi Hospital Rehabilitation Unit. It was anticipated that, the findings of the study would enable physiotherapists to recognise the needs from the individuals with LBP and apply the findings to develop a new health education programme at the Unit.

1.2 STATEMENT OF THE PROBLEM

Health education needs among individuals with LBP at the Nairobi Hospital Rehabilitation Unit had not been explored earlier. It was therefore essential to explore the expressed health education needs from the individuals with LBP directly.

1.3 AIM OF THE STUDY

The study aimed to explore the expressed health education needs among individuals with LBP at the Nairobi Hospital Rehabilitation Unit.

1.4 SPECIFIC OBJECTIVES

1.4.1 To identify the expressed health education needs among individuals with LBP at the Nairobi Hospital Rehabilitation Unit.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

1.4.2 To identify health education methods employed to educate the individuals as well as their appropriateness according to the individuals.

1.4.3 To establish the source of the health education that the individuals possessed.

1.5 SIGNIFICANCE OF THE STUDY

Current health education programmes at the Nairobi Hospital Rehabilitation Unit were planned and implemented by the medical professionals without the views from the consumers of the health education. Prior to the present study, the expressed health education needs among the individuals with LBP at the Nairobi Hospital Rehabilitation Unit were unknown. The findings of the study will therefore offer new insights on aspects that individuals with LBP distinguish as essential to them in during an episode of a LBP. Moreover, aspects and dimensions became known that needed to be addressed during health education sessions to the individuals. This will no doubt be of significance to clinicians in the physiotherapy discipline when planning health education programmes for the individuals with LBP in future.

1.6 DEFINITION OF TERMS

Health education.

Planned learning experience using a combination of methods such as demonstrations, dummies, pamphlets, sketches as well as counselling and behaviour modification techniques, which may influence patient's knowledge and

health out-comes (Bartlett, 1985). The concept stresses self-care rather than specialized care (Stuifbergen & Rogers, 1997).

Health education needs.

Health education needs are seen here as all those wishes for knowledge that arises as a result of a health problem (Glenton, 2002).

Low back pain.

The concept of 'low back pain' in this study refers to non-specific low back pain without a specified physical cause, e.g. nerve root compression (radicular syndrome) trauma, infection or tumour (Bekkering, Hendricks, Koes, Oostendorp, Ostelo, Thomassen & Van Tulder, 2003).



Medical model.

Health care delivery systems and structures created and based on the biological cause of disease as viewed and conceived by the medical professionals assumptions and believes (Glenton, 2002).

Medical professional.

Any person connected with the treatment of an illness and or injury with some skills acquired through training as a paid job (Oxford Advanced learner's dictionary, 2002).

Patient-centred model.

Health care delivery system based on patients expressed needs and pertains to the manipulations from the medical, social, economic, and environmental factors (Glenton, 2002).

CHAPTER TWO

REVIEW OF LITERATURE

2.0 INTRODUCTION

This chapter presents an overview of the literature on health education considered relevant to the current study. A high proportion of literature has focused on sustenance for LBP and issues affecting the dissemination of health education leading to non-adherence and compliance of health education. Due to literature paucity relevant to Kenya, the literature considered focuses on universal studies.

2.1 HEALTH EDUCATION AND HEALTH PROMOTION

The World Health Organisation (WHO, 2001) considers personal, family, the community, social, economic, and physical environments as among the factors capable of influencing negatively an individual's ability to cope with a health problem. The World Health Organisation further states that, these factors were capable of contributing to an increase in troublesome conditions such as LBP.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

However, many of the factors were capable of being modified. One way of modifying the factors according to Kim, Hayden & Mior (2004) was through health education. According to Battie, Cherkin, Dunn, Ciol & Wheeler (1994) the management that significantly involved health education was aimed to counteract those factors that could affect patients as they managed the pain. As a result, educational intercessions were expected to change behaviour, as well as tame the environment leading to lifestyle choices that maintained and promoted health (Napalkov, 1995). The education given was anticipated to provide patients with information that would assist in pain reduction, decrease in lost time from work and improve patient functioning. These intervention usually involved an intensive education component that focused on patients' understanding their health condition, understanding pain syndrome, identified and reduced stress factors along with recognising problem solving techniques around lifestyle issues (Claiborne, Vandenburg, Krause & Leung, 2002).

However, a certain degree of confusion about the intention and associations between health education and health promotion exists (Pitt-Brooke, Reid, Lockwood & Kerr, 1998). According to the authors, the techniques used to achieve these goals differ according to the perception and conceptualisation of the problems related to health behaviours by the medical professionals.

Health promotion covers a much wider scope, which includes health education, and encompasses other activities aimed at manipulating the physical and social environment of its target population (Pitt-Brooke et al., 1998). The authors further

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

argue that, to bring about change in the social environment, the methods of health promotion may include legislation, advocacy and lobbying, changing social norms and influencing the provision and distribution of both financial and service resources equitably. Sluijs (1991) defined health promotion as 'any planned measure', which promotes health or prevents disease, disability and premature death and encompass two major components of health promotion, namely, healthy public policy (which embrace a range of measures such as legislation, environmental modification and various fiscal interventions designed to make healthier choices easier) and health education. It appears that, the majority of physiotherapists are more engaged in health education rather than health promotion activities (Pitt-Brooke et al., 1998).

According to Sluijs (1991), health education has been viewed as a means of conveying a health message and the message accepted and acted upon by the intended individual. He further defined health education as teaching and providing information about illness; instructions on exercises, giving advice and information, general health education, counselling on stress related problems as well as improving coping styles as a way of taming social factors that affect individuals concerned. Therefore health education aims to influence health behaviours of individuals and groups as well as to address factors that influence these behaviours. These may include habits as well as choices about certain behaviour and actions in terms of prevention and treatment of illness (Baric, 1991). Klaber-Moffett (2002) additionally stresses the main aim of health

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

education as aiming at helping patients take control of their problem so that they may get back to their normal activities as well as reduce recurrence of the pain.

Fritz & George (2002) view patient education as aimed at dispelling misconceptions, which were likely to act as barriers to recovery such as fear-avoidance beliefs that tend to influence negatively on physical activity. The authors further clarify that, the misconceptions needed to be replaced with explanations that were credible and provided the patient with confidence to carry on with physical activities, work resumption, and healthy living.

Pitt-Brooke et al. (1998) has advanced three types of health education approaches that could be relevant for LBP individuals. The most extensive focused on instructions regarding the body and how to look after it. An improved knowledge regarding the working of the body would result in enhanced appreciation of the benefits of healthy behaviours and the possible consequences of engaging in unhealthy behaviours. The second type of health education according to the same authors concerned the provision of information about available health services such as physiotherapy and the reasonable use of the services and programmes. Once familiar about the health resources and programmes, the individuals should be encouraged to appropriately and timely use the health resources when required so as to assist control delay in service seeking. The third type concerned the wider environment and approached a social aspect of health education that took into consideration the social factors that could discourage the individuals from achieving the desired health goals. For

instance, inappropriate infrastructure, workplace related issues, social responsibilities, social support or lack of it, domestic concerns, economic impediments among others. These aspects and issues have occasionally been implicated as hindering individuals from accessing health care services including physiotherapy (Fritz & George, 2002). The third type of health education addresses the Pathoanatomical issues and views illness as a result of multidimensional factors that ought to be addressed to bring back and maintain good health.

In 2002, Klaber-Moffett argued health education as not only capable of building long term coping skills but also empowering individuals in overcoming the effects of the condition by increasing self-efficacy in dealing with the condition. Weeks, Brubaker, Bryrt, Davis, Hamann & Reagan (2002) perceive the role of health education as aiming at influencing patients' adherence to plan of care and self-management, which is a major principle in rehabilitation.

2.2 HEALTH SEEKING REASONS

It is well established that patients not only attend health care facilities for medication but also to gain an understanding about their health problem. For example, Bush, Cherkin & Barlow (1993), Von Korff & Saunders (1996) found that, one of the leading reasons patients consult medical professionals was to seek for information about their health problem and to get reassurance above anything else from the medical professionals. These reasons according to Bush

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

et al. (1993) were sensible and realistic needs, to learn about their health problem as well as what to expect, and what they could do about it.

Moreover, among all the variables examined including financial worries, in a study by Sofer & Walker (1994), lack of information and suitable explanation on the diagnosis was the best predictor of negative mood caused by the failure on the patients to understand the source of their health problem. In yet another study conducted by Skelton, Murphy & Murphy (1996) to gain patients views on back pain management in general practice and why they sought health services, dissatisfaction levels as high as 80% were noted and arose as a result of lack of adequate explanation on the diagnosis, cause and on how to self –manage with the pain (coping strategies). Furthermore, in a qualitative study on information needs of patients with LBP in Norway (Glenton, 2002), participants expressed the need to be explained about the diagnosis of their LBP as well as what caused it. These results were similar to the findings of an earlier study by Borkan, Reis, Hermoni & Biderman (1995) who had established that, among other things, patients wanted to be educated on the diagnosis and the cause of their problem. Deyo & Diehl (1986) had earlier on found that, the most frequently cited area of dissatisfaction by patients was inadequate explanation about their problem and poor understanding of what was wrong with them. Klaber-Moffett & Richardson (1997) also found out that, from the patients' point of view, the most important factor for a medical consultation in LBP was to get an adequate explanation of their symptoms, diagnosis and cause of the pain.

However, although patients may seek health services with an aim of getting an explanation about the cause and diagnosis of their problem, most LBP starts spontaneously. People often try to explain it by relating it to a particular event, but very little is understood about the cause (Burton, 1997). The author emphasises that, most frequently, LBP was not caused by a simple single incident but rather by accumulative strain, influenced by psychosocial factors. Studies have tried to examine various aspects for their potential value in identifying patients with LBP (Fritz & George, 2002), with most researchers establishing modest predictive values from patient characteristics, such as age, gender, or findings from clinical examinations (McIntosh, Frank & Hogg-Johnson, 2000; Werneke & Hart, 2001). Variables that have shown some strong ability to predict LBP and work related absence among LBP patients have generally been psychological in nature (Burton, Tillotson & Main, 1995). For example anxiety, depression, lack of adequate coping strategies, fear-avoidance beliefs and low health locus of control have been linked to LBP (Dionne, Koepsell & von Korff, 1997).

2.3 COPING STRATEGIES

The concept of health education emphasises self-care rather than expert care and promotes an active, independent approach toward health care, which is a key principle of rehabilitation (Stuifbergen & Rogers, 1997). It distinguishes from the more traditional instructive provision of advice while building on an individual's ability to cope with troublesome conditions (Klaber-Moffet, 2002).

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

When well developed, coping strategies are capable of guiding the individual successfully through the health condition.

Coping strategies have been classified according to whether they are attentional or avoidant (Soderlund & Lindberg, 2001). According to Suls and Fletcher (1985) attentional strategies focus directly on the source of pain and attempt to manage it while avoidant strategies include denial of pain sensation, distraction and attention-diversion. Suls & Fletcher (1985) further assert that, a coping strategy is adaptive or maladaptive depending on the internal factors of an individual, the nature of the pain problem and the specific situation factors. These may be well established within the individual and they may propel the individual to manage the problem sufficiently (Soderlund & Lindberg, 2001). However, when not well developed, the individual may be unable to manage the health problem such as LBP thus allowing it to reach the chronic stage (Zeidner & Saklofske, 1996). Situational factors may encompass a range of environmental factors that may include psychosocial as well as socio-economic. These factors are further viewed in relation to interactions between the person and the situation and how well the individual is able to counteract their effects (Zeidner & Saklofske, 1996). According to Holmes & Stevenson (1990), patients with pain of recent-onset adapt well when they employ avoidant coping strategies, while those in chronic pain adapt well in attentional coping styles. This may explain the reason most LBP individuals appear as seeking attention and recognition from their peers, such as employers, relatives, family, friends and colleagues.

2.3.1 Fear-Avoidance Behaviours

Evidence based guidelines in the United Kingdom, the United States and other countries emphasises on patients with uncomplicated LBP be discouraged from prescribed bed-rest as a form of management. They need to be encouraged to return to normal activities as soon as possible (Agency for Health Care Policy & Research, 1994; Royal College of General Practitioners, 1996). A systematic review of 16 RCTs (Randomised Controlled Trials) conducted by Waddell, Feder & Lewis (1997) confirmed that, advice to stay active and to continue usual activities as normal as possible produced faster recovery, faster return to work, less chronic disability, and fewer recurrent problems than did the traditional prescription of bed-rest. However, in 2002, Klaber-Moffett predicted a number of obstacles that needed to be conquered in order to persuade patients that returning to normal activities would be the best way of dealing with LBP predicament. Many of the obstacles were associated to beliefs and misunderstandings.

Researchers have also tried to examine the association of patient's beliefs about pain with treatment outcomes. For instance, Waddell, Feder, McIntosh, Lewis & Hutchinson (1996) found that, patients with chronic pain developed a set of negatively distorted thinking patterns that could adversely influence the response to pain treatment and rehabilitation. Such beliefs were based on fear of pain on any movement and that, pain signalled re-injury. Klaber-Moffett (2002) in her study on fear-avoidance behaviour on LBP, similarly established that, most LBP were as a result of accumulative strain influenced by psychosocial factors. These

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

factors had a tendency to obstruct individuals from not only attaining the desired health status but also in adhering to the prescribed health programmes and accessing the health services appropriately.

As Rainville, Ahern, Phalen, Childs & Southerland (1992) state, patients with chronic pain constantly associate physical activity with an increased level of pain. However, a study by the same authors found that, following an intensive rehabilitation programme on some patients who had declined any physical activity due to fear of pain, the physical capacity of these patients improved dramatically without any changes or increase in their pain ratings. Although these patients anticipated reaction in form of increased pain to the vigorous activity, the result did not match their expectation. In another large series of studies mainly on arthritis, self-management groups were found to be clinically successful when supplied with precise educational programmes that emphasised on the need to remain physically active by overcoming fear of pain (Lorig, 1995; Barlow, Turner & Wright, 1998a, 1998b, 1998c). In a similar study among LBP patients evaluated in the U.S, it was similarly established that, self-management through improved physical activity was effective in reducing LBP complaints and also reduced pain fears (Von Korff, Moore, Loring, Cherkin, Saunders, Gonzales, Laurent, Rutter & Comite, 1998).

Furthermore, literature advocates for the avoidance of the use of the terms that may seem to suggest to patients as too sick. Terms such as 'back injury' 'torn disc' when referring to LBP tend to encourage the fear and avoidance of

movement (Hadler, 1997) culminating in the withdrawal from physical activities. The individual may be afraid of movement that appears to reproduce the pain, associating it with further damage and preventing healing leading into the chronic stage of LBP. Recent research also indicate that, people who can overcome fear of movement and physical activity when suffering from LBP have better treatment outcomes and lead quality life despite the pain (Burton, Waddell, Tillotson & Summerton, 1999; Vlaeyen & Linton, 2000; Klaber-Moffett, Carr & Howarth, 2002).

2.3.2 Self-Efficacy and Counselling

Self-efficacy has a strong relationship with the proneness for behaviour change and the maintenance of that change (Taylor, 1995). It is considered a personal belief of how effectively one can cope with complicated circumstances. This belief, Taylor (1995) stresses is a key driving force and a source for appropriate action. For example, in daily life according to Bandura (1997), individuals consider circumstances that face them, consider possible and alternative course of action, judge their abilities to carry them out successfully, and estimate the results the actions are likely to produce in advance. Thus, persons with elevated self-efficacy expectations are more determined in difficult situations than those with low expectations the author declares. In this accord, patients with high-efficacy are able to demonstrate improved compliance with treatment recommendations during an episode of LBP regardless of the pain levels.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

In a broad review Jensen, Turner, Romano & Karoly (1991) found chronic pain patients such as those with LBP more strongly associated to maladaptive cognitions. They as well lacked coping styles, had low self-efficacy beliefs, and perceived control, than to either pain intensity or degree of pathology. Anderson and associates (Anderson, Dowds, Pelletz, Edwards & Peeters-As-dourian, 1995) in addition found that, chronic pain patients who had higher levels of self-efficacy as reporting less pain, had less daily interference due to the pain, greater perceived life control and higher activity levels. Moreover, Altmaier, Russell, Feng Kao, Lehmann & Weinstein (1993) in a six-month follow-up on patients with LBP established counselling as increasing self-efficacy in coping skills and that, the patients reported reduced pain. The authors in addition found the changes in self-efficacy during treatment as determining the individual's level of functioning. Thus, it could be clinically and economically valuable to advance patient's self-efficacy during the management of LBP through counselling and psychological support.

2.4 COMMUNICATION METHODS AND EDUCATION CONTENT

The effectiveness of self-management depends on the contents of the health education and the way in which it is delivered. Settings and other methods of teaching vary greatly (Van Tulder, Esmail, Bombardier & Koes, 2001). It is therefore not surprising that research has found varied outcomes for different health education programmes (Klaber-Moffett, 2002). However, according van Tulder, Koes & Bouter (1997); van Tulder et al. (2001) those methods thought to be most successful have been based in an occupational health setting.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Furthermore according to Symonds, Burton, Tillotson & Main (1995), since communication methods vary among institutions, their effectiveness also depends on the targeted population. For the more literate, written communication methods produce better effects as compared to verbal communication as it helps build personal motivation (Dolce, 1987). Among programmes that have utilised various methods of patient education, written communication with some graphics was rated highest the same author reports. Symonds et al. (1995) for instance, tested a simple pamphlet based on fear-avoidance that stressed on the advantages of being a 'coper' rather than an 'avoider'. They found out that, simple pamphlet information followed by a telephone call to check on whether individuals were following the prescribed programme; those with the pamphlet were found to manage better than those without.



In yet another controlled trial of industrial workers to test the effectiveness of a booklet based information among those with and without LBP, the pamphlet created a positive shift in beliefs and reduced the amount of extended work loss caused by LBP (Burton et al., 1999). The improved results were due to the fact that individuals were encouraged to be actively involved in their management through the booklet. Consequently, self-efficacy was found to be enhanced when an individual believes that the progress achieved was due to his own efforts (Dolce, 1987).

The content of health education is fundamental in encouraging patients to adhere to health programmes. For example, in 2000, Gifford found in his study that,

effective patient education were those based on and adopted a multimodal, bio-psychosocial approaches in counteracting the effects of LBP on the individual. Previously, Harding & Williams (1995) had established a need for advocating and embracing cognitive behavioural interventions during patient education, which had been found to be successful in the treatment of LBP. Similar findings were later established by the studies conducted by van Tulder et al. (2001); Glenton (2002) among LBP sufferers.

2.5 COMMUNICATION SKILLS

The Medical Explanatory Model relies on the technical knowledge and terms of the medical professionals. The Model according to Dekkers (1998) is based on the professional training curriculum versus lay language and views illnesses as resulting from an internal derangement that requires a medical professional intervention to rectify. The medical professional training utilises the Model and apply terms that most physiotherapists and other medical professionals may be incapable in explaining in layman's language. According to Dekkers (1998), evidence from recent studies indicate physiotherapists as frequently using the Medical Explanatory Models of health education based on the principles about the internal conditions of the body.

However, majority of patient population in spite of their level of academic education wish for health care information that is easy to understand (Davis, Bocchini & Fredrickson, 1996). Nonetheless, verbal health education from doctors, nurses, and physiotherapists has been noted to be often complicated to

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

a large number of non-medical people including patients (Davis et al., 1996). For example, in a study to establish decision-making and management among patients, Payton, Nelson & Hobbs (1998) found that, although half of the participants in that study wished to be involved directly in their treatment and decision making, only one in every four reported knew how. The researchers established that, lack of knowledge on how to be involved arose from lack of appropriate communication methods and skills among the medical professionals to the participants, a problem of lay versus professional language. This was further established as lack of suitable communication skills among the medical professionals who were incapable of employing appropriate language to their patients (Glenton, 2002).



When communication methods are applied appropriately there were positive results. For example, in LBP patients in Dekkers' (1998) and Glenton (2002) studies made use of Explanatory Models but placed LBP pain in a larger context that were familiar to the participants, referring to external factors such as environmental conditions, work-related issues, economic factors, social systems and specific events or aspects of their work or spare time. The individuals in the study were therefore able to comprehend the issues in the larger context due to the language used.

Research has also revealed the importance of explanatory variables as differing on the basis of whether people are initiating or maintaining health behaviours as determined by the stage of health behaviour (precontemplation, contemplation,

preparation, action or maintenance) according to Prochaska & Velicer (1997). The language employed tends to differ among groups depending on the stage of health the individuals are. Those in the chronic stage of a condition the authors asserts, may get familiar to most of the technical terms used by the medical professionals unlike those who may be in their early stages of the problem.

One way that an organization could impact health literacy among its clientele was to create easy-to-read materials using simple language (Centre for Health Care Strategies, 1998). The Principles for clear health communication provide guidelines for creating straightforward easy to comprehend education materials for patient education that take more accessible methods of education. These according to Centre for Health Care Strategies (1998); Doak & Doak (2002) may include using simple to follow layouts and simple pictures and writing information at an appropriate reading level. Replacing complicated medical or technical words with plain language using pictures and diagrams that clarify written concepts. Focusing materials on desired behaviour rather than on medical facts as well as making information culturally sensitive and personally relevant among the targeted population (Centre for Health Care Strategies, 1998).

2.6 HEALTH EDUCATION PROCESS

The method, content as well as the timing of health education can affect health education programme outcomes not only among LBP patients but also on the entire patient population Sluijs (1991); Sluijs, van der Zee & Kok (1993); Gahimer & Domholdt (1996). For example, in the study conducted by Sluijs (1991) and

Sluijs et al. (1993) found that physiotherapists concentrated their education efforts in the first few sessions of a course of treatment. Physiotherapists were moreover found to plan patient health education activities informally. The authors realised that, apart from the manner and quantity of education offered, the way in which it was given was vital. Van Campen & Sluijs (1989) had earlier established through a systematic review spanning over a decade that, the quantity and quality aspects of health education as capable of contributing to patients' satisfaction with the therapy, remembrance, and compliance leading to better treatment outcomes. In the same studies, van Campen & Sluijs (1989); Sluijs (1991); Sluijs et al. (1993); Gahimer & Domholdt (1996), additionally found that most physiotherapists concentrated their educational efforts in the areas relating to sickness, and exercises. The studies further exposed physiotherapists as providing little education in the aspects of stress counselling and psychological support to the patients. From the studies, manifestation of the physiotherapists as not planning or implementing patient education activities throughout the entire period of treatment was established for the number of patient education statements declined significantly throughout the course of treatment, which may have affected health education unfavourably.

2.7 CONFLICTING HEALTH INFORMATION

According to Bragem & Gihle (2001); Jadad & Gagliardi (1998) individuals with LBP may often consult a number of different health care providers who may include physiotherapists, chiropractors, acupuncturist, general Practitioners and rehabilitation units. According to Jadad & Gagliardi (1998), the information about

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

health and health behaviours from many of these sources may vary depending on the speciality of the medical professionals consulted and medical examination subjected to and may therefore conflict. The treatment may not be well coordinated and the given conflicting advice may be difficult to dispel from the patients.

In a study by Stuijbergen & Rogers (1997) among individuals with chronic disabilities, some participants in their approaches for help to cope with their health problems reported to have followed the recommendations from friends and relatives. However, the type of advice from some of the sources regularly may be irrational and may be conflicting, confusing the already apprehensive patients. As such, (Tabatabai, 1998) is of the opinion that, critical thinking skills may be required especially for processing such information along with making decisions about participating in health behaviours and for considering the contradictory nature of such information among patients. According to the author, patients are encouraged to think critically about the availed health information. This includes recognising and considering the importance and the advantages of participating in the health behaviours as well as considering alternatives to participating before making decision about participating in a particular health behaviour (Settersten & Lauer, 2004). In a study to examine the relation between critical thinking and participation in health behaviours among the general population, Settersten & Lauer (2004), established critical thinking skills could probably be used to initiate some health behaviours but not to maintain them especially when confronted with conflicting information. The skills may

embrace recognising that an issue exists, analysing the information presented (including assumptions and evidence) related to the issue. Alternatives related to the issue are then considered and conclusions drawn about the issue and explaining the justification for such conclusions (Settersten & Lauver, 2004).

Interventions aimed to improve in general critical thinking skills have been found to be very successful among nursing and social work students and can be applied to patients with LBP (Huff, 2000). Therefore, the skills could be used even in patients' management more so where an issue of conflicting information exists. According to Settersten & Lauver (2004) if physiotherapists could help build the process of critical thinking in relation to participation in health behaviours among patients especially where conflicting health information exists, then patients may be encouraged to choose knowingly to participate in more appropriate health behaviours more frequently.

2.8 ECONOMIC FACTORS

The economic impact of LBP on an individual is substantial. For instance, in a study by Fritz & George (2002) albeit the relatively low incidences of prolonged work absence in patients with LBP in that study, the economic impact was found to be considerable. The study found among other issues that, absence from work had severe financial consequences that lead to a cumulative effect on the individual and the family. In addition, a history of LBP sickness and an absence from work are said to hinder an individual's efforts to find new employment with different employers. This according to Feyer, Williamson, Mandryk, de-Silva &

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Healy (1992) destroys one's future career prospects and a source of income. Furthermore, most LBP are known to reoccur, which when coupled with high prevalence levels, lead to high health bills with serious budgetary implications on most health department affecting other sectors of the society and the economy in most countries (Feyer et al., 1992).

Stress single-handedly emanating from lost earning and direct medical expenditure on LBP to the individual has also been found to have an adverse effect on the recovery according to Painting, Favarin & Swales (1998). In deed, as a result of the high economic cost on LBP, Feyer et al. (1992) found psychological dysfunction including depression as frequent among those patients who were absent from work but not significant in sufferers who remained working despite the LBP. Rosen (1994) therefore has recommended to medical professionals to be more aggressively involved in advocating for patients return to work as a way of reducing the economic burden due to lost earning and as a way of minimising stress among LBP sufferers. The author further suggested that, medical professionals influence the individuals suffering from LBP that it was in their interest to return to work as a way of reducing financial loss and in boosting self-efficacy. A study by Spitzer (1987) also established that, a return to work was a vital outcome measure for patients with LBP. This was due to its adverse impact on quality of life resulting from economic loss among such individuals both from direct medical costs as well as lost earning.

2.9 PATIENT-CENTRED CARE

Patient-centred care symbolises a partnership between the physiotherapist and the patient about health care and the various options the healing process involves (Wilkins, Pollock, Rochon & Law, 2001). It is assumed that patients have rights to achieve full quality of life that they desire, deserve and that, only patients have the ability to know precisely what was right and/or desirable for them (Wilkins et al., 2001). The physiotherapist may have greater knowledge and technical expertise regarding many medical issues. However, a physiotherapist should not attempt to make critical decisions regarding choices among various health education needs for the patient (Coulter et al., 1998). First the physiotherapists according to the authors should understand what outcomes are wished by the patients involved in making these choices and what hinders them from achieving the outcomes they wish to achieve. After all, a patient-centred health education aims at patients' articulated needs; it is friendly and purposeful (Coulter et al., 1998). According to Payton et al. (1998), involving patients in formulating health education programmes produces greater contentment, compliance, less apprehension and better outcomes. Glenton (2002) views Patient-centered approach as based on a solid perception of patients' requirements, well expressed and not on the physiotherapist's experience.

However, Wilkins et al. (2001) recognised many barriers as existing in patient-centred practice, which they grouped into: clinician barriers, patients' barriers, patient-clinician relationship barriers and contextual or environmental barriers. They found for example, the clinician barriers as relating to perception of patients

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

safety such as advising against resuming normal activities early due to pain, lack of clinician confidence and values due to lack of professional exposure and experience. Patients' barriers as stated by the three authors, consisted of issues related to social environment (work related, health plans and the general social structures), family as well as the level of education. Patients-clinician relationship barriers were often related to expectations placed on the relationship by either party or past experiences with the health care facility. Environmental barriers related to time pressures that clinicians experienced, the approaches used by other team members and the philosophy of the health facility. The cost element (such as lack of economic capacity of the patient) within the health facility was additionally termed as capable of hindering the implementation in addition to the effectiveness of the intended patient-centred care.



Fortunately, some authors have provided some insights on how such barriers may be resolved depending on the organization and the health facility (Baum, 1998; Sumsion & Smyth, 2000). According to Sumsion & Smyth (2000), resolving some of the above barriers include interview techniques first using a disease-centered approach and then using a patient-centered approach. Other methods of resolving therapist barriers were management and peer support and the second involved staff training in client-centered practice. In general most methods to resolve therapist barriers concentrated on education of the therapists.

2.10 SOCIAL SUPPORT AND USE OF HEALTH SERVICES

According to Lee, Arozullahb & Choc (2004), individuals are social players, existing in social environments that contain different degrees of support and resources. Lepore, Evans & Schneider (1991) described the concept of social support as resources provided by a network of individuals, institutions, policies and social groups. Literature however, suggests that, social support may have both direct effects (support improves health irrespective of literacy level) and moderating effects (support buffers the negative impact of literacy on health) on health status and health service utilisation (Antonucci, Ajrouch & Janevic, 2003).

Low health literacy may have unfavourable health effects and may limit individuals from social support and other resources that people utilise when encountered by a health problem (Lee et al., 2004). For instance, on average 9%–12% of adults received plenty of help from family members and friends with written information and filling out difficult medical forms in a study conducted by (Kirsch, Jungeblat, Jenkins & Kolstad, 1993). A substantial proportion of the respondents (23%–25%) in the lowest level of literacy reported getting the same kind of assistance from others according to the same authors. Social support and resources, when availed would be particularly significant to those with low health literacy in facilitating the establishment of healthful attitudes and behaviour, increasing the use of preventive and routine medical visits, improving health status, and reducing the amount of costly, intensive treatment and hospital care (Antonucci et al., 2003). Conversely, lack of social support may intensify the adverse health situations of individuals with lower health literacy because they

are more vulnerable than those with higher health literacy (Lee et al., 2004). According to Lin, & Ensel (1999), two aspects of social support systems exist, structural and functional.

2.10.1 Structural Social Support in Health Service Utilisation

An individual's structural social dimension refers to the location within the social structure such as participation in community organisations, maintenance of social contacts, and engagement in close social networks (Lee et al., 2004). Such structural positions may increase the possibility of accessing support and resources that in turn may provide the protective responsibilities against unfavourable life conditions (Boaz & Hu, 1997). According to the authors, one way by which structural positions could shield the negative impact on health is information transmission, particularly through contacts in an individual's close networks. These contacts are such as the immediate family, relatives; people with a similar problem or friends who are often the first source people consult regarding health concerns. In a study by Verbrugge & Ascione (1987) for example, on health in Detroit, it was found that, about half the time, people responded to their health problems by talking with their families, relatives, or friends within certain support groups. In addition, in a study of Puerto-Ricans in a small town, sick persons with effective networks of relatives received a great deal of substantial assistance in selecting, consulting and accessing health care institutional resources (Schensul & Schensul, 1982). Further evidence of such protective effects of structural support came from a study on women's awareness of and attitudes towards hormone replacement therapy. The findings from the

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

study found that, apart from doctors and the media, friends with similar problems were important sources of information that promoted women's awareness of the therapy (Lydakis, Kerr, Hutchings & Lip, 1998).

Studies have also shown that care-seeking behaviour is constrained by an individual's socio-psychological circumstances (Alonzo & Reynolds, 1998). Low health literacy, the stigma and shame connected with limited ability to understand may prevent individuals from communicating their physical discomforts and obtaining timely, appropriate health information when not encouraged through social support groups Nurss (1998). Furthermore, a sense of belonging and being supported originating from participation in social groups such as back support groups may enable an individual to face stressful situations that would otherwise seem overwhelming more appropriately (Holahan, Moos & Bonin, 1997).

Eventually, structural support may compensate for the negative impact of low health literacy by forcing individuals to behave in accordance with the health norms and standards of a social group they identify with (Ali, 2002). According to this author, repeatedly, people acquire healthful behaviour from others, with or without being aware of where they learned the behaviour. Furthermore, people in close networks within such groups and friends may serve as the alternative decision makers for an individual assuming the primary responsibility and forcing the individual to seek health care and adhere to the recommended health programmes (Levine & Zuckerman, 1999). In deed, according to these authors, the adverse effects of low health literacy on health status and utilization of health

services will be greater among people with less structural social support as compared to those with greater structural social support. Such interactive adverse effects are mediated through disease and self-care knowledge, health risk behaviour, use of preventive and routine physician care, and compliance with treatment regimes (Ali, 2002).

2.10.2 Functional Social Support in Health Service Utilisation

The functional aspect of social support embrace communication and transaction activities that offer a variety of emotional, informational, and tangible needs, all of which link to ideas of information, uncertainty reduction, and personal control (Lin, & Ensel, 1999). Emotional support promotes feelings of self-esteem and self-confidence that facilitate one to accept and effectively cope with individual limitations and their adverse consequences (Holahan, Moos & Bonin, 1997). For instance, while studying a group of adolescents with diabetes, La Greca, Auslander, Greco, Spetter & Fisher (1995) found that, emotional support from family and friends improved patients' adjustment to diabetes.

Antonucci (2001) further states that, informational support could also assist people, especially those with low health literacy in accessing and understanding medical conditions. The person's literate ability may not be altered by informational support; nonetheless, such support is potentially powerful in lessening the negative impact of low health literacy (La Greca et al., 1995). Useful information also helps to reduce uncertainty, thus providing a personal sense of control or mastery over individual health problems (Antonucci, 2001).

Concrete support from social networks may help those with low health literacy by reducing the stress of dealing with the health care systems (Kawachi & Berkman, 2001). For individuals with low health literacy, difficulties in communicating with health professionals may prevent them from accessing primary care, leading to poor health status and increased use of needless health services and preventable hospitalisations (Kawachi & Berkman, 2001).

Tangible support, such as having someone insist on or take the person for treatment, may overcome certain limitations of low health literacy (Gotay & Wilson, 1998). According to the authors, similar to the structural aspect of social support, functional elements of support may interrelate with health literacy in influencing an individual's health knowledge, health behaviour, health status, and use of health services. The adverse effects of low health literacy on health status and utilisation of health care services will be greater among people with less functional social support compared with those who have greater functional social support. Furthermore, such interactive effects are mediated through disease and self-care knowledge, health risk behaviour, use of anticipatory and routine medical care, and compliance with treatment programmes (Gotay & Wilson, 1998).

2.11 MEDICAL INSURANCE COVER

Barriers to health care services are many, however one of the major barriers to health care is lack of health insurance. For example, in the United States alone, more than 44 million individuals are reported to be lacking health insurance cover

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

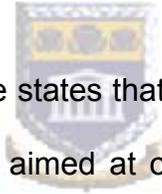
(United States Department of Health & Human Services, 2000). According to the Department, these are groups of people who live in a variety of communities and commonly have limited access to health care due to lack of health insurance and low incomes. This medically uninsured population often seek health care for immediate health concerns leading to disjointed health care, with little focus on health promotion activities, and under identification of chronic health conditions such as LBP (Kessler & Alverson, 2003).

According to the Bureau of Census (1998), the uninsured include individuals and families who are unemployed or working part-time or full-time in minimum wage jobs that do not incorporate health insurance benefits. These two groups are often identified as “the working poor.” Over one-half of uninsured families in the United States have incomes of less than 200% of the federal poverty level (Bureau of Census, 1998). These families cannot find the money for the costs of health care. As reported by the Bureau, other individuals have health insurance but lack adequate coverage to meet all the services needed or do not have the financial resources to cover services out-side an insurance plan. However, it is not known whether these individuals are unable to or are unwilling to obtain coverage due to the high cost of the premiums but all these factors relate to lack of health insurance limit access to health care (Gotay & Wilson, 1998).

When individuals and families lack health insurance, they are less likely to have a primary care provider and are less likely to receive preventative care services (Himmelstein & Woolhandler, 1995). The authors further elaborate that, lack of a

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

health care provider and sickness prevention as resulting in fragmented care and less focus on health promotion activities to maintain health status. When the uninsured do present for health services, they occasionally have more severe health problems that require emergency and much more complicated procedures (Davis, Rowland, Altman, Collins & Morris, 1995; Orne, Fishman, Manka & Pagnozzi, 2000). Furthermore, in the United States, adults with health insurance are twice as likely to receive a regular check-up, as are adults without health insurance (American College of Physicians, 1999). With limited access to health care services, underserved adults are more likely not to adhere to health preventive measures. They are three times more likely to delay seeking health care than those with coverage according to the physician's report.



Kessler & Alverson (2003) hence states that, the main goal of health care for the medically uninsured are usually aimed at offering a holistic approach to health services. This means that the patient's immediate medical concerns are addressed in the context of overall health status. The two authors recommend that, a well-managed health facility should represent an ideal setting for holistic care that emphasise on health promotion activities while meeting the immediate medical needs of clients.

Several immediate medical conditions and pain concerns are identified throughout the literature as prevalent among the un-insured just as in any other population. For instance, in a study by Kessler & Alverson (2003), regarding health education needs of the medically un-insured, they established that, holistic

approaches to health services that included the provision of the needed teaching materials, served to meet the needs of those patients. It was in addition imperative to first focus on the immediate health needs of those who lacked access to health care and then move to the promotion of healthier lifestyles (Orne et al., 2000). Health education needs of these individuals were better served by offering a variety of teaching methods that engaged the underserved and uninsured in their own care and health promotion (Kessler & Alverson, 2003).

2.12 SUMMARY

This chapter looked at different aspects that could influence low back pain negatively focusing on what could be incorporated in an effective health education programme for the individuals. The main dimensions were highlighted and what past research has shown to be important while planning a health education programme for the individuals with low back pain. More importantly, literature suggests that aspects that are crucial for a successful implementation of a health education programme for LBP are multidimensional in nature. The next chapter will present the methodology through which the health education needs among the individuals with LBP will be identified.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

The purpose of this chapter is to provide a comprehensive exposition of the research process. The process of the research shapes the layout of the entire chapter by addressing at the beginning the theoretical approach underpinning this process in order to provide a justification for the chosen methods. Thereafter, an attempt to explain the methods employed is made, providing a description that is interesting and dynamic rather than simply scientific. It is anticipated that, the representation shall communicate the humanity of the participants and therefore give shape and form to their individual subjectivity.

3.1 METHODOLOGY

A qualitative approach was adopted, specifically employing a thematic analytic method of data analysis. By adapting this method, a greater depth and breadth of understanding the participants' health education needs could be achieved. An advantage of this approach was the ability to place participants' needs within a specified perspective. The qualitative paradigm was moreover suitable since it sought to search the individuals' responsiveness and perceptions on the phenomenon under investigation.

However, whereas qualitative research methodology has been criticised by many for the subjectivity inherent therein, it is this exceptional subjectivity that is the core focus of the study. The strength of qualitative research lies in the capacity thereof to access subjectivities and so express a sense of the individual within the participant (Parker, 1994). An attempt has been made to tap that strength

and so present individual subjective expressions among the participants who had LBP.

Qualitative research has been criticised for the inherent subjectivity of the researcher. However, as the researcher, he does not attempt to deny this subjectivity, on the contrary this was seen as a contribution to this research. The inherent influence of the researcher's subjective experience on LBP as a physiotherapist will be acknowledged in the reflexivity section. Furthermore, validity in qualitative research is not as a result of indifference, but of the researcher's honesty, of which the researcher appreciated.

3.2 RESEARCH SETTING

The study was undertaken at the Nairobi Hospital Rehabilitation Unit where the researcher was a physiotherapist. The Hospital is a private premier health care facility with a multidisciplinary rehabilitation unit. Patients are attended to on request from the medical consultants, insurance firms and from the Managed Health Care Organisations (HMOs). Self-referrals are rarely accepted. Five physiotherapy treatment sessions are usually administered on average before a progress review on a patient is undertaken for further advice and management. The hospital is based in Kenya's capital and serves as a leading regional referral health facility for the East and Central African region. One of the frequent conditions treated at the Unit by physiotherapists is LBP, which account for approximately 30% to 40% of the total number of out patients at the Unit. By conducting the research at the hospital, education needs among individuals of

different nationalities would be captured. Additionally, the hospital has the capacity to develop a fitting health education programme as desired by those attending the facility unlike the under funded public health institutions. Part of the physiotherapy management is educating the individuals on back care. Nonetheless, the education programme in place was developed exclusive of the inputs from the users of the information. It was therefore vital to determine the users health education needs from them directly. Based on the findings of the study, the researcher plans to develop a health education programme for the individuals with LBP at the Unit.

3.3 INCLUSION CRITERIA

Inclusion criteria for the study were that, individuals should have been adults of whichever age, but capable of expressing themselves in Swahili, English or both in addition to possessing communicative proficiency. Furthermore, the individuals should have received a minimum of four physiotherapy treatment sessions at the Unit so as to capture those who had been educated. They ought to have been attending physiotherapy treatment in the months of November 2003 to January 2004 due to a non-specific LBP conservatively managed as described by their medical referral so as to capture education needs as they arose.

3.4 STUDY POPULATION AND SELECTION OF PARTICIPANTS

Lincoln & Guba (1985) recommended that, the sample size be big enough to allow sufficient amount and range of information, and that, saturation was said to arise when interviews no longer brought in new information that could influence the

already collected information. Saturation could therefore be achieved with ten participants (McCracken, 1988).

Recruitment of participants took place in liaison with the members of the Rehabilitation Unit. The members provided research participants with information about the study and enquired whether they were willing to be contacted by the researcher. When an individual agreed, the team member relayed this information and the researcher telephoned the individual to discuss the study as the researcher determined the suitability of the individual for the study. A short assessment was used to obtain expressive abilities about the participant using closed or short answer questions, describe the participants and analyse the data (McCracken, 1988).



A purposive sampling method was then applied to select suitable participants based on the inclusion criteria. According to De Vos (2002), purposive sampling method is based on the judgement of the researcher, in that, a sample is made of elements that embrace the most characteristic, representative or typical attributes of the population to be studied. Purposive sampling is used in special situations in which a researcher selects unique cases that are especially informative for in-depth investigations (Armitage & Berry, 1996).

When an individual indicated an interest in participating, the researcher established a time for meeting before scheduling the interview and the venue convenient to the participant. Subjects were then invited formally to participate in the study by letter (**Appendix A**), which had the information concerning the study including the

researcher's contacts if they required further clarification. They were requested to fill in a consent form (**Appendix B**), which was to be left with the attending physiotherapist during their subsequent visit. The final sample consisted of ten adults who met the inclusion criteria.

3.5 STUDY DESIGN

A qualitative paradigm was selected to allow for the exploration of the individuals' perceptions about their health education needs as well as to gain insight (Bless & Higson-Smith, 2000; Mouton, 2001). The major distinguishing characteristic of qualitative research is the fact that, the researcher attempts to understand people in terms of their own definition of their perceptions (De Vos, 2002). The use of qualitative methods has been advocated when research seeks to describe and understand individuals' experiences, expressions, views and needs in health care (Ziebland & Wright, 1997; Britten, 1996). Qualitative research in addition relies less on scales and scores, but involves the gathering of facts that reflect experiences, focusing on the perceptions and opinions of individuals taking part in the research or as observed on the scene (Verma & Mallick, 1999).

Focus group discussions according to Fontana & Frey (1994) have the advantage of being economical, data rich, flexible, stimulating to participants, cumulative and elaborative over and above the individual interview. In focus group discussion, participants frequently share insights that may be unobtainable from individual interviews or other sources of data. According to Fontana & Frey (1994); De Vos (2002), focus group discussions are also appropriate for comparing among

participants and can therefore be used for the purpose of comparing with the data obtained from the individual interviews with the aim of increasing consistency of the in depth interviews.

'The groups are generally composed of seven to ten people (although they range from as small as four and as large as twelve) who are unfamiliar to one another and have been selected because they share the same characteristics that are relevant to the question of study' (Marshall & Rossman, 1995).

3.6 PILOT STUDY

A pilot study was conducted among five individuals at the research setting with similar characteristics as those of the main study. This was to check on the clarity of the questions, the working condition of the audio equipment, the appropriateness of the interview guide as well as to familiarise the researcher with the study.

After the pilot study, major changes were instituted to make the interview guide more fitting to the study. It was resolved that, the interview guide be made more flexible as the original was rather rigid and did not allow room to participants to exhaust the line of discussion opened. After the changes, it was once more piloted among three individuals who had similar characteristics as those of the main study and was therefore adapted for the main study.

3.7 DATA COLLECTION AND INSTRUMENTS

Ten semi-structured face-to-face interviews and one focused¹ group discussion were used as the methods of data collection in the present study. According to Smith (1995), semi-structured interviews and qualitative analysis are especially suitable where one is particularly interested in the complexity of the subject. This method of research according to the author yields rich information as a comprehensive picture of participant's experiences; perceptions, feelings, opinions or needs on a particular topic could be extracted. Through this method, the researcher and the researched are allowed with much more flexibility than the conventional structured interview, questionnaires or survey.

With semi-structured interviews, the researcher prepares a set of broad questions in an interview guide in terms of which the interview is steered; the ordering of questions is of less significance (Smith, 1995). A semi-structured interview guide was created guided by the existing literature on patient health education on LBP (**Appendix C**). Nevertheless, the conversation was more flexible and responsive enough to issues as they arose, so that participants' individual perceptions, experiences and views could be explored as needed. The flexibility was adequate and sufficient enough to 'allow the participants to give full descriptions of their views with no interruptions or shifting away from the course of the study' (Rubin & Rubin, 1995). The sequence of questions on the interview guide was not necessarily followed in the interviews, nor was every question asked, or asked in the same way of each participant. This was to let the discussion be as ordinary as

¹ Focus group discussion aimed to compare the data from the face-to-face interviews in order to increase consistency.

the researcher possibly could to enhance the extraction of quality in-depth information without frightening or distracting the participant.

A broad (grand tour) question was chosen to make the participant settle down before coming to the finer details of the study. The broad question for the study was 'please enlighten me about your low back pain'. Probes were used whenever required. The purpose of probes served three main purposes in the interview: the first was to help indicate to the participant the level of depth the researcher desired so as to keep the participant elaborating. The second was to ask the participant to finish up the particular response presently given. The third function of probing was to indicate to the participants that the researcher was paying great attention to what they were saying (Rubin & Rubin, 1995).



A focus group discussion followed one week after the face-to-face interviews, and was composed of the same participants and the same interview guide. Three of the participants did not make it to the discussion due to personal commitments. The researcher had trained a research assistant who was a practising physiotherapist. The role of the assistant was to take notes of any notable responses and key points he may have come across during the interview in addition to reminding the moderator (researcher) of any areas that may have been left out.

3.7.1 PROCEDURE

3.7.1.1 Face-to-Face Interviews

Participants' appointments for the interviews were made in advance at mutually arranged times and places. The researcher introduced himself as a student, physiotherapist and that; the study was part of the requirements for the Masters degree in Physiotherapy.

Ten participants were interviewed, with each interview taking forty-five minutes to one hour. During the interviews, participants were encouraged to tell their own story about their health education needs on LBP and what was hindering them from adhering to the health education offered. The researcher conducted all interviews, which were all audio-recorded. Saturation was reached when no new major insights were revealed and when issues were repeated from other interviewees. In this case, saturation was reached during the seventh interview; however, the researcher opted to continue with the interviews to the tenth participant.

Transcribing started immediately after each interview when the researcher was still familiar with the narratives. Two interviews were completed each week until all participants were interviewed. After each interview, the audiotapes was played back to the participant so as to confirm or make any necessary changes such that new ideas that developed could be clarified. Above all, this was done to ensure that the recorded information was clear and of high quality. The tape listening among the participants also served as member checks and was done in

person by the researcher. Any changes that arose were made on a notebook; this extra information was later incorporated into the transcripts. In case the researcher wanted further clarification on any topic, he made further telephone calls. A copy of a summary of analytic categories and subcategories as well as verbal explanation by the researcher of interpretations and preliminary conclusions were made and presented to the first four participants. They were in agreement that the items were reflective of the face-to-face interviews. Four face-to-face interviews were conducted at the participants' homes, one in a participant's office, two at a members' club, two at the rehabilitation unit and one was conducted in an hotel within the city where the participant owned the business.

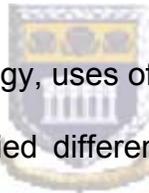
3.7.1.2 Focus Group Discussion

After the conclusion of the face-to-face interviews, a focus group discussion was conducted with the motivation for comparing and verifying data gathered from the face-to-face interviews, for according to Rubin & Rubin (1995) 'sometimes a totally different understanding of a problem emerges from the focus group discussion' that may have been forgotten during the face-to-face interviews. The focus group comprised of seven participants who had participated in the face-to-face interviews. A trained assistant and the researcher (moderator) conducted the discussion. It took place at a most secure, central and convenient location to the participants. The discussion took one and a half hours and was audio-recorded after consent from all involved. The research assistant compiled some notes of the group's behaviour and exchanges during the discussion. The focus

group interview was conducted at the researcher's house as it was the most central and most convenient for the participants.

3.8 VALIDITY AND RELIABILITY

Silverman (2000) refers validity to the degree to which a description truthfully represents the social experience to which it refers. The author in addition refers to reliability as the level of uniformity with which occurrences are assigned to the same category by different observers or by the same observer on different occasions. However, it is only useful in quantitative research while in qualitative research, different considerations are utilised which all refer to the subject of trustworthiness.



In qualitative research methodology, uses of alternative approaches to measure the authenticity of a study are applied different from those of quantitative research. Therefore, Marshall & Rossman (1995); Baumgartner, Strong & Hensley (2002) have suggested credibility, transferability, dependability and confirmability as sufficient measures for meeting authenticity purposes of which refer to the truthfulness of the study.

3.8.1 Credibility

According to Brink (1999), one way in which credibility could be ascertained was by identifying and describing participants in the study in every respect. This according to Marshall & Rossman (1995) is to demonstrate that the inquiry was accomplished in such a way that guaranteed the participants were truthfully identified and fully described. By this technique, credibility of this study was

adequately achieved, for the researcher identified the participants and gave a description of them all.

The data was triangulated through use of field notes, transcripts, the contribution of various participants both in face-to-face interviews and the focus group discussion. Such a great variety of participants adequately contributed to the credibility, of the findings. The member checking, an independent review from two postgraduate colleagues and a peer review by the project supervisor further assured the credibility of the study (Lincoln & Guba, 1985).

3.8.2 Transferability

Marshall & Rossman (1995) refers transferability to 'how the research findings can be generalised from the present representative sample to the larger population and may be a source of dilemma in qualitative research'. However, Polit & Hungler (1995) inform that, the researcher needs to provide sufficient descriptive data so that others can consider the applicability of the data to other settings. The researcher, they emphasise, reinforces transferability of findings by ensuring that the decision trail of the research is unambiguous and comprehensive. The researcher in this study has therefore tried to adhere to this provision as much as it was practically possible. He has produced a precise description of the research methodology and data analysis process assisted by direct quotations from the interviews. This amounts to 'thick description', which is the criterion of transferability (Marshall & Rossman, 1995).

Generalisation however, in qualitative research is the privilege of the reader (Lincoln & Guba, 1985). At the same time, it was the duty of the researcher to provide the reader with sufficient information (thick descriptions), so as to facilitate the person who reads to make independent conclusions. The researcher has submissively described the participants at the end of each quote and a great variety of data excerpts and all this constitute the thick descriptions.

3.8.3 Dependability

Stability of data over time and conditions through inquiry audit that involves scrutiny of the data and relevant supporting documents by an external reviewer in qualitative research is what is referred to as dependability (Polit & Hungler, 1995). A qualitative study that establishes credibility moreover establishes dependability. In the current study, the researcher endeavoured at all times to achieve this by providing satisfactory facts of participants' word for word citations to permit the reader to consider its dependability. It was additionally fulfilled through a rigorous audit trail of all data sources and data reconstruction by an academic advisor (Miles & Huberman, 1994) at the University.

3.8.4 Confirmability

Polit & Hungler (1995) claim confirmability as signifying that data are sincere and reliable, whereas Baumgartner, Strong & Hensley (2002) further emphasize confirmability as referring to neutrality or impartiality of the data. The issue of confirmability in qualitative research therefore aims at the distinctiveness of the data. To achieve this in the current study, face-to-face interviews and a focus

group discussion were employed in which evidence was obtained from participants about the phenomenon under study.

3.9 DATA ANALYSIS

3.9.1 Procedure

As mentioned earlier, a thematic analysis procedure was used to analyse data collected from the interviews and from the focus group discussion as advocated by Ritchie & Spencer (1994). This was because in a phenomenology interview, ideas that emerge can better be managed and understood under the control of a thematic analysis (Aronson, 1992). The method was chosen, as it was also an explicit and visible research methodology in which analysis was grounded in the interview data, and it also allowed a dynamic process.

Analysis of the data began while the interviews were being conducted prior to transcribing of the discussions in English word for word since there were no interviews conducted in Swahili. The process entailed the preliminary familiarisation with the data while the data collection progressed. This allowed the researcher to begin to detect and recognise recurrent ideas and patterns. The researcher then commenced data indexing according to this framework and planning the dimensions of the main themes (Mellion & Tovin, 2002). The preliminary analytic procedure was used to make the quantity of data more manageable rather than a procedure that performed the analysis itself (Silverman, 1998).

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

According to Aronson (1992), thematic analysis focuses on identifiable themes and patterns of living experiences and perceptions of the participants and/or their behaviour. Spradley (1979) explained that, the procedure goes in orderly steps, the first step aiming to collect the data, where audiotapes are recorded to study the talk of a session or of a phenomenology interview followed by verbatim transcriptions.

From the transcribed conversations, patterns of experiences were listed. Taylor & Bogdan (1984) recommended that, the next step to a thematic analysis was to identify all data that related to the already classified patterns. Related patterns were then combined and catalogued into sub-themes. Themes are defined as units derived from patterns such as 'conversation topics, vocabulary, recurring activities, meanings, feelings, or folk sayings, proverbs or theories'. These themes were identified by means of bringing together components, fragments of ideas, perceptions or experiences, which often were meaningless when viewed alone according to Leininger (1985).

This way, all significant segments of the transcripts were clustered as one according to thematic orientation, so that transcripts were broken down and then reconstructed by theoretical areas. This framework was then applied to the entire data that were pertinent to the study objectives with some passages being indexed to numerous themes. The thematic framework was developed from the interview guide, evolving issues from participants, analytic themes cropping up from the data and the aim and objectives of the study.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

The clusters were then scrutinised to gain the varieties and classes within every theme, and relations and patterns among themes established. There was nothing sacred about such an analytic preliminary and as such, extracts were often freely excluded and included in the course of the study as advocated by Silverman (1998).

Themes that emerged from the informants' needs were then pieced together to form a comprehensive picture of the participants' collective perceptions, needs, views and opinions and experiences. The coherence of the ideas however rested with the researcher who has rigorously studied how different ideas or components fit together in a meaningful way when linked together (Leininger, 1985). Thus, analysis was inevitably selective with the possibility that other researchers could find different themes from the same texts used in this research. Conostas (1992) reports that, the 'interpretative approach should be considered as a separate point of origination'. When gathering sub-themes to obtain a comprehensive view of the information, it was easy to see a pattern emerging. The next step was to construct a suitable argument for deciding on the themes to present the final interpretative analysis of the data.

It was not a clear-cut procedure as on a number of occasions the data was revisited several times to filter and classify the developing themes. It also involved identifying salient themes, recurring ideas or language, and patterns of belief that link people and setting together, it was the most intellectually challenging phase of the study and one that integrated the entire research

(Marshall & Rossman, 1995). It was in addition the most difficult, complex, confusing, creative and fun filled research phase as also observed by the above author.

Discussions with two colleagues and peers guaranteed that themes were broad and comprehensive sufficiently. In order to maintain anonymity, participants' names were changed and cited using codes FI 1² and FG 1³. The research analysis was planned around the understanding of these discussions and was controlled thematically in ways that endeavoured to be unbiased equally to the elements of the research questions and to the concerns of the participants.

3.10 ISSUES OF ETHICAL CONSIDERATIONS

Ethical considerations embrace those of general scientific research and those wholly appropriate to qualitative research. Qualitative research demands that the researcher respects the participants and that their methodology reveal this respect. Efforts were accordingly made to grant respect to all the participants, valuing their expressions as sacred and the researcher as an honoured recipient thereof.

Accordingly, the researcher took ethical measures, approaches and customs in order to demonstrate the value the researcher placed on the participants and their views. The researcher had at all times preserved an attitude of transparency, that is, not to mask any aspect of the research, as well as being open on what it was that the researcher endeavoured to achieve. As regards confidentiality, the researcher ensured that participants remained unidentified, changing their names

² Face to face Interview participant number (1-10).

³ Focus Group interview participant number (1-7).

and their identifying particulars to codes. The researcher accorded all participants the opportunity to withdraw their consent at any point during the research in accordance with qualitative research principles.

As required by the ethical committee of the University of the Western Cape, approval was obtained from the Faculty's Higher Degrees Committee (**Appendix D**), the Ministries of Health (**Appendix E**), Education, Science and Technology Kenya (**Appendix F**). Additional permission was obtained from the Training and Education Committee of the Nairobi Hospital (**Appendix G**) and from individual participants. Informed approved consent forms were signed by those willing to participate in the study. Recorded audiotapes and other study material were kept under lock and key.



The University of the Western Cape, the Ministry of Education Science and Technology and the Chairperson of the Training and Education Committee of the Nairobi Hospital are to receive a copy of the final report of the study. Finally the researcher pledged to offer each participant an opportunity to access the concluded study and discuss the research findings if one so wished.

3.11 REFLEXIVITY

As a physiotherapist, the researcher gained fresh insights, learnt about problems and frustrations encountered by patients as they go about managing LBP. The researcher was sensitised to the health education needs, threats and barriers met

by the individuals and their determination to overcome the effects of LBP despite the expressed health education needs.

The research design, its methodology and its process made the contribution of the participants including that from the researcher quite relevant in the subject that affects so many individuals. The researcher considers this a significant part of the context and credibility of the research. The use of the qualitative approach nevertheless proved to be a challenging task especially during the transcription part as well as the analysis stage. Despite all this, the richness and depth of the research material and particularly the magnitude of insights produced through the approach made this a worthwhile undertaking.

Self-reflexivity shaped a significant ingredient in the study. In this context, this meant that great reflections on the physiotherapy profession, transparency and limitations of the role of the researcher, including his own social, and professional experience. It had been difficult for the researcher to reconcile academic and professional training with the knowledge of the social factors and effects on LBP. It was also deemed crucial to engage in a process of critical thinking and analysis during the whole process of this study. This nevertheless, the researcher believed was not enough and therefore challenges the biomedical approach on LBP management.

3.12 SUMMARY

The chapter described the research setting in which the study was based; it also examined the methods used to collect data. The study design, study population,

sampling method and instruments were well described together with the motivation for choosing the methods. The pilot study, the data collection procedure and analysis process were in addition explained. Finally ethical issues relating to the study were given before touching briefly on the reflexivity of the researcher. The next chapter will therefore be devoted to the results of the study.



CHAPTER FOUR
RESULTS

4.0 INTRODUCTION

In this chapter, the researcher endeavours to give meaning to the data as comprehensively and as clearly as possible using narrative report writing style. In giving the reports of the interviews, the precise language and phrases used by the participants are preserved. Nevertheless, for additional clarity and the flow of expressions, some grammatical adjustments were at times slightly made. Repetitive or unnecessary material has been omitted from the quotes by three ellipsis points (...).

As noted in the methodology chapter, qualitative analytic procedures were used. The analysis process involved thematic coding such that codes emerged from what was in the data, rather than from a predetermined set of categories.

While analysing, it emerged that a number of themes obtained from the interviews trailed intimately the questions on the interview guide, which was not extraordinary with semi-structured interviews (Smith, 1995). The literature appraised was also a rich base of themes. When compared with the face-to-face interviews, similar themes reappeared in the focus group discussion; this gave regularity to the data. The quotations used assists in emphasising further the themes highlighted in the findings.



4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS

The Sociodemographic characteristics of the participants are presented in Table 4.1. The study population was by gender ratio at 4 to 6 (male to female) and employment status (about 80% were employed), they were well educated. Participants had attended a minimum of five and a maximum of fourteen physiotherapy treatments.

Table 4.1: Sociodemographic Profiles of the Study Participants

Participant. Number.	Gender.	Age. In years.	Marital status.	Educ.level.	Occupation.	No. of treatment received
FI-1 *4	Female.	32	Married.	Form four.	Housewife.	6

*4 Did not attend focus group discussion

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

FI-2 *4	Female	34	Married.	University.	Student.	8
FI-3 FG-1	Female.	38	Married.	University.	Teacher.	12
FI-4 FG-5	Male.	27	Single.	Diploma.	Technician.	7
FI-5 FG-3	Female.	30	Single.	University.	Company secretary.	9
FI-6 *4	Male.	52	Married.	Post grad.	Company executive	14
FI-7 FG-7	Male.	50	Married.	Diploma.	Tech.cum businessman.	8
FI-8 FG-4	Male.	45	Separated.	Diploma.	Technician.	6
FI-9 FG-6	Female.	38	Married.	Diploma.	Cateress.	5
FI-10 FG-2	Female.	33	Married.	Diploma.	Nurse.	5



4.2 EXPRESSED HEALTH EDUCATION NEEDS

Five main aspects emerged as the participants' health education needs. The five aspects formed the themes on which participants expressed as their health education needs. They were lack of knowledge, education, coping strategies, support and lack of appropriate communication methods and skills among the medical professionals. Although there were variations as to the order in which participants expressed their health education needs, they displayed homogeneous patterns.

4.2.1 KNOWLEDGE

The first theme emerged when participants expressed lack of knowledge around LBP. When answering to the question ‘what health information did you find yourself lacking during the time you managed your LBP?’ Several participants expressed their lack of knowledge in a variety of aspects on LBP. The most frequently used replies that illustrated the participants’ responses were lack of knowledge on the cause, the diagnosis, as well as on the prognosis on LBP. The lack of knowledge appeared often and varied in order of appearance on the three key aspects.

4.2.1.1 Knowledge on the Cause of LBP

Most participants expressed their desire to be explained on the cause of their LBP. They wanted the explanation so that they could evade the cause in future. For example participant FI-3 stated: *they just told me it was normal to have a lower back pain...I am not sure I really know what is causing my problem to avoid it (cause) in future.* While another participant reported:

I actually was not clear on what really causes low back pain; the information I think I am lacking is the cause. What exactly is causing my lower backache? ...Once I know the cause ...the effect will not be that bad. Once you know this is what is causing my problem then you can avoid it (FI-6).

4.2.1.2 Knowledge on the Diagnosis

There were expressions of lack of knowledge around the diagnosis of LBP among the participants. This was a source of much frustration and anxiety among some participants. From the finding, it was clear that participants needed

to be knowledgeable on the accurate diagnosis of their LBP. As participant FI-1 stated: *like it has been a mix-up thing (diagnosis) all through...which at times leaves us confused and frustrated.* Further elaboration from another female participant said:

To be honest up to now, I don't know what my problem is. You know ... they (medical professionals) talked about maybe I could be sitting a lot, may be the posture... but so far I cannot really know, I don't know whether it is gynaenocological related or bone (orthopaedic) related I am not sure even up to now (FI-3).

Further elaboration from yet another participant said:

I am not sure I know what we have been managing, whether it was the nerves, bones, muscles or my stress, I really would be gland to know (FI-6).



4.2.1.3 Knowledge on Prognosis

Participants expressed a need to be knowledgeable about the treatment outcome on LBP. They reported the lack of knowledge on the treatment outcome as making them loose trust in the management of LBP. From the findings, participants wanted to be educated on the prognosis of LBP so that they could decide on whether to carry on with the management. Participant FI-5 narrated: *I would like to know, is it a problem that can really go away or is it a problem that I will have to live with for the rest of my life? I would really like to be clear on that so that I can decide what next.*

More emphasis on lack of knowledge on prognosis:

Initially I thought this thing (LBP) was going to be over within three days... after the commencement of physiotherapy...I did not know that ...I was to

be given something (programme) that I had to continue with at home for a long time (FG-6).

4.2.2 EDUCATION

Wide-ranging expressions were established on additional probing on ‘what further health information did you require most at the time?’. Lack of education emerged as a major need among several participants’ during their descriptions and narratives. The need to be educated on relevant issues formed the second theme and highlighted on a number of aspects on LBP. The additional needs expressed included the need for education on sex and LBP, healthy lifestyles, education on the purpose of the exercise prescribed, education on appropriate use of health services and on alternative therapies available for LBP. From the findings it was evident that participants lacked education on those aspects and that required attention to effectively manage LBP.

4.2.2.1 Education on Sex and LBP

Some participants expressed a desire to be educated on LBP and sex. Education deficiency was manifested predominantly among the participants on what caused the other, whether there was a relationship between the two and on common beliefs regarding the two aspects. As one male participant in the focus group discussion stated: *what I was told by my friends was that, the other possible cause of my backache could have been too much sex (FG-5).*

Another female participant a nurse further reported:

I would like you...to remove some of these beliefs which some patients have... there are some who believe that ...low back pain is caused may be by lack of sex or too much sex or some funny beliefs (FI-10).

4.2.2.2 Education on Exercise and Healthy Lifestyles

Three important needs for education emerged from the participants' descriptions and statements regarding exercises and healthy lifestyles. With regard to exercises and healthy lifestyles, participants expressed a need to be educated on the aims of the exercises performed, as well as on the appropriate exercises for LBP sufferers as part of healthy living. Participants furthermore highlighted their wish to be educated on whether they could still carry on with the prescribed exercises regardless of the pain. From the findings it was evident that, participants had a variety of health education needs related to exercises and healthy lifestyles. As participant FI-3 stated: *should I continue with them (exercises) even when I am in pain or should I stop... you know, that kind of education is kind of lacking?* Further elaboration from yet another participant in the focus group interview said:

I need more information, when I am doing the exercise like... in the hydro (hydrotherapy), I would like to know the exercise... what the exercise is for before I can start because it is me who is sick (FG-2).

Further education need from a female participant posed:

What I have always wondered is... what should I do to maintain my weight so that I don't look over weight... when I am not supposed to exercise (due to LBP)? (FI-5).

4.2.2.3 Education on Health Service Utilisation

A common development that emerged among the participants was the need to be educated over the existence and the appropriate use of health services. They narrated how they were unacquainted and unable to make decisions regarding where to consult for LBP management. They in addition narrated on how some of them and members of the public were unfamiliar with physiotherapy services. This compelled them to consult a variety of medical professionals inappropriately. From the findings, it was manifested that participants needed to be educated on the appropriate use of health services. Participant FI-7 stated: *many people lack all the information ...because they don't know what to do once someone is faced with that kind of a situation (LBP).*

Further elucidation from another participant:



I have gone to an orthopaedic doctor...Chinese herbalist and a chiropractor. Actually I have a problem... I don't know whether to see a gynaecologist ...or another orthopaedic doctor... we don't know... people don't know exactly whom to see...We, people don't really know (FI-3).

Further emphasis from participant FG-7 expressed: *I had not heard about physiotherapy before, people don't know what physiotherapy is...I think just like me, there are many people out there who do not know what physiotherapy is and who may benefit from the service.*

Further expressions:

I think you need to a little more to get people to public awareness, let them be aware on what they are supposed to do before they get into this kind of problem (FI-6).

4.2.2.4 Health Education Regarding Alternative Therapies

Other dimensions expressed by participants as requiring attention during health education sessions were in the area of alternative therapies. Participants expressed their wish to be educated on whether there were other medical treatments for LBP available other than surgery. Responses analysed, indicated participants as requiring health education on the existence of alternative therapies for LBP individuals locally. Participant FI-10 wondered: *Now in case physiotherapy failed to heal my back and I didn't want to go... for an operation...are there any other medical treatments which take care of the back here in Nairobi?*

Another participant had this to say:

And probably if physiotherapy fails to reduce this pressure, what would be the next line of management or are there alternative treatments available locally? (FI-5).

4.2.3 COPING STRATEGIES

The third health education need that came out of the responses was lack of coping strategies on LBP among the participants. Lack of strategies in coping with LBP was a need participants expressed as lacking education in. An analysis of the needs indicated fear-avoidance behaviours, low self-efficacy and lack of counselling services, as the main areas that needed consideration for health education among the participants. It was expected that, with appropriate coping strategies, participants would have adhered and acted in accordance to the health education specified.

4.2.3.1 Fear-Avoidance Behaviours

Several participants described how fear of aggravating LBP while performing exercises prevented them from carrying on with the exercises. Analysis of the finding indicated that fear-avoidance behaviours had created negative beliefs on the individuals leading to non-adherence to the health education programmes affecting on the individuals' daily lives. One female participant FI-3 narrated: *I would do them (the exercises) then I would feel pain, so I...just gave them up. I kind of put a stop on them ... you know any time I would do the exercises there would be more pain and ... I just thought I might be hurting something somewhere, so I just stopped.*

More emphasis from another female participant:

I really cannot be able to go about my usual things without... worrying that I will hurt my back or...get more pain (FI-5).

Further expressions from yet another participant narrates as to why she didn't honour her earlier physiotherapy sessions:

I feared that I might feel a lot of pain when they are doing whatever (physiotherapy) that needs to be done. So I was kind of apprehensive (about physiotherapy) and therefore I just took my time (FI-2).

4.2.3.2 Self-Efficacy

In addition to the fear-avoidance behaviours, several responses from participants indicated lack in the necessary self-induced capability that would have enabled them execute certain activities essential for daily living. Self-efficacy was therefore established as a coping strategy that lacked among the

participants. An analysis of the expressions indicated that participants required education targeting on building their self-efficacy levels as a way of reducing dependence in performing their daily tasks. One participant FI-8 thought prolonged bed-rest was very helpful towards recovery, she thus stated: *The bed rest I had at home (for two weeks) actually gave me rest and a piece of mind because you are not like up and down, I have to do this ...pick that...that bed rest is very important both physically and psychologically and also it helps.*

Further descriptions from a participant, who felt that, her LBP couldn't allow her do anything in her house:

I am not able to attend to my children ... somebody has to attend to them, I am not able to handle my own business alone in the house because I fear my back is weak. Some times I see kids doing something wrong and there is not much ...I can do, I am helpless (FI-1).

Further elaboration on lack of self-efficacy:

I have to get a driver to drive me around...to make sure I don't strain my back, I have a corset all right, but our roads are a bit rough here. So I just sit, I don't want to play around with the clutch and turning around... If I am not driving, then I am not overdoing it (FI-6).

4.2.3.3 Counselling and Psychological Support

Further health education that could have enabled participants cope with LBP more appropriately was expressed as counselling and psychological support. Participants recognised lack of counselling and psychological support from the physiotherapists and other medical professionals as contributing unfavourably to the LBP management. Some participants considered that, counselling would

have possibly influenced LBP positively. Lack of counselling and psychological support was therefore established as a major education need among the participants. One participant FI-1 thus narrated: *as I told you, my first doctor never gave me any hope at the first sight* (consultation) (FI-1).

More elaboration from a participant:

I think physiotherapy department is not informed, because... there is no one of the physiotherapists that I saw who never told me... in a month, you will be ... walking... they need to have the skills (counselling) (FI-1).

Further elaboration on the need for counselling from a male participant stated:

I was worried because that is my back and if there is something wrong... because I don't know whether this will make me a cripple as time goes on and therefore I need a remedy ...but I did not get any counselling at all (FI-7).



4.2.4 SOCIAL SUPPORT

On further probing on what problems participants experienced as they managed their LBP, the fourth theme emerged as lack of support. It surfaced that some participants lacked support from the family members and at the workplace. This was in addition to the lack of support from social systems and structures that were additionally expressed. Work related issues were also reported to have hindered further programme adherence and compliance among the participants. From these findings it was obvious that, lack of support from the various sectors revealed must have affected health education among the participants and therefore required attention during health education planning.

4.2.4.1 Family Support

A number of participants reported as lacking support from family members as they managed LBP. The lack of support was reported as stressful. From the finding, it was clear that support from family members lacked among the participants and therefore needed to be addressed in future health education programmes. One participant FI-7 thus reported: *I am unable to enjoy the normal manly or husband duties to my wife, this has of late brought a lot of problems in our relationship... This has been a source of so much stress on my part to date, with no support.*

Further elaboration from another participant,

We all now started getting worried...there was even no time for anybody to sort of say to me oh... we feel sorry for you because you have LBP... and they all expected me to cater for my fathers bills (hospital) (FI-8).



4.2.4.2 Support at the Workplace

A few participants described as lacking support from colleagues and employers at their places of work during an episode of LBP. Lack of support was expressed as an impediment towards accessing and adhering to the prescribed health education. From the finding it surfaced that support from employers and colleagues could have created appropriate environments to the individuals, which may have lead to better treatment outcomes. A response from one participant FI-4 said: *the time I spend visiting my physiotherapist is a source of bad relationship between other employees and me who feel like I pretend (to suffer from) this back pain...they have not been supportive at all.*

Another participant from the focus group said:

I am working on a very tight schedule and at sometimes my employer has problems releasing me (to attend treatment) ...so it is like I have missed out on many occasions due to that reason... he asks me to go for the physiotherapy when I am free. I have missed out on my appointments because of lack of that support (FG-4).

4.2.4.3 Social Systems and Structures

Most participants narrated how lack of social support had created unfriendly environments to the individuals while managing LBP. They narrated how the lack of appropriate physical and social support systems were affecting their LBP negatively by hindering compliance to prescribed programmes. Social systems and structures that were described as hostile to the participants were; rough roads, traffic jams as well as poorly designed public transport vehicle seats. One participant FG-6 hence expressed about the physical structures: *so with the problem of the low back pain and the transportation from there (hospital), the roads are quite bad (full of potholes)... I give myself extra-days so that I could be able to psychologically prepare myself to travel to the hospital...as the pain becomes worse after the rough rides.*

More revelation from yet another participant on transport systems:

I have also to contend with the long sitting in car in endless traffic jams ...so you see... difficult thing this back pain (shaking his head in disbelief) (FI-7).

Another participant had this to say on the design of the public motor vehicle seats:

Most public vehicle seats are not professionally designed and when you sit on them for twenty minutes even those with no back pain come out of these vehicles with their legs numb, your back has been damaged (FG-3).

4.2.4.4 Medical Insurance Support

Numerous participants reported as lacking support from the medical insurance firms while managing their LBP. They narrated how they were unable to attend to all the prescribed outpatient physiotherapy treatment sessions due to lack of medical insurance cover on outpatient basis. They wanted to be educated on how they could minimise the effects of lack of this support. From the finding, it emerged that participants needed support from the medical insurance firms to appropriately cover treatment sessions. They therefore needed to be educated bearing in mind this fact. One participant FI-9 said: *I did not have a proper medical coverage (covering out patient services) so it would depend on when, ...I had the money I would come if I did not have the money then I would not come.*

Another participant said:

Certain employers do pay (for physiotherapy)... but I just feel sorry for people whose employers or insurance can't meet (the out patient cover) for physiotherapy, I know so many employers and insurances that don't cover the physiotherapy costs (FI-8).

Further emphasis from another participant:

We have a health insurance which only caters (covers) for inpatients only when I was admitted...they (insurance) covered, but then ... as an out patient I have to pay ... covers for inpatients only and you wouldn't go and say okay admit me so that you treat me (for LBP) because they can also verify that you really needed to be admitted (FI-3).

4.2.4.5 Work Related Issues

Work related issues were described as affecting health education among participants. On analysis of the responses, work commitments from participants and on the physiotherapists emerged as affecting health education. It arose that participants work aspects as well as the physiotherapists' schedules were remarkably busy which affected health education. From the finding, it emerged that participants wanted to be educated on how they could overcome the expressed work related issues. One participant FI-10 expressed her work as a big hindrance to health education by reporting: *for one, being in the profession like I am in (nursing), ...there are those times when one cannot avoid like attending to an emergency so you find at sometimes as much as one would like to (attend physiotherapy treatment) one find oneself unable to.*

More emphasis from yet another participant stated:

Traditionally I am somebody who has to sit for 12 hours, and am supposed to be in the office at 7.30 am go out for lunch come back and work to 10.30 p.m at night and see the day work is done such that time to follow these things (treatment) is very limited (FI-6).

Yet more barriers from another participant, who said:

You know she (the physiotherapist) is busy, she may not even have time to think about how to explain to me this is the way to the management for this, this is for this (FI-2).

4.2.5 COMMUNICATION PROTOCOLS

The fifth health education need was established when participants were responding to the question 'In what form was the information availed to you?'. While responding to the question, participants expressed the method of education in use currently as verbal. They described the method as inappropriate to them as it lacked uniformity among the physiotherapists along with the participants' tendency to forget. The information contents and education sequence was additionally described as unsuitable to the participants as a result of its superficiality and lack of sequence. Along with the cited imperfections in the communicating methods, participants' furthermore revealed that, they had been exposed to conflicting health education from the various sources consulted. Participants moreover expressed the medical professionals as lacking appropriate communication skills in that, they used technical terms when communicating to them.



4.2.5.1 Health Education Methods

The method of health education currently employed to educate participants was described as verbal. Most participants described the method as unsuitable to them in that they normally forgot the information given to them and that the education differed among the physiotherapists. They wanted the method of education to be in a written format. As participant FI-2 narrates: *it (health education) was a word of mouth, (pauses) ... he told me how to do it (exercise)...just talking when I go for my clinics he (the Gynaecologist) continues to ask me how I am managing.... I was actually given nothing else.*

Further elaboration from FI-6, who stated:

It (education) should be written...because these verbal things (verbal method of education) especially at my age (at 52)... now I tend to forget a lot of things. Put down in writing in a pamphlet form and make it graphic... you see verbal communication varies on what a person remembers or what a person knows. So if you have it written in a diagrammatic form ...it's the right way I suppose.

4.2.5.2 Health Education Content

With regard to the content of health education offered, several participants reported the content of health information given to them as superficial in that it failed to address other aspects of LBP. Some key health education components were said to lack within the contents presented, which participants alleged as requiring attention. An analysis of the findings found the information materials offered as inappropriate to the participants. Participant FI-4 consequently said: *the only bad thing about this information was that it was too shallow and it required one to actually go further and get more details about low back pain and its management else where... from the Internet.*

Another participant elaborated further by saying:

You will find that the part they (physiotherapists) tend to concentrate most is on lifting techniques...and long sitting hours (habits) ... they leave out other aspects of which I think are more important to us such as stress and other problems that we encounter on daily basis (FI-6).

4.2.5.3 Health Education Progression

Further expressions and concerns emerged regarding the health education sequence. From the responses, it was noticeable that, the health education

sequence lacked progression the way participants would have preferred in order to complete health education on all required aspects. In that regard, participant FG-7 had this to report: *most of the information that was availed to me was in the first session after which, the education process...decreased with each session, ...90 percent of the information was availed to me in the first session and there after no further education appeared to occur...reminders were only when I inquired from the physiotherapist or the doctor.*

4.2.5.4 Source of Health Education

In response to further probing over the question 'in what form was the information availed to you?', a range of responses were recorded. On scrutiny, some of the responses indicated that, in search for additional explanation, participants sought information from a multiplicity of sources. The most frequently used responses that most clearly explained the sources included doctors, physiotherapists, nurses, friends, parents, other patients, herbalists, the Internet, journals, magazines, and books. Although some of the information obtained from a number of the sources may have assisted at the time, not all the information could be expressed as dependable and therefore might be a source of confusion to the participants. From the findings it emerged that participants required a reliable source of health information on LBP. One participant FG-5 said: *my friends told me that the other possible cause of my backache could have been too much sex.*

Participant FI-9 further offered another source of information by stating:

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

A piece of advice I read somewhere (later clarified while cross-member checking as from a magazine) is to try and be as active as possible...I try to keep active as much as possible.

Further source, participant FI-3 said:

I just knew that occasionally ladies get backaches...I had heard from even my parents about it... after delivery maybe you may get backache you know traditionally you know they would tell you not to work at least after two months, after delivery you should not do any work and especially because of the ... problem of the back.

While participant (FI-2) said:

My gynaecologist was telling me how to manage it. He told me how to wake up from the bed, the kind of seat I should sit on, not sagging (FI-2).

Participant FI-5 revealed more sources:

The doctor explained to me, when you are from age forty, the possibility of having a back pain is quite high and before that I actually really never took to think about it.

Yet another source from participant FI-8:

The nurses...would tell you to rest even when you were tired (of bed-rest), they would say to you no, no, no, don't say you are tired it is better that you rest. Others were the physiotherapists.

4.2.5.5 Conflicting Health Education Information

While answering to further probing on the question 'where did you get the information you currently have' participants narrated how they had to consult various medical professionals to obtain additional clarifications and management of their LBP. In the process, several participants were exposed to conflicting

health information from the different medical professionals consulted. On analysis, it emerged that various medical professionals consulted offered diverse health information. From the findings it was identified that, participants wanted health education information standardised. Participant FI-7 narrates: *I have gone to an orthopaedic doctor... I have gone to a general practitioner, I have gone to a gynaecologist and a Chinese herbalist and a chiropractor and now a physiotherapist, all this information I have tends to be very different.*

Another participant was even more elaborate by saying:

At first I was told by my doctor that maybe I am not fit... so I decided to join a club or do some aerobics to be fit but (laughs) I think after... may be two, three sessions the back (pain) was too much. Then I was told by the physiotherapist no you should never do exercises when you are in pain. You see those kind of conflicting ideas. So you... pauses... you are left feeling that you don't know anything about how to manage your ... back (FI-3).

One further emphasis from another participant:

One problem ...I had to visit different doctors and I would get... conflicting kind of ... ideas (health education), some would think I had arthritis then when they take me for test there's no arthritis others would think that, pauses... there were fibroids...(FG-3).

4.2.5.6 Communication Skills

In response to the question 'what other factors do you consider to have hindered you during all this period?' a variety of responses were recorded. A common expression from the participants was related to the issue of the medical language, which was expressed as technical. Participants narrated how medical professionals used technical terms when communicating to them. An analysis of

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

these findings revealed lack of appropriate communication skills among some physiotherapists and other medical professionals. From the finding it was established that medical professionals lacked appropriate communication skills.

Participant FI-4 accordingly said:

Some of the problems I encountered were some of those words that were used... were a bit hard (technical) for me to comprehend. And that could not make it so easy for me to understand fully some of the terminologies used. In some cases they were using very technical words.

Participant FI-2 equally had a similar description:

When he said disc disease, I asked him what he meant, he told me ... "The disc has a disease rather" Well to me it was the same as what he had said (FI-2).

Further emphasis over the same concern,

The physiotherapist told me I am suffering from a condition called... was it... lumbago... or something like that...I am not very sure of the word but that was what the physiotherapist said (FG-5).

CHAPTER FIVE

DISCUSSION

5.0 INTRODUCTION

This chapter focuses on the main findings of the current research. The findings will be discussed in relation to the aim and objectives of the study and are explained where possible in relation to similar studies. The objectives of the study were (1) to identify health education needs among individuals with LBP (2) to identify the methods used together with their appropriateness according to the individuals and (3) to identify the source of health information that the participants had in their possession.

The study elicited some informative first-hand insights from the individuals with LBP. The insights formed several categories from which five main aspects on health education needs emerged. The discussion is therefore based on the five aspects. A few limitations of the study are discussed and finally a summary of the findings is presented.

5.1 SOCIO-DEMOGRAPHIC PROFILE

Participants in the current study were composed of four males and six females. This was a sensible participant distribution based on gender as monthly statistics at the Rehabilitation Unit indicated that, 60% to 70% of individuals seeking physiotherapy services due to LBP were female. The participants' ages ranged from twenty-seven years to fifty-two years. The participant population was similar to other primary health care LBP populations with an average age of

approximately 40 years. The age bracket according to Burton et al. (1995) is the usually economically active and a frequent age group for most LBP sufferers. These ages are usually the window of opportunity for most LBP, for about the same time one begins acquiring grey hairs, one probably starts noticing twinges of pain in the back (Burton et al., 1995).

With regard to education, the least educated of the participants was a fourth form and the most Master degree. Academic qualifications therefore did not influence the need for health education among the participants. This came out clearly from the participants because, matters relating to health and medicine were scientific and therefore difficult for most individuals to understand particularly when the Medical Model of health education was used. With the minimum number of physiotherapy treatment attended at five, and a maximum of fourteen, participants had adequate number of sessions that should have facilitated them to obtain the required health education. However, based on the information from the participants, the individuals' health education needs were not wholly fulfilled.

5.2 HEALTH EDUCATION NEEDS

Although participants had attended several physiotherapy sessions during which health education dissemination took place, expressions in lack of knowledge on several aspects of LBP was common. The findings suggest that, the health education that was offered may have been incongruent with the participants' needs. Perhaps present health education programmes were planned and

implemented without taking into consideration views from the individuals with LBP on what the individuals perceived as their health education needs.

5.2.1 LACK OF KNOWLEDGE

When participants were asked what they considered as their health education needs, they cited lack of knowledge on a number of aspects regarding LBP. The mostly expressed aspects were on the cause, diagnosis and prognosis of their LBP. These needs further overlapped, elaborated on, and added to dimensions commonly mentioned as affecting health education in most health care set-ups (Deyo & Diehl, 1986; Borkan et al., 1995; Glenton, 2002).

In seeking an explanation to establish a specific cause of a health problem, a significant need that was reported in the current study, was the distinctive responses to the uncertainty experienced by the participants due to the lack of knowledge on the cause of their LBP in pathoanatomical terms. Moreover, participants' responses were in line with the Medical Model of health education, which may have influenced them to view the cause of LBP in pathoanatomical dimensions thus the need for explanation in those terms. The expressed needs were typical universal needs among individuals with any medical condition and could raise some anxiety among such individuals when not met especially in a condition such as LBP that was ill understood and its multidimensional nature (Harland & Lavalley, 2003).

The need to be explained the cause of a health problem is probably the most important need among individuals with any medical problem in general. For

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

instance, in a study conducted by Skelton, Murphy & Murphy (1996) in England with 52 patients with LBP to gain participants opinions on the management, dissatisfaction levels as high as 80% were found to have originated from the lack of explanation on the cause, the diagnosis, prognosis and on how to self - manage the pain. The need to have the cause of LBP explained was perhaps the most important need that came out from the participants in the present study.

Lack of knowledge on the cause of a LBP, diagnosis and a clear prognosis were the most common reason for frequent medical re-visits among patients. Furthermore, patients consult health practitioners with the hope of getting an explanation about the cause and the diagnosis of their health problem before an appropriate management could be undertaken (Osborn & Smith, 1998; McPhillips, Cherkin & Rhodes, 1998). The lack of knowledge on the mentioned aspects among individuals with LBP was not strange, for according to Foster et al. (2003), "it is never known with precision why people with LBP decide to self-manage or consult a health care professional but it was well known that, patients relied more on the health care professionals to understand the given condition, the diagnosis, to suggest management plans based on the symptoms and signs and thereafter to be explained on the process of treatment to be embarked on as well as the prognosis". However, in the majority of health problems, the cause of the problem converges on the diagnosis yet, in most LBP, the cause is never known with precision (Spitzer, 1987). Consequently, lack of precise diagnosis in the majority of LBP cases suggests that, most individuals will in no way get sufficient explanation on the cause and therefore the expressed need to be

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

explained on the cause and the diagnosis of their LBP among the participants in the present study. Moreover, majority of LBP being non-specific will result in patients frequently ending up with several, in addition to often contradicting diagnoses depending on the number of practitioners consulted and the clinical investigations they may have been subjected to (Leboeuf-Yde et al., 1997). It has also proved unrealistic to diagnose precisely in pathoanatomical terms the precise cause of LBP in more than 10% to 20% of patients according to Waddell (1996). The study therefore reveals that, very little is known about the cause of LBP due to the fluctuating results as reported in the literature (Leboeuf-Yde et al., 1997). Other studies that have established similar health education needs among individuals with LBP include Deyo & Diehl (1986); Borkan et al. (1995); Glenton, (2002).



The limitations of the scientific literature available on LBP in Kenya may also trouble physiotherapists who seek for accurate prognostic estimates on LBP. Several issues are also responsible for lack of the capacity of physiotherapists and researchers in generating accurate and clinically useful information on the prognosis of LBP. Firstly, the prognosis is exceptionally unpredictable even within clinically homogeneous patient subgroups. Secondly, recovery from a LBP problem can be measured with a multiplicity of measures. While prognosis is normally characterised in terms of symptom reduction, functional improvement, and return to work, these measures may present extraordinarily different impressions of outcomes according to Roland & Morris (1983) and none has been established as a benchmark for assessing prognosis. Other studies that

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

have found physiotherapists as lacking the capacity to generate accurate prognostic results include Cherkin, Deyo, Street & Barlow (1996).

Sullivan, Turner & Romano (1991) suggests that, when the cause, diagnosis and the prognosis cannot be arrived at, as will be the case with most LBPs, physiotherapists should switch from a curative to Rehabilitative Model of pain explanation and management. Treatment goals are altered from the identification and eradication of the cause of LBP to the improvement in patient functioning and lessening of suffering. Health education then may include explaining what is and what is not causing the patient's pain, educating that the pain is particularly expected to get better on a realistic time course.

Harland & Lavalley (2003) further recommend that, explanation be given in the prevailing circumstances, the treatment procedures in the layman's language to promote self-management in the face of the lack of understanding on the source of pain. It is also prudent that, before any information is specified to the individual, the physiotherapist to find out what the patient already knew and what they felt they may be lacking towards achieving their desired health goals so that the clinician could address them.

Based on the findings from the study, participants wanted to be educated on the cause, diagnosis and the prognosis of their LBP. However, since in most LBP cases, the cause, the diagnosis and the prognostic estimates are rarely known, it would be advisable to incorporate a Rehabilitative Model of pain explanation to the individuals with LBP during health education sessions.

5.2.2 LACK OF EDUCATION

A key health education need that also emerged from the participants was the lack of education on some aspects during an episode of LBP. There was a diversity of needs that were revealed on the lack of education. The dimensions ranged from, lack of education relating to sex and LBP, lack of education on healthy lifestyles, lack of education on exercises and lack of education on the appropriate utilisation of health services along with the lack of education regarding alternative therapies for LBP.

5.2.2.1 Lack of Education regarding Sex and LBP

Lack of education regarding sex and LBP featured considerably in the participants' responses. The finding was not surprising particularly in the African perspective where diverse cultural beliefs concerning sex and LBP flourish. Nevertheless, topics such as sex, apart from their sensitive nature are also difficult for patients to talk about openly particularly among individuals of different age groups such as elderly patients and young physiotherapists.

It is also doubtful whether the training of physiotherapists at the undergraduate level engages them on their own attitudes, beliefs and values in relation to topics such as sex. The discomfort among physiotherapists to discuss sexual topics could therefore influence the quality of LBP management as expressed by the participants in the study. Low back pain is a condition that required to be influenced at many levels and the possible explanation on the lack of education

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

regarding sex and LBP may be as a result of lack of appropriate training to the physiotherapist.

In addition, most health care facilities have ill defined health education protocols for the general patient population which could have resulted to the expressed need. Therefore, it may be difficult for most physiotherapists to satisfactorily address the lack of education on sex and LBP due to the lack of clear policies over the issue in most health care facilities that could have facilitated for the resolving of the expressed need.

Some studies have established similar health education needs among groups of patients with LBP. For example, in studies conducted by Abyholm, Hjortdahl & Smertene (1999); Glenton (2002), the researchers found LBP sufferers as requiring education on a range of aspects on sex and LBP. Participants in those studies were particularly interested to know whether sex or lack of it could affect LBP and whether there were safe sex positions that they could adopt during an episode of LBP. Those findings are similar to the current study's findings on the area under discussion.

However, Johnson (2003) has established that, LBP was capable of affecting sexual function. According to the author, LBP affects sexual function in two ways, firstly, it could hinder one's ability to move freely and thus limit positions one could use in order to enjoy sex. Secondly, LBP could affect one's ability to respond sexually. However, having sex could help relieve the pain according to Johnson (2003). Some African beliefs view sex as capable of relieving LBP.

However, during a sexual activity McGill (2001) clarifies, the deep lumbar stabilizers are co-activated leading to 'sufficient segmental lumbar stability' resulting in some form of pain relief.

One of the first aims of patient education though, is to dispel misconceptions, which may proceed and act as a barrier to LBP recovery. Misconceptions such as those held by some participants in the present study require to be replaced with explanations that are credible and provide the participants with self-confidence to carry on with life (Klaber-Moffette, 2002). The explanations need to be done without exposing the individuals to further harm. From the findings, it is clear that although participants wanted to be educated on some aspects relating to sex and LBP, the physiotherapists were ill prepared for the task due to probably lack of training or lack of policy on patient education. It is therefore essential to address the need raised by the participants in the study.

5.2.2.2 Lack of Education on Exercise and Healthy Lifestyles

Overall, the findings show that, there were deficiencies in education on the aspect of exercises. Lack of education regarding aspects on exercises may have created negative influence among the participants leading to non-adherence to prescribed programmes with regrettable treatment outcomes.

Exercise constitutes the core component of the physiotherapy profession. Therefore participants' reports could be assumed to indicate that; there was need for better exercise explanation methods for the individuals with LBP. The need for education regarding aspect of exercises may however have been confounded

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

by several reasons. Firstly, the multiplicity of the medical professionals consulted may have offered diverse advice on exercises creating confusion to participants. Secondly, participants may have misinterpreted the health education offered due to the inappropriate communication methods used to educate them and the language used. Consequently it was highly likely that the exercise given were not acted upon as required due to the failure of the participants to understand the information offered.

In addition, participants sought to be educated on alternative exercises in place of the high impact aerobic exercises as a way of living healthy lifestyles during an episode of LBP. The expressions suggest current health education programmes as designed and implemented with the aim of merely eradicating the offending health problem ignoring other aspects of LBP. It has been found that targeting the anatomical causes of LBP only leads to a temporary restoration of the problem (Waddell, 1996; WHO, 2001). The approach tends to ignore participants' lifestyles that were likely to be distracted during the course of LBP management leading to the expressed need. The finding explains the importance of an all-encompassing form of health education approach that covers all aspects as expressed by the participants. A recommendable approach is the patient-centred care approach that addresses patients' needs from the patient's point of view taking into consideration the social aspects of LBP. It distinguishes from the Medical Model of Health Education which emphasis on disease control and addresses all the patient's needs as they arise (Klaber-Moffett, 2002).

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Moreover, several guidelines have been developed regarding appropriate substitutes for the high impact aerobic exercises (Clinical Standards Advisory Group, 1994; Burn, 2000; Koes, van Tulder, Ostelo, Burton & Waddell, 2001) the guidelines advocate that, those suffering from LBP should make use of low impact programmes such as walking; swimming, cycling and specific back care programmes as directed by their physiotherapist. Furthermore, Faas (1999) has also come up with some recommendations on who should do which exercise and when that could be adopted and incorporated in patients' education programmes.

Participants further expressed a need to be educated on the purpose for the exercises performed prior to commencement of the exercise sessions. It is expected that, with increased education on the aspect would increase understanding over the aim of the exercises leading to better adherence and could result in better treatment outcomes.

However, perhaps due to the busy schedules on the part of the physiotherapists resulting from high patients volumes, there could be lack of adequate time for detailed explanations on exercises to the patients. The lack of time may have been complicated by the diversity of the patient population, resulting from the high preference for the health facility by most patients. The Nairobi Hospital enjoys the status of a premier health care referral facility within the East and Central African region where those in need of high quality health care services prefer. It is therefore not surprising that patients' numbers will at times be high

resulting to possible lack of adequate time among the physiotherapists to explain to their patients in detail the specific aims of the exercises prescribed.

Nevertheless, patients deserve to receive clear explanations about the purpose of the exercises before embarking on any exercise with a view to increase compliance (Klaber-Moffett, 2002). In situations where time pressures among the medical professionals may prevail, the same author advises, the programme could be written down and illustrated for the patients to read during their own time so as to improve the level of adherence. In view of this recommendation therefore, better methods of education regarding the expressed aspects on exercises require to be established based on the individuals' established needs.

An essential technique that could overcome the expressed need with regard to the aim of the exercises could be through conducting education sessions in small groups for the first time patients prior to engaging on the actual therapy (Faas, 1999). The individuals could be educated in small groups, allowing sufficient time to address any pertinent questions on the exercises that may arise from the patients. Further follow-up could then be done by use of written pamphlets as advocated in the literature.

5.2.2.3 Lack of Education on use of Health Services

Regarding the use of health services, participants expressed a need to be educated on the existence of health services offered for LBP such as physiotherapy. Most participants reported that, they were not informed on the existence of most health services such as physiotherapy and the role the

discipline played in LBP management. In addition, they wanted to be educated on who they should have consulted for LBP management.

In view of the lack of education over the existence of the health services, some participants were compelled to consult a variety of medical professionals for their LBP. The consultations exposed some of the participants to conflicting health education from the variety of the medical professionals consulted or to some extent led to a delay in seeking for health service (Fritz & George, 2002; Lee et al., 2004). Participants were also likely to consult inappropriately, receive contradicting health information leading to a delay in the appropriate management. The findings from the present study are similar to the findings by Fritz & George (2002) who implicated lack of education on available health services as capable of hindering individuals from accessing health care services including physiotherapy.

One type of health education therefore, is one that aims at providing patients with information about the health services and the sensible use of those health resources available to their advantage (Pitt-Brooke et al., 1998). Once familiar with the health services, the authors further explained, the medical professionals should encourage the individuals to correctly and timely make use of the health resources when necessary so as to assist in minimising delay in seeking for the health service.

Perhaps as a result of the lack of education on the health services and the possible dissatisfaction linked to the medical explanations about their LBP,

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

participants in the current study may have expressed the need to be informed on the alternative therapies available for LBP. The need in addition may have arisen from the complexity and heterogeneity of patients' perceptions on a health condition such as LBP that was ill understood. For example, patients, who may have suffered from a medical condition over a long period of time, may occasionally feel the biomedical practitioner among others as generally delegitimising their illness experiences (Borkan et al., 1995). Moreover, when medical explanations given do not fit patients' own understanding of the health problem, uncertainty was bound to arise. The uncertainty was likely especially among those patients who may have consulted numerous medical professionals without receiving satisfactory explanation and progress on their LBP problem.

There is also some evidence that, lack of biomedical diagnosis in most LBP cases as consistent to increased disability coupled by less perceived control over pain which could lead to maladaptive coping strategies (Geisser & Roth, 1998). With time, the maladaptive coping strategies may build up into a desire to seek for alternative therapies. Some patients in the process could decide to consult complementary medical practitioners such as herbalists and other unconventional healers as a result of lack of any positive expectations and distrust from the medical professionals. Such patients will need to be encouraged and assisted in adhering to the prescribed health education programmes through a number of ways. The ways of encouraging such patients could include counselling, offering psychological support and appropriate explanation over their health problem as well as to why the problem may have persisted despite the

management. The aim would not only be aimed at improving on the patients' coping strategies, but also in educating them on appropriate health care services available for them and to encourage them to seek for the services whenever required.

The findings of the study are in line with the findings by Glenton (2002) who established comparable needs for education on the availability of alternative therapies among participants in a study on information needs among LBP sufferers in Norway. In her study, participants wanted to be educated on the role physiotherapy played on LBP management as well as alternative treatments available for LBP sufferers who had their LBP delegitimised by the medical professionals.



5.2.3 LACK OF COPING STRATEGIES

The lack of coping strategies that would have enabled participants to manage LBP effectively was well established in the current study. Lack of coping strategies may have led some participants into developing fear-avoidance behaviours, low self-efficacy levels that could have originated from lack of counselling and psychological support from the medical professionals.

The lack of coping strategies as highlighted by the participants clearly indicated that, LBP might be currently managed through the Medical Model where other aspects of LBP are disregarded and the physiotherapists concentrate on the anatomical causes of the problem (Richardson & Eastlake, 1994). Nevertheless self-management programmes are aimed at helping the individuals raise their

coping strategies through behaviour and lifestyles changes through a cognitive-behavioural approach, which when applied appropriately have been proved to work based on the stage of pain and built on appropriate education (Bandura, 1997). Self-management programmes though, are based on the understanding that the individual develops the means to build on the necessary strategies for coping with their health condition such as LBP.

According to Soderlund & Lindberg (2001), coping strategies are attentional or avoidant. Attentional strategies focus directly on the source of pain and the individual attempts to manage it regardless of the barriers, while avoidant strategies include the individual's denial of the pain sensation, distraction and attention-diversion. According to the authors, whether a coping strategy was adaptive or maladaptive depended on the internal factors of the individual. The internal factors comprise levels of self-efficacy, the nature of the pain problem and the specific situational factors in play such as encouragement or lack of encouragement from others, support and level of perception of the problem. It was these situational factors that participants in the present study lacked in and that should have been developed by the physiotherapists. The factors are further viewed in relation to the interactions between the person and the situation (Zeidner & Saklofske, 1996). Patients with recent-onset pain adapt well when they employed avoidant coping by basically ignoring the problem and continuing on with life (Holmes & Stevenson, 1990). However, the authors further explain that, those in chronic pain such as most LBP individuals, adapted well in attentional coping styles.

5.2.3.1 Fear-Avoidance Behaviours

Fear to further injury and pain especially while performing exercises discouraged participants from undertaking the prescribed exercises and also from attending some physiotherapy sessions. Participants described how they considered pain on movement as causing further harm and the belief that physiotherapy was a painful treatment procedure. Fear of pain was in addition, expressed as a major hindrance towards adhering to the given health education.

Participants who feared physical activity did so with the imagination that movement increased the possibility to further injury leading to more pain in that, whenever they experienced pain, some tissues were being re-injured (Symonds et al., 1996). This belief could compel some individuals to withdraw from active life with grave consequences on treatment outcomes and in performing activities of daily living.

Fear of pain to physical activity is a major contributor to the non-adherence in most health education programmes and a precursor to the development of chronic LBP disability due to non-compliance of the recommended health education programmes on physical activity (Klenerman, Slade & Stanley, 1995). Patients with negative beliefs about physical activity are also associated to an increase in LBP problems along with longer periods of work absence (Symonds et al., 1996). Moreover, fear of movement to re-injury as expressed by the participants in the present study is in addition the best predictor of patients' self-reported disability among most LBP individuals. The physiologic sensory

perceptions of pain do not add any predictive values in pain (Vlaeyen & Linton, 2000). Studies have however revealed that, patients who can overcome fear of movement such as expressed by the participants in the current study and physical activity when suffering from LBP, stand better treatment outcomes (Burton et al., 1999; Vlaeyen & Linton, 2000; Klaber-Moffet, Carr & Howarth, 2002).

Contrary to common belief among the participants that physical activity could have increased their pain and suffering, fear-avoidance beliefs about physical activity that they displayed were instead better predictors for poor LBP treatment outcomes (Al-Obaidi, Nelson, Al-Awadhi & Al-Shuwaie, 2000). All that the individuals with LBP needed to be educated on was that, pain was not advanced through a simple direct mechanical pathway. It was rather through a complex process that could be modified at many levels of the nervous system through appropriate behaviour change interventional measures through appropriate health education.

Albeit participants did have periods of increased pain, it was important for them to understand that, they could learn to cope with it and that they could do so with some success when well educated over the issue (Harland & Lavalley, 2003). The individuals get positive experiences by performing activities that were essential for daily activities (Klabe-Moffett, 2002). Subsequently, they are able to carry the experiences over to other activities of every day living with some

success. This could be achieved with a high degree of success by avoiding and altering fear avoidance behaviours.

5.2.3.2 Lack of Self-Efficacy

Participants in the present study were found to have low self-efficacy levels that translated into lack of coping strategies during an episode of LBP. The participants in the study narrated how they were powerless to perform certain activities due to LBP. In addition, participants believed that they were unable to perform certain daily procedures due to lack of ability resulting from LBP.

The participants' expressions pointed towards the association between patients' beliefs and functioning as predicted by the cognitive-behavioural Model of pain adaptation. Specific patients beliefs (that pain signals harm, that one was disabled, and that caring responses from others were appropriate) would predict patients' physical and psychosocial dysfunction and pain behaviours (Bandura, 1997). The findings therefore suggest current health education on LBP and other interventional programmes as specifically not designed to modify certain maladaptive patient attitudes and beliefs, including the belief that one was disabled and that one lacked the capacity to perform certain tasks due to LBP. Such interventions could occasionally result in diminished patient pain behaviour, physical disability, depression and non-adherence to health programmes.

Studies conducted by Jensen, Turner & Romano (1994a); Jensen, Turner, Romano & Lawler (1994b); Mark, Jensena, Joan, Romano, Judith, Turnera, Amy Good, Laura & Wald (1999) did establish associations between self-efficacy, pain

beliefs and patient-rated measures of functioning. In those studies, low self-motivation (self-efficacy) was reported as a crucial factor that could discourage patients from coping adequately with pain problems through assumptions that one was unable to perform certain tasks. According to the authors the beliefs could best be targeted in a multidimensional pain treatment programmes although presently unknown as to whether changes in the beliefs precede, follow, or occur concurrently with changes in pain levels.

Furthermore, the construct of self-efficacy for such individuals as introduced by Bandura (1997) represents a key aspect of social-cognitive theory on self-motivation. According to the theory and research, self-efficacy makes a distinction in how individuals feel, think and act. In terms of feeling, the author asserts, a low sense of self-efficacy was associated with depression, anxiety, and helplessness. Most individuals with LBP in general including some in the current study were found to be depressed, consequently requiring elevation on their self-efficacy levels enough to engage in activities of daily living.

Indeed, individuals who considered themselves as able to control episodes could conduct more active and self-determined life course than the ones who considered themselves as unable to. According to (Bandura, 1995), individuals with high self-efficacy levels choose to perform more challenging tasks with or without the necessary resources such as help from others, and are less likely to be hindered by LBP in achieving the set tasks. When setbacks occur, such

individuals recover more quickly and maintain the commitment to their set tasks and goals.

Elevated self-efficacy levels would have allowed participants in the present study to decide on more challenging settings, explore their environments, or create new environments that would facilitate their wellness such as joining health clubs for healthy lifestyles regardless of LBP. Such individuals would have had confidence in their coping abilities across a wide range of demanding situations such as exercising, domestic chores, driving and even performing occupational tasks as demanded by the economic realities of the modern day. Generally, self-efficacy aims at a broad and stable sense of personal competence to deal effectively with a variety of stressful situations (Schwarzer, 1994) as in LBP.



A strong sense of personal efficacy was related to better health, higher achievements, and more social integration and it is a key variable in clinical, educational, social, developmental health, and personality psychology (Bandura, 1997; Maddux, 1995; Schwarzer, 1994). Moreover, Maddux (1995) established that, low self-efficacy expectations regarding a behaviour or behavioural domain as leading to the avoidance of those behaviours, a common behaviour in the current study. Thus, self-efficacy beliefs could be useful in understanding and predicting behaviour among the individuals with LBP and influencing them early before they became conditioned on the individuals.

Four sources of information have been specified through which self-efficacy expectations among patients could be learned and encouraged by which they

could be modified. They include Performance accomplishments, that is, experiences of successfully performing the behaviours in question such as performing the exercises with the aim of overcoming the fear of pain, clear learning or modelling such as appropriate healthy lifestyles, verbal persuasion for example, encouragement and support from others, physiological encouragement, for example, alleviating anxiety in connection with the behaviour (Bandura, 1997). When applied in clinical setting, the approach could probably improve self-efficacy among individuals with LBP leading to better coping strategies.

5.2.3.3 Lack of Counselling and Psychological Support

The findings from the current study indicate that, participants required counselling services and psychological support during an episode of LBP. Participants recognised that, an episode of LBP was associated with stress that needed to be counselled and psychologically supported as part of the management.

However, the majority of the medical professionals including physiotherapists target the pathoanatomical causes of LBP paying less attention to the broader dimensions of illness that embrace psychosocial aspects of LBP. The findings therefore suggest that, the medical professionals may not have internalised the basic principles of counselling and that, there was over emphasis on clinical aspects that tend to be needless since all that was required was purely reassurance and education to the patients.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

In her study on LBP patients' 'information needs' using a qualitative paradigm, Glenton (2002) found that, the medical professionals never paid attention to psychological and psychosocial aspects of LBP. In addition, the medical professionals did not advise their patients on how they could overcome the psychosocial and psychological problems. Burton (1997) and Waddell (1998) had earlier established similar findings when they found that, LBP was as a result of bio- psychosocial factors, which needed to be targeted during LBP management.

Consequently, the failure to respond to physiotherapy treatment in most LBP may be as a result of the treatment currently offered being focussed at one specific level, while the influence of other levels on the outcome could be stronger (Gronblom-Lundstrom, 1992). In view of these findings, physiotherapy treatment was unlikely to be successful in patients with psychosocial problems and who were psychologically distressed because their problems were not physical in nature.

The findings from the present study strongly corroborates with other studies that have confirmed individuals with LBP as requiring counselling and psychological support as part of the management. For instance in the work of Hope & Forshaw (1999), 32% of patients at first assessment were classified as distressed. This was in contrast to a mere 6% of people found to be distressed in a population devoid of LBP in an earlier study by Mannion, Dolan & Adams (1996). As a result, the multidimensional nature of LBP was a predicament that required a multidimensional approach that could effectively be influenced by incorporating

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

counselling and psychological support during health education sessions. Therefore, the failure to offer counselling and psychological support to individuals with LBP challenges the management approaches as recommended by the American Physical Therapy Association (2003) that advocates strongly on patient counselling and psychological support.

Physiotherapists however, may believe that they were ill equipped to deal with health education and stress counselling needs of their patients. For instance, it was well known that physiotherapists had immense knowledge of mechanical causes of LBP, but knew less about the social and psychological aspects of LBP (Pinnington, 2001). As a result, the author asserts, this could be viewed as a sensible recognition of professional limitations, as a failure of physiotherapists to provide comprehensive care or as a failure of professional education curriculum to equip physiotherapists with counselling skills in their preliminary training. Furthermore, experienced musculoskeletal practitioners, physiotherapists included are all aware of recent research on LBP and specifically the psychological issues that surround it. To the current moment, physiotherapists have not acknowledged putting into practice existing information on psychological issues enough to generate change to LBP management (Pinnington, 2001).

Nevertheless, although physiotherapy has no defined internal source of expertise on the subject (counselling and psychological support) to make an impact on the problem, if well versed on the subject, physiotherapists may be in a better place

than any other medical professional to spend enough time with patients to apply psychological principles to the patients' advantage. After all, in many occasions they spend more time than any other healthcare practitioner with patients and this places upon them a big responsibility to use that time effectively in counselling and offering psychological assistance to the individuals.

All the same, Turner (1996) views it as essential and quite uncomplicated for the physiotherapists to encourage the patient that LBP though unpleasant, was also a widespread problem and similar to the common cold, would run its course realistically uninfluenced by complex medical procedures other than physiotherapy and self-management. Patients, the author further affirms, needed to know that, just like flu, LBP had a tendency to persist over time. Equipped with the knowledge, patients could then get some relief by applying self-management strategies that they had been educated on by the physiotherapist.

5.2.4 LACK OF SUPPORT

Lack of support from several important sources to the participants emerged as the fourth health education need making it the fourth theme from the interviews. It was apparent that lack of social support from a number of key sources affected health education programmes. The lack of support hindered the participants from accessing as well as from adhering to the prescribed health education. On scrutiny, there was lack of social support, lack of support from the family members, at the workplace, from medical professionals and from the medical

insurance. In addition, work related issues did discourage health education dissemination and adherence.

5.2.4.1 Lack of Social Support

Participants' expressions described lack of social support as affecting health education. The systems and structures in place were termed as unsupportive to the participants during an episode of LBP. Social support systems and structures that were mentioned as unsupportive included the transport systems and road network.

The social structures reported as unsupportive to the participants were lack of appropriate roads that required enormous resources that most developing countries such Kenya could ill afford. It was therefore not surprising that social structures were unsupportive to the participants. The research setting was in a developing country where more than half of the population lived below the poverty line with less than a Dollar to spend on food a day (Central Intelligence Agency, 2004). Besides, past governance problems that led to lack of accountability on the resource allocation and utilisation the country experienced over the years had pushed the national monetary reserve to extreme deficit leaving little resources for social development.

In addition, the possible absence of civil pressure groups that could have advocated for the rights of the individuals with LBP may have further exposed the individuals to the unsuitable social structures. Furthermore, the unfavourable trends on the weak economy that is agriculture-based, may also have created

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

unfavourable opportunities for sufficient social systems installation and maintenance that could have possibly presented the individuals with the support they required.

Nonetheless, it is recognised that a variety of support resources together with personal income, social systems such as proper transport networks, at the workplace, employer, colleagues and medical insurance organisations were linked to better health outcomes for people with chronic conditions such as LBP (Stuifbergen & Rogers, 1997). The findings of the current study are identical with the views by Klaber-Moffett (2002); Dolce (1987), assertion that, “long term adherence to back care programmes was dependent on social support the individual was accessible to”. Support extended by appropriate social structures, family members, friends, employers and colleagues are said to assist in improving treatment outcomes for health problems (Dolce, 1987), LBP included. The author reported that, lack of the structures as frequently acting as barriers to patients’ accessibility to health services including health education and could affect treatment programmes through inconveniences and lack of encouragement.

Furthermore, long-term conditions such as LBP will normally leave individuals with tremendous financial loss either due to lack of earning resulting from lost workdays or the direct costs of the medical care. Such individuals will therefore require support from various sources including state institutions and other organisations that the individual are affiliated to (Stuifbergen & Rogers, 1997).

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Without the appropriate support from these sources and the accessibility to organised acceptable social structures, such as the physical infrastructure and the medical insurance, long-term adherence to prescribed health education programmes could probably be difficult to attain.

The nature of LBP was such that, without addressing it from the biopsychosocial approach, effective health education adherence could be complicated to achieve (Waddell, 1998). To address the aspects of social support systems therefore, a more encompassing health promotion approach was required that would assist the individuals to lobby the relevant authorities on the need for better social systems that were appropriate to the individuals with LBP. Employers and family members similarly needed to be sensitised on the need to put in place mechanisms at the place of work and at home that would address the needs of individuals. The aspect of health promotion is however beyond the scope of the current study.

However, one way in which individuals with LBP may be shielded from the negative impacts on the lack of social support is particularly through contacts in an individual's close networks such as with people with a similar health problem, say back support groups who are often the first source people consulted regarding health concerns (Boaz & Hu, 1997).

5.2.4.2 Lack of Support from the Medical Insurance

Other areas and issues that hindered health education among the participants and that required to be addressed in future health education programmes was

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

lack of outpatient medical insurance cover. Participants expressed lack of support from the medical insurance as a barrier to their desired health goals. Medical insurance coverage in the majority of insurance firms dictated on inpatient coverage as a way of reducing unnecessary health care expenses and also as a way of controlling fraud. Easy access to medical insurance cover on outpatient basis could have facilitated participants to conclude the prescribed treatment sessions would have enabled participants to received the education as planned by the physiotherapist. Participants consequently wanted to be educated on how they could lessen the consequences of underinsurance.

The medical insurance firms may however be acceptably interested in the practice strategy of covering inpatient exclusively because they are directly linked with payment decisions and therefore eliminated undeserving consultations among individuals with LBP. On the contrary, the cost containment by the medical insurance through selected in-patients coverage is a great challenge to the evidence based practice (Shapiro, Lasker, Bindman & Lee, 1993). For example, experience from the US post payment review systems have established that, savings ratios, cost norms and spending targets as the exclusive drivers in the decision making on admissions by the medical insurance rather than the quality of care as considered by patient outcomes (Grogan, Feldman, Nyman & Shapiro, 1994).

Furthermore, the decision to cover inpatients only fails to assess whether medical efficacy had been achieved or whether unnecessary care had been

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

eliminated or whether fraudulent practices that were aimed at had been corrected among patients (Grogan et al., 1994). In addition, there is reason to believe that over treatment on the persistence on admission for one to qualify for reimbursement could possibly increase sickness behaviour among patients partly through disuse of body muscles by unnecessary bed-rest effects that could make some individuals to exaggerate their pain intensity (Frank, Kerr, Brooker, Demaio, Maetzel, Norman & Wells, 1996).

Medical insurance firms need to review their unwillingness to pay for rehabilitation care for individuals with LBP on out patient basis when they actually spend more through admissions (Stuifbergen, Seraphine & Greg, 2000). However, to address the issue of sensitising third party payers for rebuttal of the unpopular clauses in the medical policies, a health promotion approach may perhaps be necessary to assist the individuals through lobbying for the necessary insurance clause annulation.

All the same, during health education for the medically uninsured, it is important to first focus on the individuals' immediate health needs, and then move on to the promotion of healthier lifestyles as established by Kessler & Alverson (2003). The authors found this group of peoples' health education needs as better served when they were offered health education through a variety of teaching methods that engaged them in their own care and health promotion activities through written information. Indeed, a successful health education programme for the medically uninsured presents the individual with a sense of control by giving

appropriate information over their biological as well as on the psychosocial and socio-economic limitations such as those encountered by lack of medical insurance. A well-designed pamphlet that the individuals could use on their own was found to be the best option since they had limited resources to carry on attending for medical sessions.

5.2.4.3 Lack of Support from Work and Related Issues

The findings from the current study additionally revealed impediments to health education among the participants as originating from work, work-related issues and responsibilities. The issues were part of the environmental barriers advocated by Wilkins et al. (2001) and related to time pressures that physiotherapists and patients experienced. The issues expressed were actual tasks involvement that applied to the physiotherapists and to the participants as well.



Low back pain strikes the young and predominantly the economically active individuals who have to bear with profound family responsibilities (Burton et al., 1999). Therefore, to most individuals, due to the pressure of work along with other economic activities, securing free time to break away to concentrate on physiotherapy treatment may be difficult. Likewise, as a result of the high prevalence rates of LBP as reported in some literature (Waddell, 1996; 1997; 1998), the numerous chronic modern disabling conditions such as stroke, arthritis and other traumatic conditions resulting from road accidents presented at the Rehabilitation Unit, the physiotherapists' work schedules will most times be crowded leaving little room for satisfactory patient education. In addition, most

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

outpatients' settings only permit for brief appointments that allow little time for health maintenance and health education in the context required of LBP (Stuifbergen & Rogers, 1997).

Furthermore, physiotherapists who were overworked were also said to have insufficient time to dedicate to appropriate patient education (Waitzkin, 1985). Due to all these factors, individuals with LBP will often be faced by challenges when they attempted to obtain suitable health education from such physiotherapists. Moreover, Videman, Rauhala & Asp (1989) has established work-related issues among a number of professions such as nursing as capable of affecting health education programmes. In their study, Videman et al. (1989) established that, random duty allocations or emergencies for example, as playing part particularly among nurses who had to deal with unpredictable work overloads (patients) and could therefore not adhere to the prescribed health education. Such professionals in addition failed to honour appointment due to lack of flexibility at their places of work. As such, frequent duty reorganisation among physiotherapists could similarly affect health education due to sudden therapist changes among patients.

However, in countries such as the Netherlands, working in an out patient rehabilitation unit facilitates adequate patient education due to the emphasis the country places on preventing illness than curing a medical condition (Bertels, Brummerler, Dijkum, Giebels & van der Mannen, 1985). According to the authors, in that country, LBP management is based on the understanding that

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

LBP was as a result of bio-psychosocial factors which were thus targeted at the time of patient management with less emphasis on high technology medical equipments that aim at manipulating the pathoanatomical causes of LBP. Education programmes are given top priority with high compliance rates.

When patients and the physiotherapists' time are insufficient due to occupational pressures, Turner (1996) recommends the use of the limited time in a structured manner consistence with the cognitive-behavioural methods addressing patients' problems in stages. This would permit topics that are crucial in the health education covered as intended within the prescribed number of sessions. In addition, a well-structured patient education booklet could be of immense use to the individuals at their own free time.



Besides, the emergent understanding among administrators, practitioners as well as researchers is such that, working environments frequently play important roles in the development and sustenance of LBP (Gebhardt, 1994). According to the author, working environments that do not encourage and allow flexibility to workers will not only lead to the development of LBP but will also sustain it into its chronic stage. In view of this and its apparent high financial costs, efforts aimed at reducing and educating individuals on how to address work-related issues in LBP management may be fruitful (Kim et al., 2004).

When addressing health education for LBP individuals, it is necessary to put into consideration all the issues that may hinder the individuals and physiotherapists from accessing and offering health education information appropriately

correspondingly. When work related issues appear to interfere with the health education programmes on the individuals, and when practicable, recommendation on some form of temporarily work alteration could be made to allow for flexible schedules that permit adherence to the recommended practice on LBP.

5.2.5 LACK OF APPROPRIATE COMMUNICATION PROTOCOLS

The fifth health education need emerged when communication methods and skills employed currently were expressed as inappropriate to participants. Participants expressed the verbal method of education, the content and education progression as inappropriate to them. In addition, communication skills among medical professionals who included the physiotherapists were expressed as unsuitable to the participants while the diverse sources of health education were reported to have exposed the participants to conflicting health information.

5.2.5.1 Lack of Suitable Education Methods and Contents

The current method of health education to the individuals with LBP was established to be verbal. Participants described the method as inappropriate to them because it lacked uniformity among physiotherapists and patients. Apart from the method lacking uniformity among physiotherapists and patients, when presented, verbal communication was prone to forgetfulness.

Participants were likely to forget the verbal information given to them at a time they were in pain and often when they had limited or less recollection of the happenings at the Rehabilitation Unit. Moreover, pain can cause anxiety and

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

compound further the feelings of stress associated with LBP leaving little room for one to remember the information they may have received verbally. For instance, many patients when in pain suffer emotional problems, which could affect their recovery and quality of life let alone remembering the health information given at the time.

The material presented verbally also raises questions about their relevance since such information materials are in most occasions based on personal experiences and beliefs. Health education therefore needed to be effective both in terms of the methods used and the contents presented. This can be achieved by drawing on research knowledge and critical evidence-based actions.

It is however, still said that many health practices today including health education programmes are based on experience, traditional models and untested theories (Kitson, Ahmed, Harvey, Seers & Thompson, 1996; French, 1999). This was in line with the expressions from the participants in the current study. Furthermore, in the framework of evidence-based practice, a successful patient education programme means combining clinical expertise with the best up-to-date research knowledge and the patient's views (French, 1999).

The underlying principle of patient education on LBP is to empower them by means of education, to give them more say in their care and help them manage their own health (Charnock, Shepperd, Needham & Gann, 1999). This gives them a sense of empowerment, which can be divided into bio-physiological,

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

functional, cognitive, social, experiential, ethical and financial (Leino-Kilpi, Maenpaa & Katajisto, 1999).

In view of that, such a key component in a management of a troublesome health condition such as LBP therefore cannot be offered through an informal method of communicating such as verbal that could also lack uniformity. These findings were not surprising though considering the much flexibility allowed to physiotherapists, the lack of standards and protocols on patient education in most health care facilities.

There is however good evidence to suggest that, appropriate communication methods such as the use of leaflets as having considerable benefits towards patients adherence to health education presented and could support evidence-based patient choices as compared to verbal communication (Roland & Dixon, 1989; Cherkin et al., 1996; Symonds et al., 1996). Furthermore, providing written information to patients may offer them a resource that they could refer to at any time and enhances verbal communication. Appropriate communication methods in addition offer positive outcomes relating to patients' satisfaction with the information and enhance communication with the physiotherapists.

Participants in the current study moreover expressed the health education progression as not harmonised and that, health education offered declined with each progressive session. The possible explanation to this finding could be placed in the context of time limitation in subsequent sessions. For instance, initial appointments at the Rehabilitation Unit are one-hour sessions, allowing

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

sufficient time for physiotherapists to exam patients, treat and offer health education. The time however shrinks to half an hour in subsequent sessions allowing the physiotherapist limited time for treatment and health education.

The lack of education progression to participants could in addition have occurred due to lack of written health education materials that patients may have consulted at their own time relying less on the physiotherapist. The findings in the present study agree with those by Sluijs (1991) whose study found physiotherapists as concentrating their health education in the first session and thereafter, education giving ceased.

With the appropriate patient education methods are in place, the need for education progression may not arise since all the information would be systematically written. The advantage of education based on written material is that, patients could study the information themselves. Written material has the extra advantage of being a source from which patients could revise matters connected to their care without having to rely on the physiotherapists all the time. The findings are similar to the findings from the study by Fitzpatrick & Hopkins (1983) concerning the potential impacts when unsuitable communication methods and skills are used on outcomes in health services.

Moreover, physiotherapists in the current study were reported to plan their education informally with more emphasis placed on lifting techniques whereas attributing the cause of LBP to lengthy sitting habits. However, it is well known that, LBP was a multidimensional problem with the cause and diagnosis in most

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

cases uncertain. The findings further indicate that, current health education programmes were Medical Modelled and viewed LBP in pathoanatomical terms. Sluijs (1991) had established similar findings where physiotherapists were noted as planning their health education giving informally based on personal experiences on what they assumed to have caused LBP in pathoanatomical terms leaving other crucial aspects that were likely to sustain it.

To deal appropriately with the expressed health education need for the individuals with LBP, Sluijs et al. (1993) suggested a progression of education giving through out the course of therapy sessions; giving advice about pain relieving measures in the first sessions, advice on curative measures in follow up sessions and advice on how to prevent recurrence in the final sessions. During the entire programme, physiotherapists should also address the psychosocial factors, as occasionally, psychosocial factors were not evident.

Several approaches could be used in designing health education materials for the individuals with LBP such as the one used by Kim et al. (2004). These authors, in a study on the cost effectiveness of a back education programme among fire fighters, utilised a low back safety programme modelled by Zachrisson-Forssell (1980). The Model was based on educating participants on; the epidemiology of LBP, the anatomy and biomechanics, principles of back safety, correct lifting and handling techniques, correct posture, nutrition advice, stress management, exercises and pain management.

A systematic review by Kim et al. (2004) had established that, an intensive health education programme lasting three to five weeks three times a week as yielding the most promising results. Other aspects incorporated in delivering the health education in the study were hands-on practice and feedback sessions simulating work environments and work place ergonomic evaluation. Slides, videos and spine models were also used in delivering the programme that resulted in over 70 % reduction on new LBP reported incidences. Such a programme could be implemented in other health education programmes for LBP patients with similar success.

5.2.5.2 Lack of Appropriate Communications Skills

Participants in the current study described communication skills among the medical professionals as hindering health education. The language used by most medical professionals was expressed as technical which participants termed as unsuitable to them. Participants reported that on most occasions they never understood the advice given by medical professionals due to the use of technical terms.

It has been found that, verbal information from doctors, nurses, and physiotherapists have occasionally been complicated to a large number of non-medical people including patients (Davis et al., 1996). The use of technical terms by medical professionals suggests the failure to communicate in simple, easy language to their patients, which was a key component of an effective health care service (Elstein & Schwarz, 2002). An effective therapeutic alliance was

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

based on good communication skills. When medical professionals fail to communicate effectively with their patients, even the treatment offered may be ineffective. In view of the findings, there was need to improve on communication skills among medical professionals so as to successfully communicate with their patients for positive treatment outcome.

Several reasons have been implicated for the lack of appropriate communication process by the medical professionals (Elstein & Schwarz, 2002). For example, professional training, traditions, personal attitudes and experiences are believed to influence the way medical professionals function and interpret circumstances in which they found themselves. Moreover, traditionally in the majority of health care facilities, professional education and continuing professional advancement, key players in the health services deliberate around the Biomedical Model. The medical professionals constantly make use of technical terms in which assumptions for actions, health education dissemination, where types of explanations and meanings are rarely explored in much depth nor are they made clear when delivered to patients (Elstein & Schwarz, 2002).

Lack of appropriate communication methods and skills among health care professionals have also been established in other studies. For instance, in a study by Payton et al. (1998), although half of the participants wished to be involved in making treatment decisions, only one in four said knew how. This was as a result of the inappropriate communication skills on the part of the physiotherapists who may have offered health information in a language that was

not understood by the patients. The findings in the current study are in line with the findings by Glenton (2002) who established lack of communication skills among medical professionals as frequently in use with difficult terms as the order of the day when communicating to patients.

Effective communication among health professionals has been progressively acknowledged (Hunt, Adamson & Harris, 1998). In addition, the emerging models of health care further stresses for the requirement that has a strong essential dependence on successful interpersonal communication skills, not only between patients and health professionals but also amongst those practising (Nordholm, Adamson & Heard, 1995). Patient satisfaction appraisals have moreover exposed their expectations to be most linked to appropriate communication rather than on the biomedical criteria such as providing information to them in easy to understand language, communicating to other health professionals on their behalf and providing support whenever communication was a problem (Fitzpatrick & White, 1997).

Additionally, Moffet & Richardson (1997) have highlighted on similar needs for perfect communication and teaching patients self-directedness as a major tool for achieving positive clinical effects using simple layman's language that was easy to understand. The authors further reported the care of patients and care of students as modelling each other and could therefore be applied in health education programmes for patients with success.

5.2.5.3 Lack of Reliable Source of Health Education

The present study has established that, participants lacked a reliable source of health information. The sources of health education that participants had were amazingly diverse. The different contributors of health education to the participants further suggest the prospects of conflicting health information among the participants.

It emerged for example that there was lack of coordination in the way the information was presented, standardisation of the contents of the health information given along with the dissemination methods from the different sources that offered the education. The findings may also suggest that, in general, the health education may have been founded on personal experiences and beliefs as established in the literature.



The diverse sources of health education may have originated from the lack of standardised health education methods in most health institutions along with the lack of policies on health education programmes that included the research setting. However, the failure to propagate scientifically based health education was widespread also among medical professionals and was as a consequence of improper programme planning (Antman, Lau, Kupelnick, Mosteller & Chalmers, 1992). According to the authors, the medical advice given by most medical professionals was often based on a combination of tradition, intuition and was more or less well planned.

However, health education based on experience alone was not a satisfactory basis for medical decisions or recommendation (Glenton, 2002). According to the author, health education information not based on evidence could increase problems of relevance as well as reliability especially when originating from diverse sources. Nonetheless, when patients discover that they had a health problem that was not adequately explained by the medical professionals, they had a tendency to seek informal advice usually non-medical views from the significant others or from those who may be incompetent (Skevington, 1995). The trend could lead to acquisition of conflicting health information. The advice may be subject to a primary consequence (Cunnington, Turnbull, Regher, Marriott & Norman, 1997) and unless other acceptable explanations are offered it can often remain the patients' conviction. From the findings it is clear that individuals with LBP therefore need a reliable source of evidence based health information.

5.2.5.4 Conflicting Health Education

In addition, to the diverse sources of health education, the health education presented to the individuals by some medical professionals was expressed as conflicting. The conflicting health education left participants confused subsequently affecting adherence and compliance. The expressions from the participants centre on patients predicament as they searched for both appropriate and casual advice frequently non-medical sources or from those not proficient to (Skevington, 1995).

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Since in the majority of LBP cases the precise cause is almost never known according to Deyo & Phillips (1996); Waddell (1996), the physiotherapist may also frequently feel incompetent to present a satisfactory explanation on LBP and may therefore offer information based on personal experiences and beliefs. Additionally, preliminary consultations from different medical professionals will frequently present fragmented technical explanations specific to the area of expertise of the examiners (Harland & Lavalley, 2003). In the process, different health care providers consulted will probably recommend diverse and often mutually exclusive explanations to their patients. As time lapses, individuals with LBP may end up receiving several, often dissimilar and contradictory health education advice (Skevington, 1995; Fritz & George, 2002; Lee et al., 2004). The contradictory health education may build mistrust, confusion, anger, or hopelessness in patients who may not have received a reasonable explanation for their health problem according to the authors. Patients may for this reason lose confidence in the clinical explanations and search for alternative explanations.

In any case, individuals with LBP are most likely to consult various medical and non-medical sources out of disappointment with the expectation of getting an acceptable illumination on their health problem. Part of health education for that reason should be aimed at encouraging the individuals to develop confidence and trust to the prescribed programmes and to be tolerant with the programme as a way of reducing prospects for creating situations where LBP may remain a major health concern. This however, may be hindered by lack of professional

training among those handling LBP patients such as the physiotherapists in counselling discipline and appropriate communication skills. From the findings, it was clear that, participants required a reliable source of health information for their education needs.

5.3 LIMITATIONS OF THE STUDY

There are some limitations in this study that the reader should consider when applying the findings. Firstly as mentioned in chapter three on methodology, the participants in the study were purposively and not randomly selected, therefore generalisation of the findings to other patients is limited. Secondly, participants were individuals who were receiving physiotherapy treatment that included health education at the time of the study. Therefore, their health education needs may have been influenced by the education given. Lastly, the research setting is a premier health care facility of international standards, the researcher for that matter is uncertain whether health education needs among individuals with LBP attending the health facility would differ with those attending a general public health facility in Kenya. Nevertheless, despite the few limitations, the study-identified aspects that needed to be addressed in future health education programmes for this group of patients.

5.4 SUMMARY OF FINDINGS

This chapter began by explaining the purpose of the study and then discussed the findings based on the aim and objectives of the study. Five main health education needs that emerged from both face-to-face interviews and the focus

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

group discussion were discussed in relation to similar studies. The health education needs of the participants that emerged were: lack of knowledge on the cause, the diagnosis and the prognosis of LBP.

There was lack of education regarding sex and LBP, exercises and healthy lifestyles and the appropriate use of health services. In addition, participants lacked coping strategies that were manifested through fear-avoidance behaviours and low self-efficacy. In addition to requiring counselling and psychological support during an episode of a LBP, participants needed to be equipped with coping strategies. Furthermore, participants lacked support in form of social support, support from the medical insurance, support at the work place, while work related issues were found to affect health education programmes among the participants.



The main method that was used to educate the participants was established to be verbal of which was reported to be inappropriate. Moreover, the communication methods used on the individuals were inappropriate besides the lack of suitable communication skills among the medical professionals. However, the diverse sources of health education that offered participants with health education could have exposed some participants to conflicting information. Although most of the aspects that participants expressed as requiring health education on were not clinically related, they too required attention bearing in mind the multidimensional nature of LBP.

The chapter compared the current findings with similar studies and suggested how some of the needs could be addressed. Finally some limitations of the study were effectively mentioned. In the following chapter, a comprehensive summary of the findings is presented together with the conclusion and the implications of the study. Areas that need to be researched further are identified ahead of the recommendations that the current study was able to identify.



CHAPTER SIX

SUMMARY, CONCLUSION, IMPLICATIONS, FURTHER RESEARCH AND RECOMMENDATIONS

6.0 INTRODUCTION

In this chapter, a concise summary of the study is presented. The most pertinent key health education needs from the study are presented in the conclusion, while

implications of the findings follow ahead of areas that need to be researched on in future. Finally, recommendations arising from the study are proposed.

6.1 SUMMARY

The purpose of the current study was to establish health education needs among individuals with LBP at the Nairobi Hospital Rehabilitation Unit. The study was embarked on with the assumption that, a multifaceted interrelationship existed between LBP, psychological and psychosocial aspects. On that basis, the Medical Model of health education currently in operation solitary was considered unsuitable in effecting considerable change among the individuals with LBP positively.

To deliver relevant health education and reduce suffering among the individuals with LBP, a more encompassing Model of Health Education was believed to be more fitting in addressing the health education needs for the individuals.

Traditionally, physiotherapists work around the Medical Model of health education, that assumes the cause of LBP resulted from an individual's problem in pathoanatomical perspective, the cause resulting from the individual acting in the wrong way. The assumption obviously neglects other aspects that evidence has proved as influencing the development and sustenance of LBP. Psychosocial, economic, environmental, and occupational aspects among others do play a role in influencing the development and sustenance of LBP. When these aspects are ignored during health education sessions, could possibly result in LBP progressing into the chronic stage. In addition, the Medical Model of

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

health education had failed to put into consideration the individuals' needs that were likely to influence negatively LBP during the management of the problem. However, despite the evidence indicating the rising levels of LBP and the suffering the individuals undergo as they manage LBP, few efforts had been made to explore the perceived health education needs among the individuals with LBP at the Nairobi Hospital Rehabilitation Unit. The individuals were left with no option but to revert into passive consumers of health education information that they had no inputs in its development.

Ten individuals with LBP were purposively selected for the face-to-face interviews and a focus group discussion from the Rehabilitation Unit. Participants' ages ranged from 27 years to 52 years with a 4 to 6 ratio of male to female representation. The same interview guide was used in all the interviews that took forty five minutes to one. The focus group discussion took one and half hours to determine participants expressed health education needs, the method of health education used together with its appropriateness according to the individuals in addition to identifying the source of health education that the individuals had. A thematic analysis procedure was used for analysis within which categories were formed and latter condensed into major themes from the expressed views of the participants.

The study in particular identified that participants lacked knowledge on the cause, diagnosis and prognosis of their LBP. Participants also lacked education on sex and LBP, exercises and healthy lifestyles and on the appropriate use of health

services. Moreover, participants lacked coping strategies manifested in form of fear-avoidance behaviours, low self-efficacy originating perhaps from lack of counselling and psychological support.

Furthermore, there was lack of support from the social environment, from the medical insurance, at the work place while work related issues hindered participants further from adhering to health education offered. Additionally, appropriate communication methods and skills to the participants from the medical professionals were lacking. The method used for education was established to be verbal which according to the participants was inappropriate. Finally, the diverse sources that offered health education, presented different health information that was reported as conflicting to the participants.



6.2 CONCLUSION

The findings of the study indicate the individuals with LBP as requiring health education on various aspects and although the majority of the aspects are not clinically related, they too required attention. Participants in the current study expressed the need to be knowledgeable on the cause, diagnosis and the prognosis of their LBP. However, since LBP was a multidimensional health problem, with its actual cause unknown in most cases, it was generally unreasonable to make a diagnosis on LBP in pathoanatomical terms singly. Under such circumstances, a Rehabilitative Model of health education was probably more pertinent to the individuals. Additionally, the findings suggest

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

participants as lacking education regarding several aspects of LBP that may have been disregarded by the current health education programmes. In view of the findings, there was need to apply a more encompassing, all-inclusive model of health education among the individuals so as to cover on the aspects that were neglected by the Medical Model of health education currently in use as expressed by the participants.

Numerous aspects were established to hinder health education among the participants that needed to be addressed in any future health education programmes. The aspects ranged from lack of coping strategies among the participants in form of fear-avoidance behaviours, lack of self-efficacy, lack of counselling and psychological support from physiotherapists and other medical professionals. It appeared that, the expressed needs could have resulted from unsuitable training among physiotherapists whose curriculum may have overlooked the need for training in counselling and the development of communication skills during the initial physiotherapy course.

Given that participants lacked social support during an episode of LBP, it could be appropriate to introduce a health promotion approach in future education programmes for the individuals. Through the approach, government organisations, insurance firms, employers and family members could be sensitised on the need to create appropriate environments suitable for the support of the individuals during an episode of LBP. This could possibly be

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

achieved through organised groups such as back support groups with the assistance from the physiotherapists.

Further impediments to health education originated from inappropriate health education methods and communication skills among the medical professionals. Verbal method of education used to educate the participants was established to be unsuitable as it lacked uniformity among physiotherapists and patients. When health education was delivered using appropriate methods, it could help improve on programme compliance, patient satisfaction leading to better treatment outcomes. Moreover medical professionals were found to lack appropriate communication skills to their patients, which was a key component in health care. Given that fact, medical professionals should aim at improving their communication skills through in-service courses as part of personal development.



In view of the varied health education sources from where participants had obtained health information, conflicting health information was bound to arise. In addition, various sources of information in a condition not so well understood such as LBP was capable of generating untested health information that could eventually lead to conflicting information to participants. However, when a well-developed evidence based health information booklet was in place, the various sources could be used successfully to support health education programmes to the individuals with LBP. The sources were generally the first points the individuals consulted due to their convenience.

The current study has clearly established that, health education needs for this group of individuals were not congruent with the medical professionals assumption on what the individuals' health education needs were. Moreover, the study has offered further support for the need of applying the bio-psychosocial Model of health education when giving health education to the individuals with LBP in order to influence positively LBP from all aspects.

One of the main strengths of the present study was that, participants volunteered their needs as they unfolded during treatment sessions and therefore did not rely on memory to recall what they essentially lacked. In general, the study demonstrates the importance of a qualitative approach to research that focuses on obtaining the individuals' perceptions regarding their health education needs. In addition to confirming the outcomes of the Medical Model of Health Education, the findings suggest the need to concentrate on additional aspects when planning and implementing health education programmes among the individuals with LBP. Furthermore, the findings specify areas that require to be targeted in health education interventions that aim at influencing LBP positively among the individuals.

6.3 IMPLICATIONS

The findings of the current study present a challenge to the clinical practitioners and health educators whose responsibilities may embrace patient care and professional curriculum design for physiotherapy undergraduate students. The

findings elaborate on areas that need to be redesigned in patient education and physiotherapy training to match the expectations of the patients. In addition to what the medical professionals had assumed for sometime now as the health education needs for the individuals with LBP, these individuals' health education needs were more diverse as originally thought. It has been recognised that LBP was a complex form of illness with many contributing factors. Therefore, the significance of using a multifactorial approach of health education to prevent and manage it has as been advocated as the generally effective method to the individuals according to Daltroy et al. (1997) and Zwerling et al. (1997). Based on what participants in the current study have expressed as their health education needs, a paradigm shift was required so as to develop a new health education programme for the individuals. It was essential that new determined efforts and approaches be directly put in place targeting areas that participants have expressed as requiring attention.

6.4 RECOMMENDATIONS

6.4.1 Future Research

While this study has provided first-hand information on areas participants with LBP perceived as requiring attention and change during health education sessions, there are other areas and aspects that would be useful to research on in future:

As discussed earlier, a limitation of the study was that, participants' perceptions were from a small sample that was purposively selected and utilised

physiotherapy services of a leading health care facility within an urban setting. The health education needs for this group of individuals for that reason, may be different from those of the individuals in a rural setting utilising public physiotherapy services. Future research therefore should be extended to the rural residents with LBP who had no prior health education and who utilise public physiotherapy services in order to fully generalise the findings of the current study. Future research plan might include different regions to determine differences and similarities in the nature and scope of issues raised by the participants in the present study.

Before any health education is specified to the individuals with LBP, it is essential to establish what the individuals already knew and what their health education needs were. However, according to literature search by the researcher, no single tool was found to exist that would systematically assess the health education needs for this group of patients. There is need therefore for the present study to take an additional stride and carry out an elaborate more advanced research with an aim to develop a tool for assessing the individuals' health education needs prior to dissemination of any health education.

6.4.2 Recommendations Based on the Findings

Based on the findings of the study, the following recommendations are made; their importance however is not in the order at which they appear.

1. Develop and implement a policy guideline on LBP management within the Nairobi Hospital with an aim of standardising on the management and information giving.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

2. Health education for individuals with LBP should switch from curative to Rehabilitative Model of pain explanation and management targeting the individuals functioning to lessen suffering.
3. Develop a booklet for LBP individuals complete with graphic illustrations using simple, clear language incorporating Swahili languages where possible.
4. The present study should be taken a notch higher in research so as to come up with a tool that would assess health education needs for first time LBP individuals.
5. While planning health education for the uninsured, focus on their immediate health needs then move to the promotion of healthier lifestyles using a variety of methods that engage them in their own care and health promotion through written information.
6. Initiate group education classes to explain the procedures and aims of those procedures to first-time LBP individuals before commencement of any physiotherapy treatment.
7. Develop and dispatch to the public evidence based health education information materials through relevant departments within the Hospital to minimise conflicting health information from reaching patients.
8. Encourage physiotherapists to learn effective communication skills for better patient-therapist alliance through in service courses within the hospital and other relevant sources.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

9. Encourage physiotherapists to take counselling courses as part of their career development so that they can offer the service to their patients whenever required.
10. Recommend to the Medical training College to incorporate counselling in their physiotherapy undergraduate curriculum.
11. Support and motivate individuals with LBP to form back support groups that will support, lobby and advocate for the needs of LBP individuals for better social systems.

It is the researcher's anticipation that the needs and issues elicited by this study will advance an honest desire and direction for change not only at the Nairobi Hospital Rehabilitation Unit but also in the entire country by all those concerned in one way or another in the management of individuals with LBP.



REFERENCES

Abyholm, A.S. & Hjortdahl, P.A. (1999). Being believed is what counts. A qualitative study of experiences with the health service among patients with chronic back pain. In Glenton, C. Developing patient-centred information for back pain sufferers. *Blackwell science, Health Expectations*. **5**: 1-11.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Abyholm, A.S., Hjortdahl, P. & Smertene, S.L. (1999). The pain takes hold of life. A qualitative study of how patients with chronic back pain experience and cope with life situations. In Glenton, C. Developing patient-centred information for back pain sufferers. *Blackwell science, Health Expectations*. **5**: 1-11.

Agency for Health Care Policy & Research (1994). *Acute low back pain problems in adults*. Clinical Practice Guidelines. New York, AHCP, Rockville.

Ali, N.S. (2002). Prediction of coronary heart disease preventive behaviours in women: A test of the health belief model. *Women & Health*. **35 (1)**: 83–96.

Al-Obaidi, S.M., Nelson, R.M., Al-Awadhi, S. & Al-Shuwaie, S. (2000). The role of anticipation and Fear of Pain in the Persistence of Avoidance Behaviour in Patients with chronic low back pain. *Spine*. **25 (9)**: 1126-1131.

Alonzo, A.A. & Reynolds, N.R. (1998). The structure of emotions during acute myocardial infarction: A model of coping. *Social Science and Medicine*. **46**: 1099–1110.

Altmaier, E., Russell, D., Feng Kao, C., Lehmann, T. & Weinstein, J. (1993). Role of self-efficacy in rehabilitation outcome among chronic back pain patients. *Journal of Counselling Psychology*. **40 (3)**: 335-339.

American College of Physicians (1999). Entire Issue... Family Physician Report (Online: accessed on 24th September 2003).

URL: <http://www.aafp.org/fpr/990100fr/all.html> 51k.

American Physical Therapy Association (2003). *Guide to physical therapist practice*. Revised second edition. Alexandria, Virginia.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Anderson, K., Dowds, B., Pelletz, R., Edwards, T. & Peeters-As-dourian, C. (1995). Development and initial validation of a scale to measure self-efficacy beliefs in patients with chronic pain. *Pain*. **63**: 77-84.

Andersson, G.B. (1997). Epidemiological features of chronic low back pain. *Lancet*. **354(9178)**: 581-585.

Antman, E.M., Lau, J., Kupelnick, B., Mosteller, F. & Chalmers, T.C. (1992). A comparison of results of meta-analyses of randomised control trials and recommendations of clinical experts. Treatments for myocardial infarction. *Journal of the American Medical Association*. **268**: 240 -248.

Antonucci, T.C. (2001). *Social relations: An examination of social networks, social support, and sense of control*. In: Birren, J.E. (Ed) Handbook of the psychology of aging (5th ed.), pp. 427–453, San Diego, CA, Academic Press.

Antonucci, T.C., Ajrouch, K.J. & Janevic, M.R. (2003). The effect of social relations with children on the education-health link in men and women aged 40 and over. *Social Science and Medicine*. **56**: 949–960.

Armitage, P. & Berry, G. 1996). *Statistical Methods in Medical Research* (3rd ed), pp 78-80, Great Britain, University Press Cambridge.

Aronson, J. (1992). *The interface of family therapy and a juvenile arbitration and mediation program*. Unpublished doctoral dissertation, Nova South Eastern University, Fort Lauderdale.

Avis, M. (1997). 'Incorporating patients voices in the audit process'. *Quality in Health Care*. **6**: 86-91.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Axelsson, A., Nilsson, S. & Coles, R. (1995). Tinnitus information: a study by questionnaire. *Audiology*. **34**: 301-310.

Bandura, A. (Ed.). (1995). *Self-efficacy in changing societies*. New York: Cambridge University Press.

Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: Freeman.

Bardin, L.D. (2002). Physiotherapy and low back pain: part I Outcomes Research In the quest for evidence. *South African Journal of Physiotherapy*. **58(1)**: 3-7.

Baric, L. (1991). *Health promotion and Education*, (2nded). England, Altrincham, Burns Publications.

Bartlett, E.E. (1985). At last a definition (Editorial). *Patient Education and Counselling*. **7**: 323-324.



Barlow, J., Turner, A. & Wright, C. (1998a). Long-term outcomes of an arthritis self-management programme. *British Journal of Rheumatology*. **37**: 1315-1319.

Barlow, J., Turner, A. & Wright, C. (1998b). Sharing caring and learning to take control: self-management training for people with arthritis. *Psychology Health and Medicine*. **3**: 387-393.

Barlow, J., Turner, A. & Wright, C. (1998c). Comparison of clinical and self-reported diagnosis for participants on a community based arthritis self help management programme. *British Journal of Rheumatology*. **37**: 985-987.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Battie, M., Cherkin, D., Dunn, D., Ciol, M. & Wheeler, K. (1994). Managing low back pain: attitudes and treatment preferences of Physical Therapists. *Physical Therapy*. **74**: 219-226.

Baum, C. (1998). *Client-centred practice in a changing health care system*. In: Law, M. (Ed), *Client-Centred Occupational Therapy*, pp 29-47, Thorofare, New Jersey, Slack.

Baumgartner, T.A., Strong, C.H. & Hensley, L.D. (2002). *Conducting and Reading Research in Human and Performance*. (3rded) Boston, WCB McGraw Hill.

Bekkering, G.E., Hendricks, H.J.M, Koes, B.W., Oostendorp, R.A.B., Ostelo, R.W.J.G., Thomassen, J.M.C. & van Tulder, M.W. (2003). Dutch physiotherapy guidelines for low back pain. *Physiotherapy*. **89(2)**: 82-96.

Bergquist-Ullman, M. & Larsson, U. (1997). Acute low back pain in industry. *ACTA Orthopaedic Scand Supplement*. **170**: 1-117.

Bertels, M., Brummerler, L.T., Dijkum, C., Giebels, R. & van der Mannen, J. (1985). *Time for quality: Evaluative research of physical therapy in health centres*. Institute of Social Studies, Amsterdam, Stichting University.

Bigos, S.J., Bowyer, O.R. & Brean, G.R. (1994). *Acute Low Back Problems in Adults*. Clinical Practice Guideline number 14. Rockville, Agency for Health Care Policy and Research publication number 95-0642, US Department of Health and Human Services, pp 1-160, New York, AHCPH publication.

Bless, C. & Higson-Smith, C. (2000). *Fundamentals of Social Research Methods*. Cape Town. Juta.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Boaz, R.F. & Hu, J. (1997). Determining the amount of help used by disabled elderly persons at home: The role of coping resources. *Journals of Gerontology Series B-Psychological Sciences & Social Sciences*. **52**: S317–S324.

Borenstein, D.G. (2000). Epidemiology, aetiology diagnostic evaluation and treatment of low back pain. *Current Opinion, Rheumatology*. **12**: 143-149.

Borenstein, M.W. (1997). Epidemiology, aetiology diagnostic evaluation and treatment of low back pain. *Current Opinion, Rheumatology*. **9**:144-150.

Borkan, J., Reis, S., Hermoni, D. & Biderman, A. (1995). Talking about the pain: a patient-centred study of low back pain in primary care. *Social Science & Medicine*. **40**: 977-988.



Bragem, S. & Gihle, I. (2001). *Hospital based back care in Norway*. Report 1, Oslo: The Norwegian Back Pain Network- communication unit.

Brink, H.I. (1999). *Fundamentals of Research Methodology for Health Care Professionals*. (2nd ed). Cape Town, Juta.

Britten, N. (1996). *Qualitative interviews in medical research*. In: Mays, N & Pope, C. (Eds). *Qualitative Research in Health Care*. London, British Medical Journal Publishing Group.

Bureau of the Census (1998). *Report on the Uninsured in America: Current population survey*, Washington, DC.

Burn, L. (2000). *Back and neck pain: the facts*, Pp 53-88, New York, Oxford University Press.

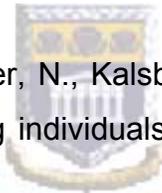
HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Burton, A.K. (1997). Spine Update-back injury and work loss: Biomechanical and Psychosocial Influences. *Spine*. **22**: 2575-2580.

Burton, A.K., Tillotson, K.M. & Main, C.J. (1995). Psychosocial predictors of work loss in acute and subchronic low back trouble. *Spine*. **20**: 722-728.

Burton, A.K., Waddell, G., Tillotson, K.M. & Summerton, N. (1999). Information and advice to patients with back pain can have positive effect. A randomised controlled trial of a novel educational booklet in primary care. *Spine*. **24**: 2484-2491.

Bush, T., Cherkin, D. & Barlow, W. (1993). The impact of physician attitudes on patient satisfaction with care for low back pain. *Archives Family Medicine*. **2**: 301-305.



Carey, T.S, Evans, A., Hadler, N., Kalsbeek, W., McLaughlin, C. & Fryer, J. (1995). 'Care-seeking among individuals with chronic low back pain'. *Spine*. **20 (3)**: 312-317.

Centre for Health Care Strategies Inc. (1998). Strategies to Improve Patient Education Materials (Online: accessed on 30th May 2004)

[URL:http://www..Chcs.org/resource/hl.html](http://www.Chcs.org/resource/hl.html).

Central Intelligent Agency, World fact book (2004). Kenya's economy. (Online: accessed on 10th August 2004)

[URL: http://www.cia.gov/cia/publications/factbook/geo/ke/html](http://www.cia.gov/cia/publications/factbook/geo/ke/html).

Charnock, D., Shepperd, S., Needham, G. & Gann, R. (1999). Discern: an instrument for judging the quality of written consumer health information on treatment choices. *Journal of Epidemiology and Community Health*. **53**: 105–111.

Cherkin, D.C., Deyo, R.A., Street, J.H. & Barlow, W. (1996). Predicting poor outcomes for back pain seen in primary care using patients' own criteria. *Spine*. **21(24)**: 2900-2907.

Cherkin, D.C. (1998). Primary care research on low back pain. *Spine*. **23**: 1997-2002.

Cherkin, D.C., Deyo, R.A., Street, J.H., Hunt, M. & Barlow, W. (1996). Pitfalls of patient education. Limited success of a programme for back pain in primary care. *Spine*. **21**: 345-355.

Claiborne, N., Vandenburg, H., Krause, T.M. & Leung, P. (2002). Measuring quality of life changes in individuals with chronic low back conditions: a back education programme evaluation. *Evaluation and Programme Planning*. **25**: 61-70.

Clinical Standards Advisory Group (1994). *Report on Back Pain*. London: Her Majesty Stationer Office, (HMSO), 1-89.

Cohen, J.E., Frank, J.W., Bombardier, C., Peloso, P. & Guillemin, F. (1994). Group education interventions for people with low back pain. An overview of literature. *Spine*. **19**: 1214-1222.

Constas, M.A. (1992). Qualitative analysis as a public event: The documentation of category development procedures. *American Educational Research Journal*. **29(2)**: 253-266.

Coulter, A., Entwistle, V.A. & Gilbert, D. (1998). *Informing patients. An Assessment of quality of Patient Information Materials*. London, King's Fund.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Cunnington, J., Turnbull, J., Regher, G., Marriott, M. & Norman, G. (1997). 'The effect of presentation order in clinical decision making'. *Academic Medicine*. **72**: S40- 42.

Daltroy, L.H., Iversen, M.D., Larson, M.G., Lew, R., Wright, E., Ryan, J., Zwerling, C., Fossel, A.G. & Liang, M.H. (1997). A controlled trial of an educational programme to prevent low back pain injuries. *New England Journal of Medicine*. **337**: 322-328.

Davis, K., Rowland, D., Altman, D., Collins, K. & Morris, C. (1995). Health insurance: The size and shape of the problem. *Inquiry*. **32**: 196–203.

Davis, T.C., Bocchini, J.A. & Fredrickson, D. (1996). Parent comprehension of polio vaccine information pamphlets. *Paediatrics*. **97**: 804-810.

Dekkers, W. (1998). Hermeneutics and experiences of the body. The case of low back pain. *Theoretical Medicine and Bioethics*. **19**: 277-293.

De Vos, A.S. (Ed) (2nded). (2002). *Research at Grass roots for the Social Sciences and Human Service Professionals*. Pretoria, Van Schaik.

Deyo, R.A. & Diehl, A.K. (1986). 'Patient satisfaction with medical care for low-back pain'. *Spine*. **11(1)**: 28-30.

Deyo, R.A. & Phillips, W.R. (1996). Low back pain: a primary care challenge. *Spine*. **21**: 2826-2832.

Doak, C.C. & Doak, L.G. (Eds) (2002). *Pfizer Health Literacy Principles*. New York, Pfizer Inc.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Dolce, J. (1987). Self-efficacy and disability beliefs in behavioural treatment of pain. *Behavioural Research and Therapy*. **25**: 289-299.

Dionne, C.E., Koepsell, T.D. & von Korff, M. (1997). Predicting long-term functional limitations among back pain patients in primary care settings. *Journal of Clinical Epidemiology*. **50**: 31-43.

Elstein, A. & Schwarz, A. (2002). A clinical solving and diagnostic decision-making; selective review of the cognitive literature. *British Medical Journal*. **324**: 729- 732.

Faas, A. (1999). Exercises: Which ones are worth trying, for which patients, and when? *Spine*. **21(24)**: 2874-2883.

Feyer, A.M., Williamson, A., Mandryk, J., de Silva, I. & Healy, S. (1992). 'Role of psychosocial risk factors in work-related low back pain'. *Scandinavian Journal of Work, Environment and Health*. **18**: 368-375.

Fitzpatrick, R.M. & Hopkins, A.P. (1983). Effects of referral to a specialist for headache. *Journal of Social Medicine*. **76**: 112-115.

Fitzpatrick, R. & White, D (1997). Public participation in the evaluation of health care. *Health and Social Care in the Community*. **5**: 3-8.

Fontana, A. & Frey, J.H. (1994). *Interviewing. The Art of Science*. In: Denzin, N. and Lincoln, Y. (Eds.), *Handbook of Qualitative Research*. Pp361-376, Thousand Oaks, Sage.

Foster, N.E., Pincus, T., Underwood, M., Vogel, S., Breen, A. & Harding, G. (2003). Treatment and the process of care in musculoskeletal conditions, A

Multidisciplinary perspective and integration. *Orthopaedic Clinics Of North America*. **34**: 239-244.

Frank, J.W., Kerr, M.S., Brooker, A.S., Demaio, S.S, Maetzel, A., Norman, R.W. & Wells, R.P. (1996). Disability resulting from occupational low back pain, part I & II: What do we know about primary prevention: A review of the scientific evidence on prevention before disability begins. *Spine*. **21**: 2908-2929.

French, P. (1999). The development of evidence-based nursing. *Journal of Advanced Nursing*. **29**: 72–78.

Fritz, J.M. & George, S.Z. (2002). Identifying Psychosocial Variables in patients with acute work-related low back pain: The importance of fear-avoidance beliefs. *Physical Therapy*. **82**: 973-983.

Gahimer, J.E. & Domholdt, E. (1996). Amount of patient education in physical therapy and perceived effects. *Physical Therapy*. **76(10)**: 1089-1096.

Gebhardt, W.A. (1994). Effectiveness of training to prevent job-related back pain: A meta-analysis. *British Journal of Clinical Psychology*. **33**: 571-574.

Geisser, M.E. & Roth, R.S. (1998). Knowledge of and agreement with chronic pain diagnosis: relation to affective distress, pain beliefs and coping, pain intensity and disability. *Journal of Occupational Rehabilitation*. **8**: 73-88.

Gifford, L. (2000). *Tropical Issues in Pain*, 2, Falmouth NO1 Press.

Glenton, C. (2002). Developing patient-centred information for back pain sufferers. *Blackwell Science, Health Expectations*. **5**: 1-11.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Gotay, C.C. & Wilson, M.E. (1998). Social support and cancer screening in African American, Hispanic, and Native American Women. *Cancer Practice*. **6**: 31–37.

Granger, C.V., Lackner, J.M., Kulas, M. & Rushell, C.F. (2003). Outpatients with low back pain: An analysis of the rate per day of pain improvement that may be expected and factors affecting improvement. *American Journal of Physical Therapy and Rehabilitation*. **82(4)**: 254-260.

Grogan, C. M., Feldman, R.D., Nyman, J.A. & Shapiro, J., (1994). How will we use clinical guidelines? The experience of Medicare carriers. *Journal of Health Political Policy & Law*. **19**: 7-26.

Gronblom-Lundstrom, L. (1992). Health as a measure of rehabilitation: outcome for patients with low back pain. *Physiotherapy Theory and Practice*. **8**: 67-77.



Gyntelberg, F. (1974). 'One year incidence of low back pain among male residents of Copenhagen aged 40-59'. *Danish Medical Bulletin*. **21(1)**: 30-36.

Hadler, N. (1997). Workers with disabling back pain. *The New England Journal of Medicine*. **337**: 341-343.

Harding, V. & Williams, A. (1995). 'Extending physiotherapy skills using a psychological approach: Cognitive-behavioural management of chronic pain'. *Physiotherapy*. **81**: 681-688.

Harland, N. & Lavalley, D. (2003). Biopsychosocial management of chronic low back pain patients with psychological assessment and management tools. *Physiotherapy*. **89(5)**: 305-312.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Harris, K.A. (1998). The information needs of patients with cancer and their families. *Cancer Practice*. **6**: 39-46.

Himmelstein, D. & Woolhandler, S. (1995). Care denied: U.S. residents who are unable to obtain needed medical services. *American Journal of Public Health*. **85**: 341–344.

Holahan, C.J., Moos, R.H. & Bonin, L. (1997). *Social Support, Coping and Psychological Adjustment: A Resources Model*. In: Pierce, G.R., Lakay, B., Sarason, I.G. & Sarason, B.R. (Eds), *Sourcebook of Social Support and Personality*. Pp. 169–186, New York, Plenum Press.

Holmes, J. & Stevenson, C. (1990). Differential effects of avoidant and attentional coping strategies on adaption to chronic and recent-onset pain. *Health Psychology*. **9(5)**: 577-584.

Hope, P. & Forshaw, M. (1999). 'Assessment of psychological distress is important in patients presenting with low back pain'. *Physiotherapy*. **85(10)**: 563-570.

Huff, M. (2000). A comparison study of live instructions versus interactive television for teaching MSW students' critical thinking skills. *Research on Social Work Practice*. **10**: 400-416.

Hunt, A., Adamson, B. & Harris, I. (1998). Physiotherapists' perceptions of the gap between education and practice. *Physiotherapy Theory and Practice*. **14**: 125-138.

Hult, L. (1954). 'The Munksfors investigation: A study of the frequency of the stiff-neck-brachilgia and lumbago-sciatica syndromes'. *Acta Orthopaedica Scandinavica*. **16**: S1-76.

Jadad, A.R. & Gagliardi, A. (1998). Rating health information on the Internet: Navigating to knowledge or to Babel? *Journal of American Medical Association*. **279**: 611-614.

Jensen, J., Turner, A. J., Romano, J.M. & Karoly, P. (1991). Coping with chronic pain: A critical review of the literature. *Pain*. **47**: 249-283.

Jensen, M.P., Turner, J.A. & Romano, J.M. (1994a). Correlates of improvement in multidisciplinary treatment of chronic pain. *Journal of Clinical Psychology*. **62**: 72-179.

Jensen, M.P., Turner, J.A., Romano, J.M. & Lawler, B.K. (1994b). Relationship of pain-specific beliefs to chronic pain adjustment. *Pain*. **57**: 301–309.

Johnson, C.S. (2003). *Chronic Low Back Pain and how it may affect Sexuality: Patient Education*. University of Kentucky, Health Information Library.

Kawachi, I. & Berkman, L.F. (2001). Social ties and mental health. *Journal of Urban Health*. **78**: 458–467.

Kessler, T.A. & Alverson, E. (2003) Health concerns and learning styles of underserved and uninsured clients at a nurse managed centre. *Journal of Community Health Nursing*. **20(2)**: 81-92.

Kim, P., Hayden, J.A. & Mior, S.A. (2004). The cost-effectiveness of a back education programme for firefighters: a case study. *Journal of Canadian Chiropractic Association*. **48 (1)**: 13-19.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Kirsch, I.S., Jungeblat, A., Jenkins, L. & Kolstad, A. (1993). Adult literacy in America: A first look at the results of the national adult literacy survey, Washington, DC, National Center for Educational Statistics US Department of Education.

Kitson, A., Ahmed, L.B., Harvey, B., Seers, K. & Thompson, D.R. (1996). From research to practice: one organizational model for promoting research-based practice. *Journal of Advanced Nursing*. **23**: 430–440.

Klaber-Moffett, J. (2002). Back pain: encouraging self-management approach. *Physiotherapy Theory and Practice*. **18**: 205-212.

Klaber-Moffett, J., Carr, J. & Howarth, E. (2002). *High fear-avoiders of physical activity benefit from an exercise programme for back pain patients*. Manuscript submitted for publication.

Klaber-Moffett, J.A. & Richardson, P.H. (1997). The influence of the physiotherapist-patient relationship on pain and disability. *Physiotherapy Theory and Practice*. **13 (39)**: 90-96.

Klenerman, L., Slade, P.D. & Stanley, I.M. (1995). The prediction of chronicity in patients with an acute attack of low back in a general practice setting. *Spine*. **20**: 478-484.

Koes, B.W., Tulder, M.W., van derWindt, A.W.M. & Bouter, L.M. (1994). The efficacy of back schools: A review of randomised clinical trials. *Journal of Clinical Epidemiology*. **47**: 851-862.

Koes, B.W., Van Tulder, M.W, Ostelo, R., Burton, A. K. & Waddell, G. (2001). 'Clinical guidelines for the management of low back pain in primary care: An international comparison'. *Spine*. **26**: 2504-13.

Kopec, J.A. & Esdale, J.M. (1998). Occupational role performance in persons with back pain. *Disability Rehabilitation*. **20**: 373-379.

La Greca, A.M., Auslander, W.F., Greco, P., Spetter, D. & Fisher, E.B. (1995). Adolescents' support for diabetes care. *Journal of Paediatric Psychology*. **20(4)**: 449-476.

Leboeuf-Yde, C., Lauritsen, J.M. & Lauritzen T. (1997). Why has the search for causes of low back pain largely been nonconclusive? *Spine*. **22**: 877-881.

Lee, S.Y.D., Arozullahb, A.M. & Choc, I.K. (2004). Health literacy, social support, and health: a research agenda. *Social Science and Medicine*. **58(7)**: 1309-1321.

Leininger, M. (1994). 'Evaluation criteria and critique of qualitative research studies'. In: Morse, J.M.(ed) *Critical Issues in Qualitative Research Methods*. Thousand Oaks, Sage.



Leininger, M. M. (1985). *Ethnography and ethno-nursing: Models and modes of qualitative data analysis*. In: Leininger, M.M. (Ed.), *Qualitative Research Methods in Nursing*. Pp 33-72, Orlando, Grune & Stratton.

Leino-Kilpi, H., Maenpaa, I. & Katajisto, J. (1999). Nursing study of the significance of rheumatoid arthritis as perceived by patients using the concept of empowerment. *Journal of Orthopaedic Nursing*. **3**: 138-145.

Lepore, S.J., G.W., Evans, G.W. & Schneider, M.L. (1991). Dynamic role of social support in the links between chronic stress and psychological distress. *Journal of Personality and Social Psychology*. **61**: 899-909.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Levine, C. & Zuckerman, C. (1999). The trouble with families: Toward an ethic of accommodation. *Annals of Internal Medicine*. **130**: 148–152.

Levinson, W. (1994). Physician-patient communication: a key to malpractice prevention. *Journal of American Medical Association*. **272**: 1619-1620.

Li, L.C. & Bombardier, C. (2001). Physical Therapy of low back pain: An exploratory survey of therapist approaches. *Physical Therapy*. **81(4)**: 1018-1027.

Lin, N.X.Y. & Ensel, W.M. (1999). Social support and depressed mood: A structural analysis. *Journal of Health and Social Behaviour*. **40(4)**: 344–359.

Lincoln, Y.S. & Guba, E.G. (1985). *Naturalistic inquiry*. Newbury Park, CA, Sage.

Linton, S.J., Larden, M. & Gillow, A.M. (1996). Sexual abuse and chronic musculoskeletal pain: Prevalence and psychological factors. *Clinical Journal of Pain*. **12**: 215-221.

Linton, S.J. (1997). A population-based study of the relationship between sexual abuse and back pain. Establishing a link. *Pain*. **73**: 47-53.

Linton, S.J. & Andersson, T. (2000). Can chronic disability be prevented? A randomised trial of a cognitive-behaviour intervention and two forms of information for patients with spinal pain, *Spine*. **25**: 2825-2831.

Linton, S.J. & van Tulder, M.W. (2001). Preventive interventions for back and neck pain problems: what is the evidence. *Spine*. **26**: 778-787.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Lorig, K. (1995). Patient education: treatment or nice extra? *British Journal of Rheumatology*. **34**: 703-706.

Lydakos, C., Kerr, H., Hutchings, K. & Lip, G.Y. (1998). Women's awareness of and attitudes towards hormone replacement therapy: Ethnic differences and effects of age and education. *International Journal of Clinical Practices*. **52(1)**: 7–12.

Maddux, J. (Ed.) (1995). *Self-efficacy, adaptation, and adjustment: Theory, Research, and Application*. New York, Plenum.

Maniadakis, N. & Gray, A. (2000). The economic burden of back pain in the UK. *Pain*. **84(1)**: 95-103.

Mannion, A., Dolan, P. & Adams, M.A. (1996). 'Psychological questionnaires: Do " abnormal" scores precede or follow first-time low back pain? *Spine*. **21(22)**: 2630-2641.



Mark, P., Jensen, B., Joan, M., Romano, C., Judith, A., Turner, B.C., Amy, B., Good, C., Laura, H. & Wald, C. (1999). Patient beliefs predict patient functioning: further support for a cognitive-behavioural model of chronic pain. *Pain*. **81 (1)**: 95-104.

Marshall, C. & Rossman, G. B. (1995). *Designing Qualitative Research* (2nded). London, Sage, and Thousand Oaks.

May, S.J. (2001). Patient satisfaction with management of low back pain Part I: what is satisfaction? Review of Satisfaction with Medical Management. *Physiotherapy Journal*. **87(1)**: 4-20.

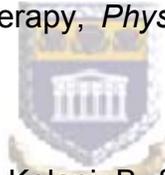
McCracken, G. (1988). *The long interview*. Newbury Park, CA, Sage.

McGill, S. M. (2001). Low Back Stability: From Formal Description to Issues for Performance and Rehabilitation. *Exercise and Sport Science Reviews*. **29**: 26-31.

McIntosh, G., Frank, J. & Hogg-Johnson, S. (2000). Prognostic factors for time receiving workers compensation benefits in a cohort of patients with low back pain. *Spine*. **25**: 147-157.

McPhillips-Tangum, C.A., Cherkin, D.C. & Rhodes, L.A. (1998). Reasons for repeated medical visits among patients with chronic back pain. *Journal of General Internal Medicine*. **13**: 289-295.

Mellion, L.R. & Tovin, M.M. (2002). Grounded theory: a qualitative research methodology for physical therapy, *Physiotherapy Theory and Practice*. **18**: 109-120.



Mijiyawa, M., Oniankitan, O., Kolani, B. & Koriko, T. (2000). Low back pain in hospital outpatients in Lome (Togo). *Spine*. **67(6)**: 533-538.

Miles, M.B. & Huberman, A.M. (1994). Qualitative data analysis: A Source Book of New Methods (2nd ed). Beverly Hills, CA, Sage.

Moffett, J.A. & Richardson, P.H. (1997). The influence of the Physiotherapist-patient relationship on pain and disability. *Physiotherapy Theory and Practice*. **13**: 89-96.

Mosley, L. (2002). Combined physiotherapy and education is efficacious for chronic low back pain. *Australian Journal of Physiotherapy*. **48**: 297-302.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Mouton, J. (2001). *How to succeed in your Master's and Doctoral Studies. A South African Guide and Resource Book*. Pretoria, J.L. Van Schaik.

Napalkov, N. (1995). The role of the World Health Organisation in promoting patient education with emphasis on chronic disease. *Patient Education and Counselling*. **26**: 5-7.

Nordholm, L., Adamson, B. & Heard, R. (1995). Australian physiotherapists' and occupational therapists' views on professional practice. *Journal of Allied Health*. **24**: 267-282.

New Zealand Guidelines Group Inc (1999). *Guide to Assessing Psychosocial Yellow Flags in Acute Low Back Pain: Risk Factors for Long-term Disability and Work Loss*. New Zealand, Wellington.

Nurss, J.R. (1998). *Adult literacy & health care*. In: Smith, M.C. (Ed) *Literacy for The Twenty-First Century: Research, Policy, Practices, and the National Adult Literacy Survey*. Pp 195–206, Westport, CT, Praeger.

Orne, R. M., Fishman, S. J., Manka, M. & Pagnozzi, E. E. (2000). Living on the edge: A phenomenological study of medically uninsured working Americans. *Research in Nursing and Health*. **23**: 204–212.

Osborn, M. & Smith, J.A. (1998). The personal experience of chronic benign lower back pain: an interpretive phenomenological analysis. *British Journal of Health Psychology*. **3**: 65-83.

Oxford advanced learner's dictionary (4th ed) (2002). *Medical professional*. Cape Town, Oxford University Press.

Painting, S., Favarin, I. & Swales, J. (1998). The management of acute industrial low back pain. *Physiotherapy*. **84 (3)**: 110-117.

Papageorgiou, A.C., Croft, P.R., Ferry, S., Jayson, M.I. & Silman, A.J. (1995). Estimating the prevalence of low back pain in the general population. Evidence from the South Manchester Back Pain Survey. *Spine*. **20**: 1889-1894.

Parker, I. (1994). *Discourse analysis*. In Banister, P., Burman, E., Parker, I., Taylor, M. and Tindall, C. (Eds.), *Qualitative Methods in Psychology*. Milton Keynes, Open University Press.

Payton, O.D., Nelson, C.E. & Hobbs, M.C. (1998). Physical therapy patients' perceptions of their relationships with health care professionals. *Physiotherapy Theory and Practice*. **14**: 211-221.

Pinnington, M.A. (2001). 'Why are we finding it so hard to change our approach to low back pain?' *Physiotherapy*. **87**: 58-59.

Pitt-Brooke, J., Reid, H., Lockwood, R. & Kerr, K. (1998). *Rehabilitation of Movement. The Basis of Clinical Practice*. Health Education & Communication. London, WB Saunders.

Polit, D.F. & Hungler, P. (1995). *Nursing Research: Principles and Methods*. (6th ed). Philadelphia. Lippincott Company.

Potter, M., Gordon, S. & Hamer, P. (2003). Identifying physiotherapist and patient expectations in private practice physiotherapy. *Physiotherapy Canada*. **55**: 195-202.

Prochaska, J.O. & Velicer, W.F. (1997). The Transtheoretical Model of Health Behaviour Change. *American Journal of Health Promotion*. **12**: 38-48.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Quebec Task Force On Spinal Disorders (1987). Scientific approach to the assessment and management of activity-related spinal disorders: a monograph for clinicians. *Spine*. **12**: 51-59.

Rainville, J., Ahern, D.K., Phalen, L., Childs, L.A. & Southerland, R. (1992). 'The association of pain with physical activities in chronic low back pain'. *Spine*. **17 (9)**: 1060-1064.

Richardson, B. & Eastlake, A. (1994). *Physiotherapy in Occupational Health, Management, Prevention and Promotion in the Work Place. Health Promotion and Education*. Oxford, Butterworth-Heinemann.

Ritchie, J. & Spencer, E. (1994). *Qualitative data analysis for applied policy research*, In, Bryman, A. and Burgess, R.G. (Eds). *Analysing Qualitative Data*. London, Routledge.

Roland, M. & Dixon, M. (1989). Randomised controlled trial of an educational booklet for patients presenting with back pain in general practice. *Journal of Royal College of General Practitioners*. **39**: 244-246.

Roland, M. & Morris, R.A. (1983). A study of the natural history of low back pain: Part II. Development of guidelines for trials of treatment in primary care. *Spine*. **8**: 145-150.

Rosen, M. (1994). Report of a Clinical Standards Advisory Group Committee on Back Pain, London, Her Majesty's Stationery Office (HMSO).

Royal College of General Practitioners (1996). *Clinical Guidelines for the Management of Low Back Pain*. London, Royal College.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Rubin, H.J. & Rubin, I.S. (1995). *Qualitative Interviewing. The Art of Hearing Data*. London, Thousand Oaks.

Schensul, S.L. & Schensul, J.J. (1982). Healing resource use in a Puerto Rican community. *Urban Anthropology*. **11(1)**: 59–79.

Schwarzer, R. (Ed.) (1994). *Self-efficacy: Thought Control of Action*. Washington D.C, Hemisphere.

Settersten, L. & Lauver, D.R. (2004). Critical Thinking, Health Status and Participation in Health behaviours. *Nursing Research*. **53 (1)**: 11-18.

Shapiro, D.W., Lasker, R.D., Bindman, A.B. & Lee, P.R. (1993). Containing costs while improving quality of care: the role of profiling and practice guidelines. *Annual Reviews of Public Health*. **14**: 219-241.

Silverman, D. (ed) (1998). *Qualitative Research. Theory, Method and Practice. Discourse Analysis as a way of Analysing Naturally Occurring Talk*. London Thousand Oaks, Sage.

Silverman, D. (2000). *Doing Qualitative Research*. London, Sage Publications.

Skelton, A.M., Murphy, E.A. & Murphy, R.J.L. (1996). Patients' views of low back pain and its management in general practice. *British Journal of General Practice*. **46**: 153-156.

Skevington, S.M. (1995). *Psychology of Pain*. Chichester, John Wiley & Sons.

Sluijs, E.M. (1991). A checklist to assess patient education in physical therapy: Development and reliability. *Physical Therapy*. **71**: 561-569.

Sluijs, E.M., van der Zee, J. & Kok, G.J. (1993). Differences between physical therapists in attention paid to patient education. *Physiotherapy Theory and Practice*. **9**:103-117.

Smith, J. (1995), 'Semi-structured Interviewing and Qualitative Analysis' In Smith, J., Harre, R. & van Lannehoven, L. (Eds). *Rethinking Methods in Psychology*. London, Sage Publication.

Soafer, B. & Walker, J. (1994). 'Mood assessment in chronic pain patients'. *Disability and Rehabilitation*. **16**: 35-38.

Soderlund, A. & Lindberg, P. (2001). Cognitive behavioural components in physiotherapy management of chronic whiplash associated disorders (WAD)- a randomised group study. *Physiotherapy Theory and Practice*. **17**: 229-239.

Spitzer, W.O. (1987). 'Scientific approach to the assessment and management of activity-related spinal disorders: A monograph for clinicians. Report of the Quebec Taskforce on Spinal Disorders'. *Spine*. **12(7)**: S1- S52.

Spradley, J.P. (1979). *The Ethnographic Interview*. New York, Holt, Reinehard and Winston.

Stuifbergen, A. (1995). Health promoting behaviour and quality of life among individuals with multiple sclerosis. *School Inquest Nursing Practice*. **9(1)**: 31-50.

Stuifbergen, A.K. & Rogers, S. (1997). Health promotion: An Essential Component of Rehabilitation for Persons With Chronic Disabling Conditions. *Advanced Nursing Science*. **19 (4)**: 1-20.

Stuifbergen, A.K., Seraphine, A. & Greg, R. (2000). An explorative model of Health Promotion and Quality of life in Chronic Disabling Conditions. *Nursing Research*. **49**: 122-129.

Sullivan, M.D., Turner, J.A. & Romano J. (1991). Chronic pain in primary care. Identification and management of psychosocial factors. *Journal of Family Practice*. **32**: 193-198.

Suls, J. & Fletcher, E. (1985). The relative efficacy of avoidant and non-avoidant coping strategies: A Meta analysis. *Health Psychology*. **4**: 249-288.

Sumsion, T. & Smyth, G. (2000). Barriers to client-centeredness and their resolution. *Canadian Journal of Occupational Therapy*. **67**: 15-21.

Symonds, T.L., Burton, A.K., Tillotson, K.M. & Main, C.J. (1996). 'Do attitudes and beliefs influence work loss due to low back trouble?' *Occupational Medicine*. **46(1)**: 25-32.



Symonds, T.L., Burton, A.K., Tillotson, K.M. & Main, C.J. (1995). Absence resulting from low back trouble can be reduced by psychosocial intervention at the work place. *Spine*. **20**: 2738-2745.

Tabatabai, M. (1998). Investigation of decision-making process: A hypermedia approach. *Interacting with Computers*. **9**: 385-396.

Taylor, S. (1995). *Health Psychology*. McGraw-Hill, Singapore.

Taylor, S. J. & Bogdan, R. (1984). *Introduction to Qualitative Research Methods: The Search for Meanings*. New York, John Wiley & Sons.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Thornquist, E. (1994). Profession and life: separate worlds. *Social Science Medicine*. **39**: 701-713.

Turner, J.A. (1996). Education and behavioural interventions for low back pain in primary care. *Spine*. **21**: 2851-2859.

United States Department of Health, Human Services, Public Health Services (2000). *Healthy people 2010*. Washington DC, Government Printing Office.

Van Campen, C & Sluijs, E.M. (1989). *Bibliography patient compliance. A survey of reviews (1979-1989)*. Netherlands Institute of primary Health Care (NIVEL), CIP – Gegenens Koninklijke, bibliotheek, The Hague.

Van Tulder, M., Esmail, R., Bombardier, C. & Koes, B. (2001). *Back Schools for Non-Specific Low Back Pain*. (Cochrane Review). The Cochrane Library: Issue 1.



Van Tulder, M.W., Koes, B.W. & Bouter, L.M. (1997). Conservative treatment of acute and chronic low back pain. A systematic review of randomised controlled trials of most common interventions. *Spine*. **22**: 2128-2156.

Verbrugge, L.M. & Ascione, F.J. (1987). Exploring the iceberg: Common symptoms and how people care for them. *Medical Care*. **25 (6)**: 539–569.

Verma, K.G. & Mallick, K. (1999). Research education: *Perspectives & techniques*. London, The Palmer Press.

Videman, T., Rauhala, H. & Asp, S. (1989). Patient-handling skill, back pain injuries and back pain: An intervention study in nursing. *Spine*. **14**: 148-156.

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

Vlaeyen, J. & Linton, S. (2000). Fear avoidance and its consequences in chronic musculoskeletal pain: a state of the art. *Pain*. **85**: 317-332.

Von Korff, M. & Saunders, K. (1996). The course of back pain in primary care. *Spine*.**21**: 2833-2837.

Von Korff, M., Moore, J., Loring, K., Cherkin, D., Saunders, K., Gonzales, V.M.G., Laurent, D., Rutter, C. & Comite, F. (1998). A randomised trial of a lay personal-led self-management group intervention for back pain patients in primary care. *Spine*. **23**: 2608-2615.

Waddell, G. (1996). Keynote address for primary care forum. 'Low back pain: A twentieth-century health care enigma'. *Spine*. **24**: 2820-2825.

Waddell, G. (1998). The back pain revolution. *Psychosocial Factors of Low Back Pain*. London, Churchill Livingstone.

Waddell, G., Feder, G. & Lewis, M. (1997). 'Systematic reviews of bed-rest and advice to stay active for acute low back pain'. *British Journal of General practice*. **47**: 647-652.

Waddell, G., Feder, G., McIntosh, A., Lewis, M. & Hutchinson, A. (1996). *Low Back Pain Evidence Review*. London, Royal College of General Practitioners.

Waitzkin, H. (1985). Information giving in medical care. *Journal of Health and Social Behaviour*. **26**: 81-101.

Weeks, D.L., Brubaker, J., Bryrt, J., Davis, M., Hamann, L. & Reagan, J. (2002). Videotape instruction versus illustration for influencing quality of performance, motivation and confidence to perform simple and complex exercises in healthy subjects. *Physiotherapy Theory and Practice*. **18**: 65-73.

Wensing, M., Grol, R. & Smits, A. (1994). Quality Judgements by patients on general practice mind: A literature analysis'. *Social Science and Medicine*. **38**: 45-53.

Werneke, M. & Hart, D.L. (2001). Centralization phenomenon as a prognostic factor for chronic low back pain and disability. *Spine*. **26**: 758-765.

Wilkins, S., Pollock, N., Rochon, S. & Law, M. (2001). Implementing client-centred practice: Why is it so difficult to do? *Canadian Journal of Occupational Therapy*. **68**: 70-79.

Williams, B. (1994). 'Patient satisfaction: A valid concept?' *Social Science and Medicine*. **38**: 509-516.



World Health Organisation (2001). World Health Assembly for International use. Resolution WHA: 54.21.

Zacharisson-Forsell, M. (1980). The Swedish back school. *Physiotherapy*. **66**: 112-114.

Zeidner, M. & Saklofske, D. (1996). *Adaptive and Maladaptive Coping*. In: Zeindnerand, M. & Endler, N. (Eds), *Handbook of Coping: Theory, Research, Applications*. New York, John Willey and Sons.

Ziebland, S. & Wright, L. (1997). *Qualitative Research Methods*. In Jenkinson, C. (ed) *Assessment and Evaluation of Health and Medical Care: A Methods Text*. Buckingham, Open University Press.

Zwerling, C., Daltroy, L.H., Fine, L.J., Johnston, J.J., Melius, J. & Silverstein, B.A. (1997). Design and conduct of occupational injury intervention studies:

HEALTH EDUCATION NEEDS AMONG INDIVIDUALS WITH LBP

A review of evaluation strategies. *American Journal of Industrial Medicine*.
32:164-179.

