

THE CURRENT ROLE OF THE CHIROPRACTOR IN THE
PATIENT-CENTRED APPROACH TO STRESS
MANAGEMENT.

By

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A dissertation submitted to the faculty of health in partial compliance with the requirements for the Masters Degree in Technology : Chiropractic, at the Durban University Of Technology.

I, Jitesh Deonarain, do declare that this dissertation represents my own work in both conception and execution.

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Dedication

To my Mom, Dad and Sandhrika
Thank you for all your love, encouragement and support.

Acknowledgments

Mrs Karin Young. Mentor, friend and true inspiration.

Mrs T. Esterhuizen for all her hard work in helping me with my statistical analysis.

The staff in the Chiropractic department.

Abstract

Objectives: The aim of this study was to determine the current role of the Chiropractor in the Patient-Centred Approach to Stress Management.

Methods: Chiropractors were contacted telephonically in order to discuss a convenient time in which they are free to receive the questionnaire at their practice. The questionnaire was developed specifically for this particular research project and verified through the use of a focus group and pilot testing. The researcher waited outside the room whilst the Chiropractor completed the questionnaire. The questionnaire was then collected after completion prior the researcher leaving the practice, in order to improve the return of the questionnaires.

Results: Seventy-five percent of chiropractors, in the study indicated that they took a psychosocial history which may indicate that they utilised the fundamental biopsychosocial theme of 'patient-centeredness'. 68.9% of chiropractors who took a psychosocial history indicated that they are equipped with the necessary skills to evaluate psychosocial stressors in patients and 55.6% indicated that their patients responded 'Very Positively' to their stress management protocols. All the Chiropractors in the study indicated that they had consulted patients who had associated their main complaint with stress related issues. 38.3% of Chiropractors felt that their patients 'Often' associated their main complaint with stress-related issues whilst 35% felt that their patients 'Very Often' relate their main complaint with stress-related issues. Muscle spasm (85%) was the most common symptom or sign found or elicited in a patient suffering with chronic stress. Referral was the most common primary method of treatment with 36% of Chiropractors utilising this method in the clinical setting when dealing with a stressed patient.

Conclusion: Chiropractors in the study indicated that they took a psychosocial history therefore they utilised the fundamental biopsychosocial theme of 'patient-centeredness' and that the majority indicated that they are equipped with the necessary skills to evaluate psychosocial stressors in patients and that patients responded positively to their stress management protocols.

Key Terms: stress, patient-centred, chiropractor

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Chapter One

INTRODUCTION

1.1 Introduction

According to Abrams and Ellis, (1994) the term stress is a broad and generic term applying to many different states and situations that act on the body to reduce homeostasis. Walter Canon, (1929) offered the first model of homeostasis as the “coordinated physiological processes which maintains most of the steady states in the organism”. The stress response is a natural reaction by the body against potentially harmful stimuli to increase the chances of survival however persistent activation of the stress response can cause changes to homeostatic mechanisms (Hardy and Pollard, 2006).

Jamison, (2000) asserted that chronic pain cannot be exclusively credited to biological factors and that psychological influences, such as stress, may influence or be associated with chronic pain and musculoskeletal conditions such as muscle spasm and backache.

This is relevant to chiropractors as Middleton and Pollard, (2005) proposed that chiropractors are regarded as practitioners who treat musculoskeletal conditions therefore it may be advisable for chiropractors to actively include stress management within their clinical care protocols so as to holistically treat their patients.

According to Mead and Bower, (2000) patient-centeredness is concerned with understanding the patients’ illness within a broader biopsychosocial framework. Therefore the patient-centred approach acknowledges that health is more than a physical matter and psychological influences, such as stress, has been linked to

musculoskeletal conditions, such as back pain and tension headaches, which are routinely treated by chiropractors.

Studies by Jamison, (1998) have indicated that people are striving for emotional, mental and social well being as notions of health become more holistically orientated. This has meant that the biopsychosocial model is gaining favour over the biomedical model. The biomedical model aims to reduce the patients' illness to a collection of symptoms and signs which are investigated and then treated with appropriate clinical protocols (Mead and Bower, 2000).

Astin, (1998) reported that 34% of adults in the USA used at least one unconventional form of health care (defined as those practices "neither taught widely in U.S. medical schools nor generally available in U.S. hospitals). The most frequently used alternatives to conventional medicine were relaxation techniques, chiropractic and massage. This highlights the fact that consumers are acknowledging the limitations of the biomedical model and also further emphasis the importance of patient-centred protocols, with its foundations in the biospsychosocial framework, in the contemporary chiropractic practice.

1.2 Aim of the study

The aim of this study was to determine the current role of the Chiropractor in the Patient-Centred Approach to Stress Management.

1.2.1 The first objective

To determine whether Chiropractors utilise patient-centred stress management protocols.

1.2.1.1 Hypothesis one

Chiropractors do not utilise patient-centred stress management protocols.

1.2.2 The second objective

To verify whether those chiropractors who utilise patient-centred stress management protocols are competent with regards to these protocols.

1.2.2.1 Hypothesis two

Chiropractors who utilise patient-centered stress management protocols are not competent in regards with these protocols.

1.2.3 The third objective

To establish whether chiropractic patients associate their main complaint with stress related issues and to determine if muscle spasm is the most common symptom or sign that a chiropractor may elicit or find during a clinical examination of a patient suffering from chronic stress.

1.2.3.1 Hypothesis three

Chiropractic patients do not associate their main complaint with stress related issues and the most common symptom or sign that may be elicited or found by a chiropractor during a clinical examination of a patient suffering from chronic stress is not that of muscle spasm.

1.2.4 The fourth objective

To determine if referral is the most common primary method of treatment that chiropractors utilise in the clinical setting when dealing with a stressed patient and to determine in which institution/organization these chiropractors had studied these techniques that they now utilise in their practice.

1.2.4.1 Hypothesis four

Referral is not the most common primary method of treatment that chiropractors utilise in the clinical setting when dealing with a stressed patient and these stress management techniques was not acquired at a Chiropractic University/Technikon.

1.2.5 The fifth objective

To establish if time constraints on Chiropractors affect their utilisation of stress management protocols.

1.2.5.1 Hypothesis five

Time constraints do not affect their utilisation of stress management protocols.

1.4 Rationale for the Study and Research Questions

Chronic stress has been linked to musculoskeletal conditions which are commonly treated by chiropractors, such as back pain and tension headaches, therefore to Chiropractors, who are regarded as musculoskeletal specialists, it is important to develop effective stress management protocols so that they can effectively treat the patient in a holistic manner. As patients are coming to regard health as more than a physical matter and health care is moving away from the conventional “biomedical model” and more in favour of holistic treatment, it is important for Chiropractors to recognise and have treatment protocols for patients suffering from chronic stress.

1.5 Assumptions/ Limitations

All Chiropractors were required to report honestly and openly in regards to the reality of their situation.

The study utilised a self-administered questionnaire. The questionnaire was designed specifically for this research project with the aid of a Focus Group. All questionnaire studies do however have inherent errors as a consequence of their design. Questionnaire error includes such factors as faults in sampling, coding, tabulating, data processing, interview bias, and data misinterpretation (http://www.chalmersresearch.com/rbmg/types_bias.html).

The cumulative effect of these inherent errors could discredit the use of the questionnaire as a valid research tool, but being aware of these errors and taking precautions to avoid them minimizes their effect and bias in the interpretation of these research findings. The researcher was aware of these possible errors and has attempted to eliminate them to the best of his ability.

1.6 Conclusion

The aim of this study was to determine the current role of the Chiropractor in the Patient-Centred Approach to Stress Management. Chapter Two consists of a brief review of literature, followed by the research methodology (Chapter Three), the results and discussion follow in Chapters Four and Five and finally Chapter Six discusses the conclusions and recommendations.

Chapter Two

LITERATURE REVIEW

The following chapter aims to review the literature regarding the following topics:

- The stress response and its association with musculoskeletal pathologies as well the relevance this has to chiropractors
- The limitations of the biomedical model and the emergence of the patient-centred approach
- Factors which may influence chiropractic stress management protocols; such as inter-professional relationships, practitioner time constraints and the chiropractic curriculum

This is done an attempt to compare and correlate the results of this study to previous studies.

2.1 The stress response and its association with musculoskeletal pathology

According to Abrams and Ellis, (1994) the term stress is a broad term applying to many different states and situations that act on the body to reduce homeostasis.

Hardy and Pollard, (2006) indicated that Walter Cannon in 1929 offered the first model of homeostasis as the “coordinated physiological processes which maintain most of the steady states in the organism.” Walter Cannon then focused his research on the sympathetic nervous system as he believed that this was the essential system for homeostasis balance to promote the survival of an organism. Hans Selye, from his work conducted during the 1930’s to 1950’s, introduced the concept of the “flight-or-fight” or the “stress response” which involved the activation of “necessary physiological and behavioural responses” to increase the chances of survival.

Hardy and Pollard, (2006) emphasised that the stress response is a natural reaction and that any stress, whether pleasant or not, would disturb the homeostasis balance. Repeated activation of this stress response can cause maladaptation of the homeostatic mechanisms and have detrimental effects on sub-cortical structures.

Some of these sub-cortical detrimental effects included musculoskeletal conditions with the most common sign or symptom being muscle spasm (Jamison, 2000). Other sign and symptoms related to chronic stress included; migraines, tension headaches, eczema, tremors, palpitations, chest pain, dizziness, breathlessness, diarrhoea, frequency of micturition, fatigue, poor concentration, sensory loss, weight loss and loss of libido (Davidsons, 1995).

Langworthy and Breen, (2007) stated that psychological factors maybe the primary cause of chronic pain, such as low back pain, or that pre-existing stress

may predispose individuals to chronic pain. A study by Middleton and Pollard, (2005) reinforced the research of Langworthy and Breen. They reported that a group of 1638 subjects without low back pain were observed to determine the relationship between psychological distress and low back pain and the results indicated that symptoms of psychological distress could predict the onset of new episodes of low back pain. The psychological factors included stress and anxiety. Innes, (2005) acknowledged that a vicious cycle can be created whereby pain causes stress and vice versa, and both produce more stress which in turn contributes to more pain.

2.2 Relevance to chiropractors

The chiropractic approach to healthcare is holistic, where the patient is regarded as an individual; in addition, chiropractic care is also directed more towards prevention and health promotion more than many other healthcare professions (Hardy and Pollard, 2006).

According to Jamison, (1998) chiropractors treat conditions of a neuromusculoskeletal and non-neuromusculoskeletal nature however the majority of conditions treated by chiropractors are neuromusculoskeletal, such as low back pain. In a study conducted by Jamison, (1999) 3 out of 4 chiropractic patients perceived themselves to be moderately to severely stressed and expressed interest in their chiropractor to help them cope with stress.

It is therefore of relevance to certain chiropractic patients and all chiropractic practitioners that many patients seeking chiropractic care associate their main complaint with stress related issues and would value advice from their chiropractor on how to better manage stress. In addition, some patients who perceived themselves to be minimally stressed, believed it would be helpful if chiropractic care included strategies to help them cope with stress (Jamison, 2000).

Middleton and Pollard, (2005) suggested that chiropractors provide their patients with coping mechanisms, such as exercise therapy, breathing techniques, and other self-care measures, whilst manipulation, soft tissue therapy and listening could be utilised during a consultation to help them cope with their stress thus offering healthcare more likely to be in demand in the twenty-first century.

The extent to which chiropractors include stress management techniques in their practice is an individual decision. While stress management maybe regarded as a non-specific intervention, such intervention is consistent with contemporary chiropractic practice. The selective inclusion of stress management techniques in chiropractic care may add a new dimension to chiropractic care (Jamison, 1999).

2.3 Inter-professional relationships

According to a study by Smith et al., (2006) 99.8% of chiropractors have recommended patients see a medical primary care physician. The most common health complaints for which chiropractors referred a patient to a medical primary care physician were: psychological conditions, infectious conditions and conditions that were unresponsive to manipulation. A study conducted by Sawyer et al., (1998) illustrated that chiropractors most commonly referred to specialist physicians such as psychologists, orthopaedic surgeons and neurologists, and that common reasons for making such referrals were “second opinion” or “legal” considerations such as personal injury claims and litigations. The study by Sawyer et al., (1998) also established that close to 70% of chiropractors mentioned that they received requests for patient records from specialist physicians for patient records and 80% submitted requests for patient records to doctors.

Smith *et al.*, (2006) further declared that the lack of a direct formalised referral relationship between chiropractors and medical primary care physicians had implications for efficiency, quality, and patient safety in the health care delivery system.

2.4 Limitations of the biomedical model and the emergence of the patient-centred approach

In the past 30 years, an extensive body of literature has emerged advocating a 'patient-centred' approach to medical care. However, despite the popularity of the concept, there is a general lack of consensus regarding its definition. The most comprehensive description is provided by Stewart *et al.*, (1995) whose model of the patient-centred clinical method identifies six interconnecting components:

- (1) exploring both the disease and the illness experience;
- (2) understanding the whole person;
- (3) finding common ground regarding management;
- (4) incorporating prevention and health promotion;
- (5) enhancing the doctor-patient relationship;
- (6) 'being realistic' about personal limitations and issues such as the availability of time and resources.

According to Mead and Bower, (2000) the patient-centred approach is gaining impetus due to the limitations of the 'biomedical model', in which the patients illness is reduced to a collection of signs and symptoms which are then investigated and interpreted. Curing (or improving) the patients illness therefore occurs through accurate diagnosis of the pathology, which permits a selection of appropriate interventions that will "restore the diseased processes" to normal.

As individuals are striving for emotional, mental and social wellbeing, they are increasingly regarding health as more than solely a physical matter (Jamison, 1999). A study by Foster et al., (2003) asserts that the biomedical model, that propagated the belief that treating all dysfunctions was highly dependant on the exact identification of some pathology, is becoming increasingly redundant. This is allowing the shift towards the biopsychosocial model of healthcare which encapsulates the biological together with the psychological and social factors.

Mead and Bower, (2000) proposed that `patient-centred' medicine differs from the `biomedical model' in terms of five key dimensions.

1. Biopsychosocial perspective

The biopsychosocial perspective is a fundamental theme of many published accounts of `patient-centeredness'. Stewart et al., (1995) confirmed that the patient-centred method requires a ``willingness to become involved in the full range of difficulties patients bring to their doctors, and not just their biomedical problems". This presents a powerful aid to understanding chronic pain, such as persistent back pain (Foster et al, 2003).

Woolf and Akesson, (2001) recommended that the management of chronic musculoskeletal pain of uncertain origin presents a particular problem for both clinicians and patients alike. Due to a lack of any clear pathophysiological explanation to guide practitioners in treating these patients, interest is being diverted to alternative explanations of persistent back pain. The challenge of providing more effective treatment for these patients has resulted in more support for the biopsychosocial model. This combined approach, integrating the biological with the psychological and social forces, presents a potentially useful tool to understanding persistent back pain. Hence, by focusing not just on the pathology, but rather on the context in which symptoms occur and are reported,

more efficient and effective course of treatment should be possible. Such a broader approach is not only desirable, but also necessary given the failure of the traditional biomedical approach for most people with chronic musculoskeletal pain.

Thus, it can be highlighted that an essential part of the biopsychosocial model and the concept of patient-centeredness, is that of communication skills and taking the patients history. This is highlighted in a study by Dale et al., (1993) which asserts that the medical exam and taking the patients history are the processes wherein doctors collect information that is integral to good medical care. They indicate that the less meticulously the doctors collect data, the greater the likelihood of inaccuracy in diagnosis. Consequently, this can lead to unnecessary and incorrect tests and investigations being conducted. Dale et al., (1993) further indicates that for certain medical problems, the history taking is the most critical component as a diagnosis can be determined or certain pathologies negated. For example migraine headaches are so classic in their symptoms that a careful history may be the only thing needed to make a diagnosis. Similarly researchers at West Virginia University studied the relative contribution of the history taking, the physical exam and laboratory tests in 80 patients who came to a medical clinic with previously undiagnosed conditions. They found that after just the history taking, the doctors could make the diagnosis 76% of the time. The physical exam resulted in another 12% of the patients being diagnosed. Lab tests resulted in another 11% of the diagnoses.

Travaline et al., 2005 proposed that effective communication forms the foundation of the doctor's relationship with his/her patient from the onset of the history taking throughout the treatment plan.

The processes of taking a patients history and the formation of effective communication channels with a patient had been jeopardised by time constraints placed on doctors (Mechanic et al., 2001).

According to the study by Mechanic et al., (2001) the average duration of an initial consultation with a physician in 1998 was to 21.4 minutes. This time had decreased over the years due to managed care organisations, with their emphasis on maximising “throughput”, forcing physicians to go through patients at an extremely high speed. Mechanic et al., (2001) also suggested that initial consultations with female physicians are 1.2 minutes longer, on average, than visits to male physicians as they maybe more inclined to focus on issues of communication and psychosocial factors rather than their male counterparts.

2. The `patient-as-person'

According to Mead and Bower, (2000) patients need to be understood in a holistic manner, within their unique context, not characterised by a diagnostic label. For example, a compound leg fracture will not be experienced in the same way by two different patients; it may be a far less cause for concern to the retired worker than the professional athlete, for whom the injury potentially signifies the end of a career. Similarly, the medical treatment of a disease will not remedy the symptoms and suffering for all patients alike. Thus, patient-centred medicine visualises the patient as an individual rather than the object of some disease entity.

3. Sharing power and responsibility

Clarke, (1994) stated that the patient-centred approach promoted greater patient involvement in healthcare than that which is most often associated with the biomedical model. Rather than being viewed as a technical process, healing is

regarded as a personal one in which the doctor is experienced, not as a diagnostician, but rather as a companion to the client in the process of understanding the subjective disease process.

4. The therapeutic alliance

According to Clarke, (1994) in the biomedical model the perceived value of the relationship between doctor and patient is somewhat vague since diagnosis and treatment are in effect decision-making and procedural issues. The patient-centred approach places more emphasis on the personal relationship that exists between the doctor and patient. Rogers (1967, cited in Clarke, 1994) asserted that the therapist's attitudes of empathy, congruence and unconditional positive regard are both necessary and sufficient for implementing therapeutic change in clients.

Practice observation by Jamison (1996), identified a number of therapeutic elements in the chiropractor-patient relationship. The practitioner:

- Provided a supportive relationship: Practitioners interacted socially and professionally with clients
- Served as a source of information: Practitioners offered patients an explanation of their symptom experience, the basis of how successful intervention may be achieved and guidelines to reduce discomfort and prevent future recurrences of symptoms.
- Encounter had an intrinsic psychotherapeutic effect: Formulation of a working diagnosis is the product of the dynamic interaction between the patient and the practitioner, which serves as the focus for immediate therapeutic intervention.
- Undertook manual intervention: Touch emerged as an intrinsic component of chiropractic diagnosis and therapy.

- Provided the patient with knowledge and skills which could enhance a sense of personal control: Despite the differing degrees of patient education that were experienced, the majority of chiropractors did provide their patients with information on how they could relieve pain and reduce muscle tightness.

5. The 'doctor-as-person'

Mead and Bower, (2000) acknowledged that “the doctor and the patient are influencing each other all the time and cannot be considered separately”, whilst according to the biomedical model, the doctor has little or no influence on diagnosis and treatment.

2.5 Chiropractic curriculum

A study by Jamison, (1998) proposed that even though chiropractic philosophy advocates a holistic approach, chiropractic practice, with its focus on biomechanical analysis followed by therapeutic adjustment, was still functioning within the biomedical framework. This presented chiropractic educators with the problem of producing “practitioner-scientists who can also function as caring counsellors”.

Jamison, (1998) further stated that effective clinical communication, which displayed empathy and empowered patients to actively engage in their own healthcare, contributed significantly to successful patient management. Teaching methods in the undergraduate curriculum needed to take cognizance of this and consequently need to provide learning opportunities that attended to these elusive practice requirements.

Chapter Three

METHODOLOGY

3.1 Introduction

This chapter aims to describe the research methodology as well as collecting data and their analysis. This research study has met the Institutional and ethical obligations of research in the Faculty of Health Sciences, Durban University of Technology (Appendix A).

3.2 Research Design

This was a quantitative questionnaire based study in the investigation of the current role of the Chiropractor in the patient-centred approach to stress management, in the greater Durban area.

3.3 Sampling

3.3.1 Method

Total sample selection was used for all chiropractors (Mouton, 1996) within the Durban metropolitan area, which was defined as an area having a dialling code (prefix) of 031.

Questionnaires that were returned to the researcher was by means of self selection (Mouton, 1996) with respect to the respondents.

All chiropractors, 79 practitioners, registered with the Allied Health Professions Council of South Africa who practiced in the greater Durban area were requested to participate in this study.

With respect to the questionnaires, a minimum return of 50% (40 completed questionnaires) was deemed to be sufficient in order to attain a sample representative of the group under study in this research (Esterhuizen, 2007). Of the sample 60 (76%) chiropractors completed the questionnaire and fulfilled all the inclusion and exclusion criteria for the study.

All participants were allocated into one group, with subgroups only being necessary during statistical analysis.

All the questionnaires were used for purposes of analysis and the grouping of the various responses would be determined by the outcomes that needed to be obtained in this research (see aims and objectives).

3.4 Inclusion and exclusion criteria

Each practitioner, fitting into the inclusion criteria, were personally given a questionnaire (Appendix B) to complete

3.4.1 Inclusion criteria

- Chiropractors must be registered with the Allied Health Professions Council of South Africa.
- The Informed Consent Form has to be signed and returned.

3.4.2 Exclusion criteria

- Any Chiropractor who is not a South African resident and not living in the greater Durban area will not be considered for the sample.
- Any Chiropractor not familiar with the English language will be excluded due to English being the medium of instruction at the Chiropractic institutions in South Africa.
- Chiropractors who participated in the Focus Group and Pilot Study will be excluded from the study.
- Any practitioners that are involved in the development and approval of this research proposal through the Department of Chiropractic will be excluded.

3.5 Procedure

Chiropractors were contacted telephonically in order to discuss a convenient time in which they were free to receive the questionnaire at their practice.

At this appointment or meeting each self - selected chiropractor was presented with:

- a) A Letter of Information (Appendix C) ,
- b) An Informed Consent Form (Appendix D),
- c) A Questionnaire (Appendix B),

The Letter of Information and Informed Consent Form needed to be completed prior to the Chiropractor receiving the questionnaire. The researcher then waited outside the room whilst the Chiropractor completed the questionnaire. The questionnaire was then collected so to improve the return of the questionnaires.

To maintain confidentiality, the Informed Consent Forms and the Questionnaires was filed randomly by the respondent Chiropractors in two different ballot boxes.

3.6 Measurement tool

3.6.1 Questionnaire Development

A demographic and epidemiological questionnaire was utilised to gather the relevant information. According to Mouton, (1996) questionnaires are a good source of information, provided that the questionnaire had been demonstrated to be reliable and valid. Mouton, (1996) also states that questionnaires are the tool of choice for a project such as this because it reduces researcher bias.

As a result the questionnaire was specifically developed by the researcher for the study using the literature of; Langworthy and Breen (2007), Smith et al., (2006), Hardy and Pollard (2006), Innes (2005), Middleton and Pollard (2005), Foster et al., (2003), Woolf and Akesson (2001), Mechanic et al., (2001), Mead and Bower (2000), Jamison (2000), Jamison (1999), Jamison (1998), Sawyer et al., (1998), Jamison (1996), Davidsons (1995), Stewart et al., (1995), Travaline et al., (1995), Clarke (1994), Abrams and Ellis (1994) and Dale et al., (1993).

These individual pieces of literature presented various factors that affect the use of psychosocial parameters in practice. Based on these factors, a questionnaire was then developed by the researcher for focus group evaluation and validation.

3.6.2 Focus group

Focus groups complement surveys and are used to formulate questionnaires; as a result they promote validity by way of providing additional detail and context for a survey. This is created by discussing the wording of a question or offering advice on how the whole questionnaire would appear to respondents.

Additionally focus groups are also used to help interpret the results of surveys (Bernard, 2000).

The Focus Group included 8 chiropractors and one psychologist, which helped determine the face validity of the questionnaire. Face validity is determined by an agreement between researchers and those with a vested interest in the questionnaire, that on “the face of it” the tool seems valid. The group gathered to discuss the questionnaire and the factors that it covers, thus ruling out any ambiguity. Relevant questions have been included while some irrelevant questions have been omitted (Bernard, 2000).

Before commencing, the participants read the Letter of Information (Appendix E) and signed the Letter of Informed Consent (Appendix F). A Confidentiality Statement (Appendix G) and Code of Conduct Statement was signed by all of the participants (Appendix H). The questionnaire was then given to the participants and they were asked to comment on how the questionnaire could be modified to obtain the required information from the study group.

The changes identified by the Focus Group included amongst others:

- Grammar changes
- Reduction of questions with ambiguity
- Sequence of the questions
- Inclusion of pertinent questions and further instructions

3.6.2.1 Focus Group changes to the questionnaire

The following changes were made to the proposed Appendix I and the amended version constitutes Appendix J:

The formats of various questions were modified in order for them to be more suitable for statistical analysis as well as to make the questionnaire more user-friendly.

- The statement 'All questions are strictly confidential. Please tick one answer per question unless otherwise indicated' was added to the beginning of the questionnaire.
- Categorical options were included in question one with regards to age.
- The question, 'Did you qualify in a South African Institution?' was removed.
- The statement, 'If you have been in private practice for less than six months, please do not continue,' was removed as the focus group decided to modify the inclusion criteria so that any Chiropractor registered with the AHPCSA could partake in this study, regardless of their experience.
- The question, 'Are you registered with the AHPCSA?' was removed as it forms part of the exclusion criteria.
- Question seven was changed from, 'What is the average number of patients you see per working day,' to 'What is the average time you spend with each new patient during a consultation.'
- The questions, 'Do your patients perceive that they are moderately to severely stressed,' and 'Do you think it would be beneficial if a Postgraduate course in stress management was offered to Chiropractors,' was omitted.

- The question, 'Do your patients' state that stress is the cause of their presenting pathology which requires Chiropractic treatment,' was rephrased to, 'How often do patients associate their main complaint with stress related issues.'
- Question fourteen was formatted into a tabulated design.
- The questions, 'Chiropractors are equipped with the necessary skills to evaluate psychosocial stressors in patients,' and 'Do you think Chiropractors should utilise a psychological stress profile to further enhance their diagnostic abilities,' were included and became questions twelve and thirteen.
- Further options were added onto question nineteen and the follow-up to question 20, 'What components of the Chiropractic curriculum do you think was deficient,' was suggested and included.

3.6.3 Pilot study

The refined Questionnaire was then reviewed in a pilot study. The purpose of the pilot study was to ascertain the following information (Fink and Kosecoff, 1985 and Hicks, 2004):

- Were the questions misleading?
- Were the questions appropriate for the respondents participating in the survey?
- Would the questionnaire yield the correct and necessary information?
- Would the researcher be able to use the information collected in the survey correctly?
- Was a reasonable amount of time been allocated for the task?
- Was the instructions clearly understood by the respondents.

The questionnaire, following the changes made by the Focus Group was given to six respondents. The respondents were representative of the study group. They were required to answer the Questionnaire (Appendix J), to determine if the questions could be understood and easy to complete. It was judged in terms of its readability, simplicity and whether the instructions to the Questionnaire was also easy to understand. Members involved in the pilot study had to further amend the Questionnaire so that the final Questionnaire could be produced.

3.6.3.1 Pilot study changes to the questionnaire

The following changes were affected to Appendix J and the amended version constitutes Appendix B:

- The general layout of the questionnaire was changed so as to make the questions more presentable.
- The following questions, 'What is the most common primary method of treatment you utilise in the clinical setting when dealing with a stressed patient,' and 'how do the patients respond to your stress management protocols,' were included.

3.6.4 Final Questionnaire discussion

Participants filled in the questionnaire with respect to their opinion on:

- Chiropractors utilising patient-centred stress management protocols.
- Whether those Chiropractors who utilise patient-centred stress management protocols are competent in regards to these protocols.

- The factors which may influence Chiropractors utilisation/non-utilisation of patient-centred stress management protocols, such as:
 - If Chiropractic patients, do indeed, present with stress-related conditions.
 - The most common primary treatment methods and where these skills were attained.
 - The impact of time constraints and the affect it has on the Chiropractors stress management protocols.

3.7 Statistical analysis:

SPSS version 15.0 was used for data analysis (SPSS Inc., Chicago, Illinois, USA). A p value of <0.05 was considered as statistically significant.

Descriptive objectives were analysed with frequency tables and cross-tabulation tables. Graphs were included to reflect the data graphically for certain questions.

Relationships between the categorical variables were assessed using the Pearson chi-square statistic.

Binomial test and One-sample chi-square test were used to compare between observed and expected proportions within categorical variables (Esterhuizen, 2008).

Chapter Four

RESULTS

4.1 Introduction

Results of the statistical analysis of the data are presented in this section. Only the figures of results that feature in the discussion are shown here. Firstly, a descriptive analysis is presented, followed by analytical analysis, which reports proportions and means. These results will be discussed in the context of the literature available to date.

4.2 Data

4. 2. 1 Primary Data

The data collected from the questionnaire/ participant responses and the data obtained once the statistical analysis was complete.

4. 2. 2 Secondary Data

The data in the literature, internet, books and journals with which to compare the outcome of the results in the research study.

4.3 Key for abbreviations

P value: is the Probability of your results being due to chance or random error and if the p value is a very small one it can be conclude that the results are significant (Hicks, 2004).

N: total Number of scores (Hicks, 2004).

n: sample size (Hicks, 2004).

4.4 Response rates

A total of 60 out of a possible 79 chiropractors participated in the study . All the chiropractors were registered with the Allied Health Professions Council of South Africa and practiced in the greater Durban area. The 19 Chiropractors who did not participate in the study chose to do so due to a personal decision.

The response rate of the participants was 75.9%, which was above the minimum set sample response rate of 50%, as discussed in Chapter 3. A possible reason for the high response rate is that the Chiropractors were contacted telephonically and an appointment was setup whereby the Chiropractors had to complete the questionnaire at a given time, as they were not allowed to take the questionnaire home. The researcher waited for the questionnaires to be completed and collected it thereafter. The researcher had direct contact with the Chiropractors and this potentially would have resulted in an increase in the response rates (Russell, et al. 2004).

4.5 Demographics of the sample

The demographic data had shown that the majority of the respondents were between 20 and 40 years old (80%, n=48). A total of 91.7% (n=55) of the respondents were White and the remainder (8.3%, n=5) were Indian. There were 40 (66.7%) male respondents and 20 (33.3%) female respondents. This demographic data was shown in Tables 4.1, 4.2 and 4.3 respectively.

Table 4.1: Age

	Frequency	Percent
20-30	24	40.0
31-40	24	40.0
41-50	1	1.7
50 and above	11	18.3
Total	60	100.0

Table 4.2: Ethnicity

	Frequency	Percent
White	55	91.7
Indian	5	8.3
Total	60	100.0

Table 4.3: Gender

		Frequency	Percent
	Male	40	66.7
	Female	20	33.3
	Total	60	100.0

The comparison between gender and the average time spent with each patient is not statistically significant at the 95% level ($p=0.064$). However, it can be noted that 47.5% of male respondents spent an average of over 20 minutes with the patient whilst 65% of the female respondents spent over 20 minutes with each patient.

Table 4.4: Comparison between Gender and Average time spent with each patient

		Gender				Total	
		Male		Female		Count	%
		Count	%	Count	%		
Average time spent with patient	Less than 5 minutes	2	5%	3	10%	5	8.3%
	6-10	1	2.5%	1	5%	2	3.3%
	11-15	2	5%	2	10%	4	6.7%
	16-20	16	40%	1	5%	17	28.3%
	Over 20 minutes	19	47.5%	13	65%	32	53.3%
		40	100%	20	100%	60	100.0%

Pearson Chi-Square= 8.880, df=4, p=0.064
6 cells (60.0%) have expected count less than 5. The minimum expected count is .67.

The data in Table 4.5 showed that the majority of Chiropractors qualified at the Durban Institute of Technology (DUT) (76.7%, n=46), followed by Palmer College (18.3%, n=11) and the University of Johannesburg (UOJ) (3.3%, n=2).

Table 4.5: Institution

	Frequency	Percent
Bournemouth, England	1	1.7
DUT	46	76.7
Palmer College - IOWA USA	11	18.3
UOJ	2	3.3
Total	60	100.0

The data in Table 4.6 showed that 23.3% (n=14) of Chiropractors had been practicing between 0.5 and 3 years whilst 28.3 (n=17) had been in practice for over 10 years.

Table 4.6: Duration in private practice

Years	Frequency	Percent
0.5-3	14	23.3
4-6	15	25.0
7-9	14	23.3
10 and over	17	28.3
Total	60	100.0

4.6 Results

4.6.1 Objective 1: To determine whether Chiropractors utilize patient-centred stress management protocols.

The data in Table 4.7 reflected that the proportion of respondents who indicated that they took a psychosocial history (75%, n=45) was higher than those who did not (15%, n=15). The results are statistically significant at the 95% level ($p < 0.001$). Table 4.8 showed the proportion of respondents who focused on the different types of stressors. A total of 86.7% (n=39) focused on family stressors or health stressors, whilst 84% (n=38) focused on occupational stressors and 68.9% (n=31) on financial stressors.

Table 4.7: Binomial Test

	Category	N	Observed Prop.	Test Prop.	p (Based on Z Approximation)
Do you take a Psychosocial history?	Yes	45	.75	.50	.000(a)
	No	15	.25		
	Total	60	1.00		

Table 4.8: Focus of Psychosocial history

	Frequency	Percent
Financial stressors	31	68.9%
Occupational stressors	38	84.4%
Family stressors	39	86.7%
Health stressors	39	86.7%

4.6.2 Objective 2: To verify whether those chiropractors who utilize patient-centred stress management protocols are competent with regards to these protocols.

The data in Table 4.9 reflected that of those Chiropractors who took a psychosocial history, 97.8% (n=44) indicated that they have a role to play in stress management. Of those, 35.6% (n=16) 'Strongly Agreed' that they are equipped with the necessary skills to evaluate psychosocial stressors in patients whilst 33.3% (n=15) 'Agreed'.

Table 4.9: Chiropractors equipped with the necessary skills

		Do chiropractors have a role to play in stress management				Total	
		Yes		No			
		Count	%	Count	%	Count	%
Are chiropractors equipped with the necessary skills to evaluate psychosocial stressors in patients?	Strongly agree	16	35.6%	1	2.2%	17	37.8%
	Agreed	15	33.3%	0	.0%	15	33.3%
	Disagree	11	24.4%	0	.0%	11	24.4%
	Strongly disagree	2	4.4%	0	.0%	2	4.4%
Total		44	97.8%	1	2.2%	45	100.0%
Pearson Chi-Square = 1.684 df=3 p = 0.640 a 5 cells (62.5%) have expected count less than 5. The minimum expected count is .04.							

The data in Table 4.10 reflected that of those Chiropractors who took a psychosocial history, 97.8% (n=44) indicated that Chiropractors have a role to play in stress management. Of those, 55.6% (n=25) indicated that patients responded 'Very Positively' to their stress management protocols. However, the results are not statistically significant at the 95% level ($p=0.360$)

Table 4.10: Patient response to stress management protocols

		Do chiropractors have a role to play in stress management				Total	
		Yes		No			
		Count	%	Count	%	Count	%
How do patients respond to stress management protocols	Positively	25	55.6%	0	.0%	25	55.6%
	2	14	31.1%	1	2.2%	15	33.3%
	3	5	11.1%	0	.0%	5	11.1%
Total		44	97.8%	1	2.2%	45	100.0%
Pearson Chi-Square = 2.045, df=2 , p=0.360 4 cells (66.7%) have expected count less than 5. The minimum expected count is .11.							

4.6.3 Objective 3: To establish whether chiropractic patients associate their main complaint with stress related issues and to determine if muscle spasm is the most common symptom or sign that a chiropractor may elicit or find during a clinical examination of a patient suffering from chronic stress.

The one-sample chi_square (Table 4.11) results reflected that there was no significant difference between observed and expected proportions at the 95% level ($p=0.522$). All the Chiropractors in the study indicated that they had consulted patients who had associated their main complaint with stress related issues. The percentages are reflected in Table 4.12 and Figure 1 and showed that 38.3% ($n=23$) of Chiropractors felt that their patients 'Often' associated their main complaint with stress-related issues whilst 35% ($n=21$) felt that their patients 'Very Often' related their main complaint with stress-related issues.

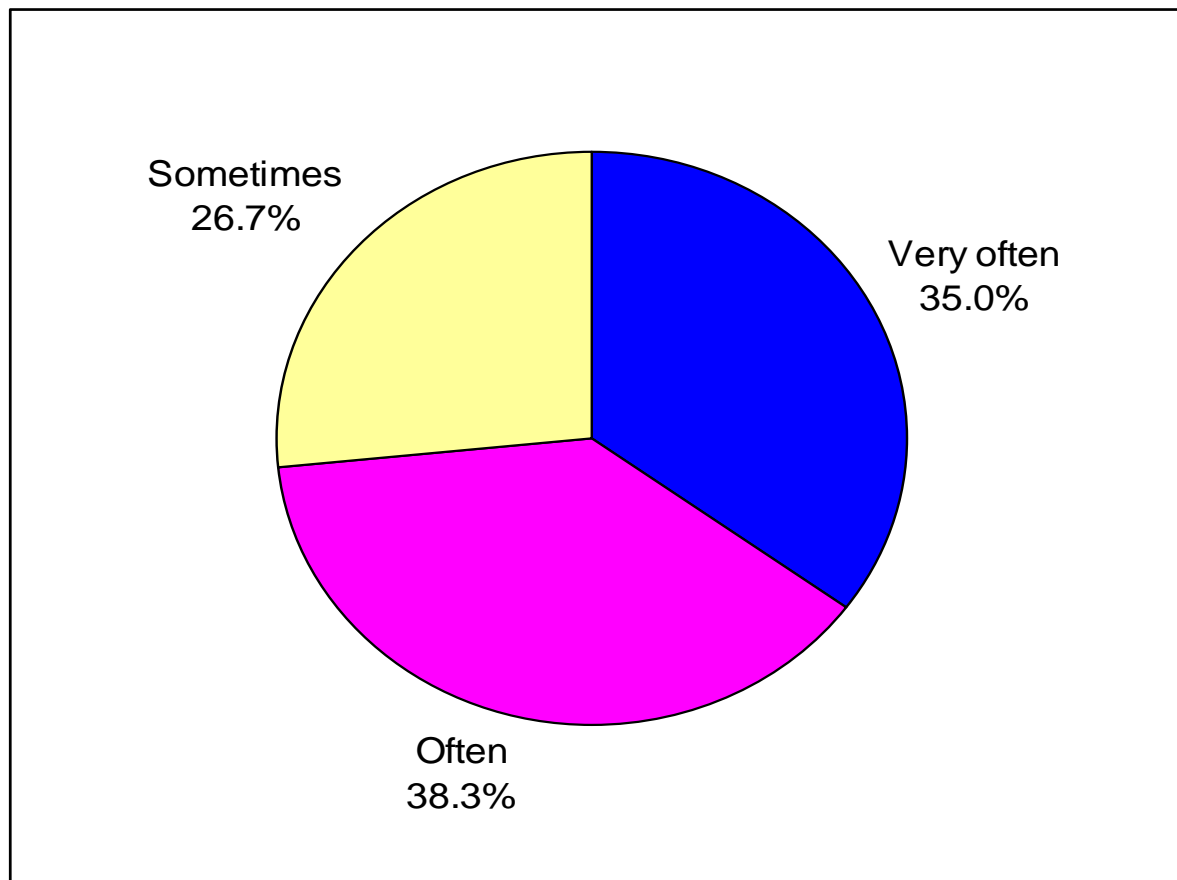
Table 4.11: One-sample chi square

	Chi-Square	df	P
How often do patients associate main complaint with stress-related issues	1.300	2	0.522
How often do you associate more serious psychosocial stress in your practice	41.700	2	<0.001
Do signs and symptoms influence treatment protocol	20.500	4	<0.001

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

Table 4.12: Patients who associate their main complaint with stress-related issues

	Frequency	Percent
Very often	21	35.0
Often	23	38.3
Sometimes	16	26.7
Total	60	100.0

Figure 4.1: Patients who associate their main complaint with stress-related issues

The data reflected in Table 4.13 showed that 71.7% (n=43) of Chiropractors 'Sometimes' encountered more serious psychosocial stress in their practice; like child/spousal abuse, drug abuse, etc; whilst 21.7% (n=13) indicated 'Never' and 6.7% (n=4) indicated 'Often'. This result was significant at the 95% level ($p < 0.001$).

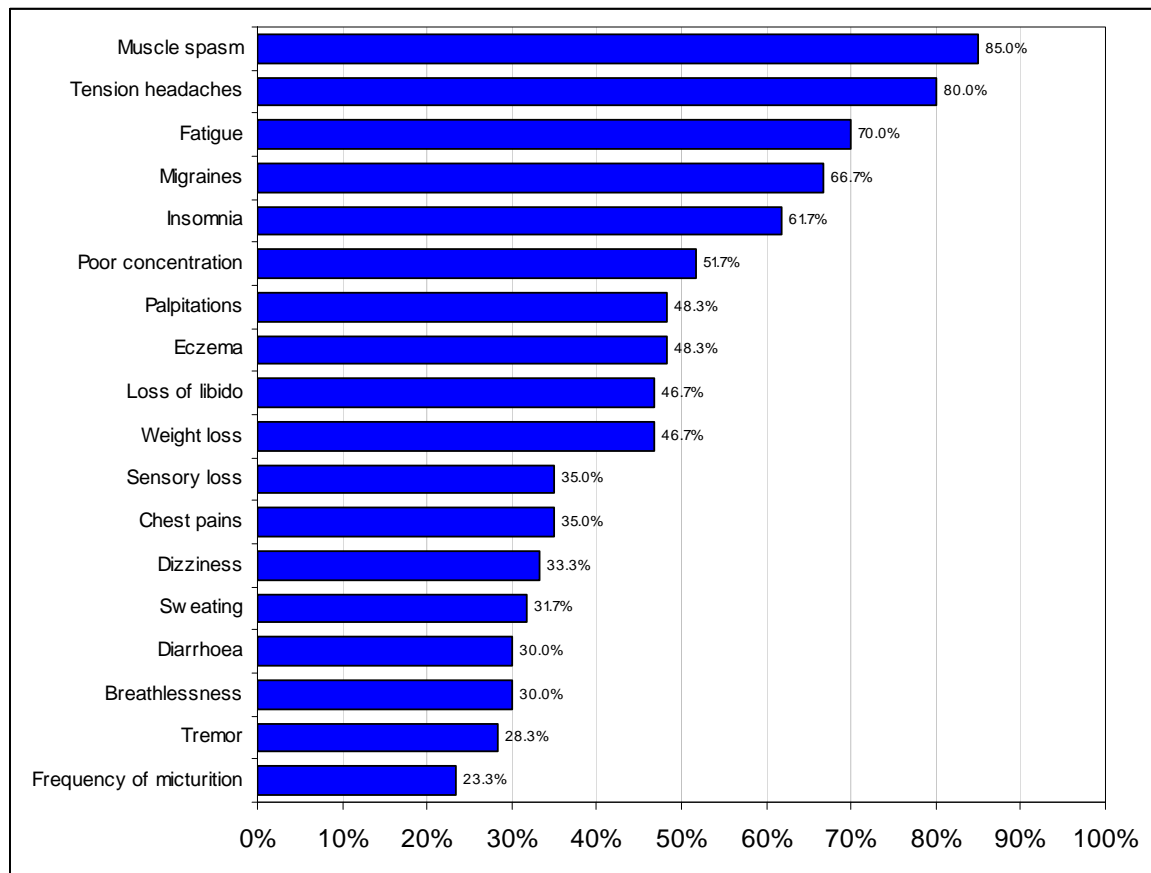
Table 4.13: More serious psychosocial stress found in Chiropractic practice

	Frequency	Percent
Often	4	6.7
Sometimes	43	71.7
Never	13	21.7
Total	60	100.0

Figure 2 and Table 4.14 revealed that Muscle spasm (85%, n=51) was the most common symptom or sign found or elicited in a patient suffering with chronic stress, this was followed by Tension headaches (80%, n=48) and Fatigue (70%, n=42). The other signs and symptoms were less frequently noted and are shown in order of frequency in Figure 2.

Table 4.14: Common signs and symptoms of chronic stress

	Frequency	Percent
Migraines	40	66.7%
Muscle spasm	51	85.0%
Tension headaches	48	80.0%
Eczema	29	48.3%
Tremor	17	28.3%
Sweating	19	31.7%
Palpitations	29	48.3%
Chest pains	21	35.0%
Dizziness	20	33.3%
Breathlessness	18	30.0%
Diarrhoea	18	30.0%
Frequency of micturition	14	23.3%
Insomnia	37	61.7%
Fatigue	42	70.0%
Poor concentration	31	51.7%
Sensory loss	21	35.0%
Weight loss	28	46.7%
Loss of libido	28	46.7%
Constipation	1	1.7%
Nausea	1	1.7%
Tinnitus	1	1.7%
TMJ problems	1	1.7%
Indigestion	1	1.7%
Weight Gain	1	1.7%

Figure 4.2: Common signs and symptoms of chronic stress

The data in Table 4.15 showed that 10% (n=6) of Chiropractors are 'Always' influenced in their treatment protocol upon discovering symptoms and signs of chronic stress, whilst 3.3% (n=2) indicated that they are 'Never' influenced. The majority of Chiropractors (35%, n=21) having indicated that they are 'Sometimes' influenced. The results for Table 4.15 is significant at the 95% level ($p < 0.001$).

Table 4.15: Influence to practice protocols

	Frequency	Percent
Always	6	10.0
Very often	17	28.3
Often	14	23.3
Sometimes	21	35.0
Never	2	3.3
Total	60	100.0

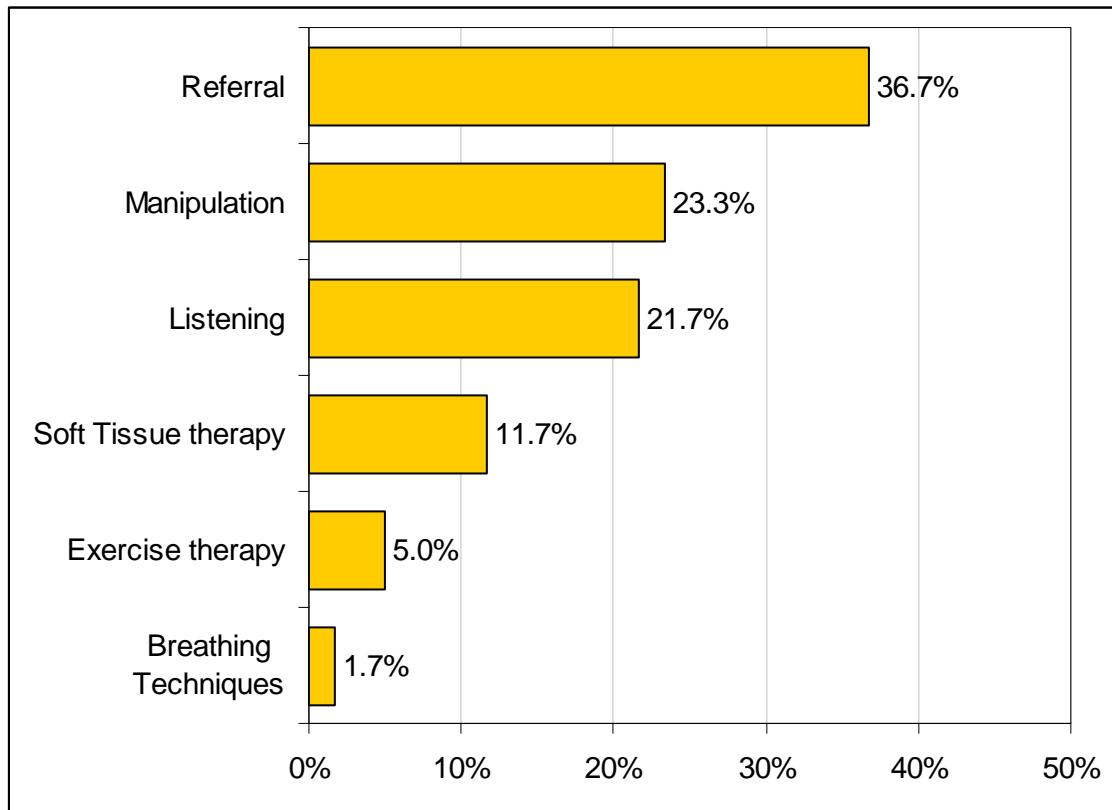
4.6.4 Objective 4: To determine if referral is the most common primary method of treatment that chiropractors utilize in the clinical setting when dealing with a stressed patient and to determine in which institution/organization these chiropractors had studied these techniques that they now utilize in their practice.

Referral was the most common primary method of treatment with 36% (n=22) of Chiropractors utilizing this method in the clinical setting when dealing with a stressed patient. This was followed by Manipulation (23.3%, n=14) and Listening (21.7%, n=13). The other treatment methods are shown in order of frequency in Figure 3.

Table 4.16: Most common primary method of treatment utilized by Chiropractors when dealing with a stressed patient.

	Frequency	Percent
Manipulation	14	23.3
Listening	13	21.7
Exercise therapy	3	5.0
Referral	22	36.7
Soft Tissue therapy	7	11.7
Breathing Techniques	1	1.7
Total	60	100.0

Figure 4.3: Most common primary method of treatment utilized by Chiropractors when dealing with a stressed patient.



Of the 36% (n=22) of Chiropractors who refer stressed patients to other healthcare professionals, the majority of referrals are to Psychologists (30%, n=18) followed by General Practitioners and Homeopaths with 3.3% (n=2). This is shown in Table 4.17.

Table 4.17: Referrals to other Healthcare Professionals

	Frequency	Percent
Psychologist	18	30.0
General Practitioner	2	3.3
Homeopath	2	3.3
Total answered	22	36.7
Not answered	38	63.3
Total	60	100.0

The data in Table 4.18 showed that of the 36% (n=22) of Chiropractors who refer stressed patients to other healthcare professionals, 36.4% (n=8) of them 'Sometimes' had an interactive relationship with these professionals whilst 22.7% (n=5) of Chiropractors stated that they 'Always' or 'Often' had an interactive relationship with these other healthcare professionals.

Table 4.18: Interactive relationship with specialists

	Frequency	Percent
Always	5	22.7
Very often	4	18.2
Often	5	22.7
Sometimes	8	36.4
Total answered	22	-
Not answered	38	-
Total	60	100.0

The majority of Chiropractors obtained stress management techniques through self-study (56.7%, n=34) whilst 43.3% (n=26) acquired stress management techniques at their Chiropractic University/Technikon. This was shown in Table 4.19 in which the other less frequently utilized institutions/organizations are also included.

Table 4.19: Institutions/Organizations where Chiropractors acquired stress management techniques

	Frequency	Percent
Chiropractic University/Technikon	26	43.3%
International Chiropractic College	10	16.7%
Observation/Advice from Chiropractic colleagues	13	21.7%
Observation/Advice from other Health care professionals	17	28.3%
Self study	34	56.7%
Conferences/Workshops	13	21.7%
LifeLine courses	3	5.0%
Other	4	6.7%

The data in Table 4.20 had shown that 66.7% (n=40) of Chiropractors felt that Chiropractic tertiary education did not equip them with the necessary skills to effectively implement stress management protocols.

Table 4.20: Chiropractic tertiary education has equipped you with skills to implement stress management protocols

	Frequency	Percent
Yes	20	33.3
No	40	66.7
Total	60	100.0

4.6.5 Objective 5: To establish if time constraints on Chiropractors affect their utilization of stress management protocols.

The comparison between time constraints affecting treatment protocols and the average time spent with a new patient is not significant at the 95% level ($p=0.066$).

Table 4.21: Comparison between time constraints affecting treatment protocols and the average time spent with a new patient.

		Average time spent with patient										Total	
		Less than 5 minutes		6-10		11-15		16-19		Over 20 minutes		Count	%
		Count	%	Count	%	Count	%	Count	%	Count	%		
Busy	Always	0	.0%	1	1.7%	0	.0%	0	.0%	2	3.3%	3	5.0%
	Very often	0	.0%	1	1.7%	1	1.7%	1	1.7%	1	1.7%	4	6.7%
	Often	1	1.7%	0	.0%	1	1.7%	2	3.3%	6	10.0%	10	16.7%
	Sometimes	2	3.3%	0	.0%	2	3.3%	12	20.0%	14	23.3%	30	50.0%
	Never	2	3.3%	0	.0%	0	.0%	2	3.3%	9	15.0%	13	21.7%
Total		5	8.3%	2	3.3%	4	6.7%	17	28.3%	32	53.3%	60	100.0%
Pearson Chi-Square = 25.215, df=16, p=0.066 21 cells (84.0%) have expected count less than 5. The minimum expected count is .10.													

The data in Table 4.22 had showed that 50% (n=30) of Chiropractors felt that they 'Sometimes' could not deal with their patient's stress issues like they usually would when they got very busy whilst 21.7% (n=13) felt that time constraints 'Never' affected their treatment protocols and 5% (n=3) noted that time constraints 'Always' affected their treatment protocol.

Table 4.22: Time constraints affecting treatment protocols

	Frequency	Percent
Always	3	5.0
Very often	4	6.7
Often	10	16.7
Sometimes	30	50.0
Never	13	21.7
Total	60	100.0

The majority of Chiropractors (53.3%, n=32) spent more than 20 minutes with a new patient during a consultation whilst 28.3% (n=17) spent between 16 to 20 minutes and 8.3% (n=5) spent less than 5 minutes consulting their new patient. This was shown in Table 4.23 and Figure 4.

Figure 4.4: Average time (in minutes) spent with a new patient during a consultation

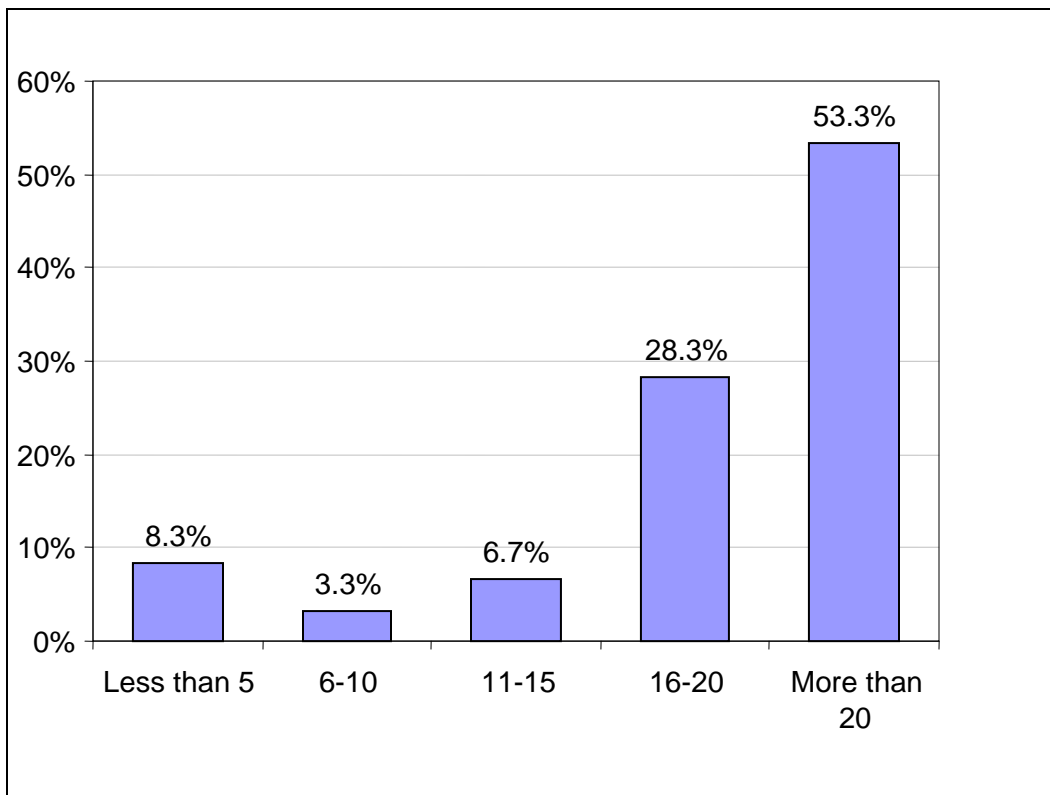


Table 4.23: Average time (in minutes) spent with patient

Minutes	Frequency	Percent
Less than 5	5	8.3
6-10	2	3.3
11-15	4	6.7
16-20	17	28.3
More than 20	32	53.3
Total	60	100.0

Chapter Five

DISCUSSION OF RESULTS

5.1 Introduction

This chapter will discuss the outcomes of this research as well as the objectives of the research.

5.2 Discussion of results

5.2.1 Response rate and demographic profile

The demographic data reflected that the majority of the respondents were between 20 and 40 years of age. A total of 91.7% of the respondents were Caucasians and 66.7% were male. The reason for the high proportion of Caucasian participants may be comparable to the current racial demographic distribution of chiropractors in South Africa at the time the questionnaire was sent out. A total of 76.7% of the respondents were DUT graduates with 23.3% having been in practice between 0.5 and 3 years whilst 28.3% having been in practice for over 10 years.

5.2.2 Objective 1: To determine whether Chiropractors utilise patient-centred stress management protocols.

Seventy-five percent of chiropractors, (Table 4.7) in the study indicated that they took a psychosocial history which may indicate that they utilised the fundamental biopsychosocial theme of 'patient-centeredness, (Stewart et al., 1995). This meant that they had taken the patients social and psychological factors into account and did not just focus on the pathology. Patients cannot be totally characterised by a diagnostic label, regardless of whether that label is physical, psychological or social in nature. To gain a comprehensive and holistic understanding of the patient's presentation and in order to provide an effective regimen, the practitioner should aim to understand the patient as an individual case, within his/her unique context. This combined approach allows for a better understanding of the presenting problem. This is highlighted by Woolf and Akesson, (2001) who indicated that such a broader approach is necessary given the failure of the traditional biomedical approach for most people with chronic musculoskeletal pain.

The fact that seventy-five percent of chiropractors in this study took a psychosocial history reinforces the study by Hardy and Pollard, (2006) which indicates that chiropractic care is more holistic than many other medical professions.

5.2.3 Objective 2: To verify whether those chiropractors who utilise patient-centred stress management protocols are competent with regards to these protocols.

Of the 45 chiropractors who took a psychosocial history, which may signify that they utilised patient-centred protocols, only one chiropractor indicated that they felt that chiropractors do not have a role to play in stress management. Their reasoning was that they considered stress management beyond the scope of chiropractic practice. 68.9% of chiropractors who took a psychosocial history indicated that they are equipped with the necessary skills to evaluate psychosocial stressors in patients and 55.6% indicated that their patients responded 'Very Positively' to their stress management protocols.

A possible reason for the majority of patients responding 'Positively' to Chiropractic treatment is that 75% of the chiropractors in this study had taken a psychosocial history and thus they were able to make an accurate diagnosis without unnecessary tests and investigations being conducted. This is congruent with a study by Dale et al., (1993) which asserted that taking the patients history is integral to good medical care. It also further reinforced a study by Jamison, (2000) which stated that many patients would value advice from their chiropractor on how to better manage stress. The extent to which chiropractors may choose to treat stress is an individual decision. However when making such a decision, it is worth noting that psychological factors and among the best predictors of whether pain will become chronic (Jamison, 1999).

5.2.4 Objective 3: To establish whether chiropractic patients associate their main complaint with stress related issues and to determine if muscle spasm is the most common symptom or sign that a chiropractor may elicit or find during a clinical examination of a patient suffering from chronic stress.

All the Chiropractors in the study indicated that they had consulted patients who had associated their main complaint with stress related issues. 38.3% of Chiropractors felt that their patients 'Often' associated their main complaint with stress-related issues whilst 35% felt that their patients 'Very Often' relate their main complaint with stress-related issues (Tables 4.11, 4.12 and Figure 1).

This was congruent with a study by Jamison (1999) whereby 3 out of 4 chiropractic patients perceived themselves to be stressed and that many patients seeking chiropractic care associated their main complaint with stress related issues.

Muscle spasm was the most common symptom or sign found or elicited in a patient suffering with chronic stress, this was followed by tension headaches, fatigue and migraines. This is consistent with a study by Jamison (2000) in which an association was established between chronic stress and a number of clinical conditions, the most common being muscle spasm (Table 4.14 and Figure 2).

5.2.5 Objective 4: To determine if referral is the most common primary method of treatment that chiropractors utilise in the clinical setting when dealing with a stressed patient and to determine in which institution/organization these chiropractors had studied these techniques that they now utilise in their practice.

Referral was the most common primary method of treatment that chiropractors utilise when dealing with a stressed patient, this was followed by Manipulation and Listening (Table 4.16 and Figure 3). This is consistent with a study by Smith *et al.*, (2006) whereby 99.8% of chiropractors have recommended patients see a medical primary care physician.

The most common healthcare professional that chiropractors referred to was Psychologists; this was followed by General Practitioners and Homeopaths equally (Table 4.17). This is congruent with a study conducted by Sawyer *et al.*, (1998) which illustrated that chiropractors most commonly referred to specialist physicians such as psychologists and neurologists

The majority of chiropractors obtained stress management techniques through self-study, highlighting the dynamic learning possibilities that are afforded by being in practice as well as the need to provide formalised post-graduate learning opportunities (Table 4.19). A significant percentage of chiropractors, 43.3%, acquired stress management skills at their Chiropractic University/Technikon however it is necessary to note that 66.7% of chiropractors felt that chiropractic education did not equip them with the necessary skills to effectively implement stress management protocols (Table 4.20). This further emphasises the difficulties that Jamison, (1998) indicated in her study whereby chiropractic educators needed to produce “practitioner-scientists who can also function as caring counsellors”.

5.2.6 Objective 5: To establish if time constraints on Chiropractors, affect their utilisation of stress management protocols.

The majority of Chiropractors spent more than 20 minutes with a new patient during a consultation (Table 4.23 and Figure 4). This is congruent with data with a study by Mechanic *et al.*, (2000) who stated that the average duration of an initial consultation in 1998 with a physician was 21.4 minutes. This study was also noted that 47.5% of respondents who are male spent an average of over 20 minutes with a new patient whilst 65% of the female respondents spent over 20 minutes with a new patient (Table 4.4). This is consistent with a study by Mechanic *et al.*, (2000) who showed initial consultations with female physicians are 1.2 minutes longer, on average, than visits to male physicians.

Half of the chiropractors in the study noted that they 'Sometimes' could not deal with their patient's stress issues during very busy periods whilst 21.7% felt that time constraints 'Never' affected their treatment protocols and 5% noted that time constraints 'Always' affected their treatment protocol (Table 4.22). This is congruent with a study by Mechanic *et al.*, (2000) who proposed that managed care organisations, with their emphasis on maximising "throughput" was forcing physicians to go through their patients at an extremely high speed.

5.3 Objectives and the related hypotheses

5.3.1 The first objective

To determine whether Chiropractors utilise patient-centred stress management protocols.

Hypothesis one

Chiropractors do not utilise patient-centred stress management protocols.

This hypothesis is rejected based on the finding that the majority of chiropractors utilised the fundamental biopsychosocial theme of 'patient-centeredness'.

5.3.2 The second objective

To verify whether those Chiropractors who utilise patient-centred stress management protocols are competent in regards to these protocols

Hypothesis two

Chiropractors who utilise patient-centred stress management protocols are not competent in regards to these protocols.

The majority of chiropractors indicated that they are equipped with the necessary skills to evaluate psychosocial stressors in patients and that patients responded positively to their stress management protocols hence this hypothesis is rejected.

5.3.3 The third objective

To establish whether chiropractic patients associate their main complaint with stress related issues and to determine if muscle spasm is the most common symptom or sign that a chiropractor may elicit or find during a clinical examination of a patient suffering from chronic stress.

Hypothesis three

Chiropractic patients do not associate their main complaint with stress related issues and the most common symptom or sign that may be elicited or found by a chiropractor during a clinical examination of a patient suffering from chronic stress is not that of muscle spasm.

This hypothesis is rejected based on the fact that a significant number of chiropractic patients associate their main complaint with stress related issues and that muscle spasm was the most common symptom or sign that may be elicited or found.

5.3.4 The fourth objective

To determine if referral is the most common primary method of treatment that chiropractors utilise in the clinical setting when dealing with a stressed patient and to determine in which institution/organization these chiropractors had studied these techniques that they now utilize in their practice.

Hypothesis four

Referral is not the most common primary method of treatment that chiropractors utilise in the clinical setting when dealing with a stressed patient and these stress management techniques was not acquired at a Chiropractic University/Technikon.

This hypothesis is rejected based on findings that referral was the most common primary method of treatment that chiropractors utilise when dealing with a stressed patient and that the majority of chiropractors obtained stress management techniques through self-study.

5.3.5 The fifth objective

To establish if time constraints on Chiropractors, affect their utilisation of stress management protocols.

Hypothesis five

Time constraints do not affect their utilisation of stress management protocols.

Half of the chiropractors in the study noted that they 'Sometimes' could not deal with their patient's stress issues like they usually would when they got very busy therefore this hypothesis is rejected.

Chapter Six

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions

The current role of the chiropractor in the patient-centred approach to stress management has been described in this study.

Chiropractors in the study indicated that they took a psychosocial history therefore they utilised the fundamental biopsychosocial theme of 'patient-centeredness' and that the majority indicated that they are equipped with the necessary skills to evaluate psychosocial stressors in patients and that patients responded positively to their stress management protocols.

All the Chiropractors in this study have indicated that they had consulted patients who had associated their main complaint with stress related issues. It is therefore of relevance to certain chiropractic patients and all chiropractic practitioners that many patients seeking chiropractic care associate their main complaint with stress related issues and believed it would be helpful if chiropractic care included strategies to help them cope with stress.

Muscle spasm which was the most common symptom or sign found or elicited in a patient suffering with chronic stress. This is of particular importance to chiropractors as the majority of conditions treated by chiropractors are neuromusculoskeletal (Jamison, 1998). In order for chiropractors to be capable in their treatment of neuromusculoskeletal pathology, it is imperative that they be able to establish the association between chronic stress and neuromusculoskeletal pathologies. Of further vital importance is the ability of the

chiropractor to competently elicit or find the relevant symptoms and signs in a patient suffering with chronic stress in order to effectively manage the concomitant neuromusculoskeletal pathology.

Referral to psychologists was the most common primary method of treatment that chiropractors utilised when dealing with a stressed patient. It is important that the referral relationship between specialist physicians be formalised therefore increasing efficiency, quality and patient safety in the health care delivery system.

The majority of chiropractors in this study obtained stress management techniques through self-study highlighting the dynamic learning possibilities that are afforded by being in practice as well as the need to provide formalised post-graduate learning opportunities. Effective clinical communication, that displays empathy and empowers the patient to actively engage in his/her own health care, contributes significantly to successful patient management. Teaching methods in the undergraduate curriculum need to take cognizance of this and consequently provide learning opportunities that attend to these practice requirements. Chiropractors were asked about what components of the chiropractic curriculum they thought was deficient and the following is a compilation of the three most common responses:

- Not enough emphasis on practical psychological assessments in order to effectively treat a patient with stress-related issues.
- Not enough opportunity was afforded to observe other medical professionals, such as psychologists, in their approach to stress management.
- Chiropractic students were not adequately taught how to utilise a referral network.

The above points can be used in further studies and strategies which need to be implemented in order to improve the chiropractic curriculum.

The majority of Chiropractors spent more than 20 minutes with a new patient during a consultation and that they 'Sometimes' could not deal with their patient's stress issues like they usually would when they got very busy. This study showed that pressure is still being placed on doctors to see a maximum number of patients in minimal time. This concept shows no signs of withdrawal and many doctors are stumbling as a result of the unmanageable workload.

6.2 Recommendations

6.2.1 Recommendations with respect to this study

- It may be beneficial to do a similar study using other healthcare professionals in South Africa as the sample group and correlate the outcomes of that study with the outcomes of these results.
- It is suggested that further studies delve into facilitating better inter-professional relationships between chiropractors and medical primary care physicians.
- The deficiencies of the chiropractic curriculum highlighted in this study can be used in further studies and strategies in order to improve the chiropractic curriculum.

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Appendix A

ETHICAL ISSUES CHECKLIST FOR RESEARCH APPROVAL

To be completed by all people wishing to conduct research under the auspices of Durban University of Technology.

1. Use the Durban University of Technology Research Ethics Policy and Guidelines to ensure that ethical issues have been identified and addressed in the most appropriate manner, before finalising and submitting your research proposal.
2. Please indicate [by a X as appropriate] which of the following ethical issues could impact on your research.
3. Please type the motivations/further explanations where required in the cell headed COMMENTS.
4. The highlighted response cells indicate those responses that are of particular interest to the Research Ethics and Biosafety Committee
5. The checklist is divided into sections relevant to all research; research on animals; research on humans; research on human health issues and biotechnology.

ALL RESEARCH

NO.	QUESTION	YES	NO	N/A
	CONFIDENTIALITY			
1.	Does the data collection process involve access to (personal or otherwise) confidential personal data (including access to data for purposes other than this particular research project) without prior consent of subjects? If yes, motivate the necessity.		X	
	COMMENTS			
2.	Will the data be collected and disseminated in a manner that will ensure confidentiality of the data and the identity of the participants? Explain your answer.	X		
	COMMENTS: In terms of coding, recording, reporting and disseminating the data, all information will be coded in order to ensure confidentiality of the participants.			
3.	Will the materials obtained be stored and ultimately disposed of in a manner that will ensure confidentiality of the participants? If no, explain. If yes specify how long the confidential data will be retained after the study and how it will be disposed of.	X		
	COMMENTS: The data / questionnaires will be stored by the research administrator for 5 years before the data / questionnaires will be shredded.			
4.	Will the research involve access to data banks that are subject to privacy legislation? If yes, specify and explain the necessity.		X	
	COMMENTS			
	BENEFITS			

5.	Is this research expected to benefit the participants or organisations directly or indirectly? Explain any such benefits.	X		
	COMMENTS: Indirectly, chiropractors will be exposed to an increased awareness of stress in patients.			
6.	Does the researcher expect to obtain any direct or indirect financial or other benefits from conducting the research? If yes, explain.	X		
	COMMENTS: The researcher will receive direct benefit through obtaining his M. Tech: Chiropractic			
NO.	QUESTION	YES	NO	N/A
	<i>SPONSORS, INTERESTS AND INDEMNITY</i>			
7.	Will this research be undertaken on the behalf of or at the request of a pharmaceutical company, or other commercial entity or any other sponsor? If yes, identify the entity.		X	
	COMMENTS			
8.	If yes to 7, will that entity undertake in writing to abide by Durban University of Technology Research Ethics Policy and Guidelines? If yes, do not explain further. If no, explain.			X
	COMMENTS			
9.	If yes to 8, will that entity undertake in writing to indemnify the institution and the researchers? If yes, do not explain further. If no, explain.			X
	COMMENTS			
10.	Does the researcher have indemnity cover relating to research activities? If yes, specify. If no, explain why not.	X		
	COMMENTS: DUT insurance cover			
11.	Does the researcher have any affiliation with, or financial involvement in, any organisation or entity with direct or indirect interests in the subject matter or materials of this research? If yes, specify.		X	
	COMMENTS			
12.	Does permission need to be obtained in terms of the location of the study? If yes indicate how permission is to be obtained.	X		
	COMMENTS: Yes: from the practitioners via the informed consent letter. (Appendix 2)			
	<i>DECEPTION/COVERT DATA COLLECTION</i>			
13.	Is deception of any kind to be used? If so provide a motivation for acceptability.		X	
	COMMENTS			
14.	Does the study involve covert data collection? If yes, explain why this is necessary and what steps have been taken to address the ethical implications of this.		X	
	COMMENTS			

RESEARCH ON ANIMALS

15.	Does the research involve the use of animals? If yes, describe the nature of this involvement.			X
	COMMENTS			
NO.	QUESTION	YES	NO	N/A
16.	Is the research being conducted at an approved facility? If no, explain why. If yes, indicate which facility.			X
	COMMENTS			

RESEARCH ON HUMANS

	<i>RECRUITMENT</i>			
17.	Does recruitment involve direct personal approach from the researchers to the potential subjects? Explain the recruitment process	X		
	COMMENTS: Practitioners in the greater Durban area will be approached personally.			
18.	Are participants linked to the researcher in a particular relationship, for example employees, students, family? If yes, specify how.		X	
	COMMENTS			
19.	If yes to 18, is there any pressure from researchers or others that might influence the potential subjects to enrol? Elaborate.			X
	COMMENTS			
20.	Does recruitment involve the circulation/publication of an advertisement, circular, letter etc? If yes, specify and provide copy.	X		
	COMMENTS: No advertisements will be used, but practitioners will be recruited by telephonic means.			
21.	Will subjects receive any financial or other benefits as a result of participation? If yes, explain the nature of the reward, and safeguards.		X	
	COMMENTS			
22.	Is the research targeting any particular ethnic or community group? If yes, motivate why it is necessary/acceptable. If you have not consulted a representative of this group, give a reason. In addition explain any consultative processes, identifying participants. Should consultation not take place, give a motivation.		X	
	COMMENTS			
	<i>INFORMED CONSENT</i>			
23.	Does the research fulfil the criteria for informed consent? [See guidelines]. If yes, no further answer is needed. If no, please	X		

	specify how and why.			
	COMMENTS: See appendix 2			
NO.	QUESTION	YES	NO	N/A
24.	Will the research involve the use of no-treatment or placebo control conditions? If yes, explain how subjects' interests will be protected.		X	
	COMMENTS			
25.	Will a Subject Information Letter be provided and a written consent be obtained? If no, explain. If yes, attach copies to proposal. In the case of subjects who are not familiar with English (e.g. it is a second language), explain what arrangements will be made to ensure comprehension of the Subject Information Letter, Informed Consent Form and other questionnaires/documents.	X		
	COMMENTS: Appendix 1,2,3			
26.	Will results of the study be made available to those interested? If no, explain why. If yes, explain how.	X		
	COMMENTS: The manuscript will be in the library. The research will be published in a journal article. The results will be sent to the participants, should they request it.			
	<i>RISKS TO PARTICIPANTS</i>			
27.	Will participants be asked to perform any acts or make statements that might be expected to cause discomfort, compromise them, diminish self-esteem or cause them to experience embarrassment or regret? If yes, explain.		X	
	COMMENTS			
28.	Might any aspect of your study reasonably be expected to place the participant at risk of criminal or civil liability? If yes, explain.		X	
	COMMENTS			
29.	Might any aspect of your study reasonably be expected to place the participant at risk of damage to their financial standing or social standing or employability? If yes, explain.		X	
	COMMENTS			
30.	Does the research involve any questions, stimuli, tasks, investigations or procedures which may be experienced by participants as stressful, anxiety producing, noxious, aversive or unpleasant during or after the research procedures? If yes, explain.		X	
	COMMENTS			

RESEARCH ON HUMAN HEALTH ISSUES/ BIOTECHNOLOGY

31.	Does the protocol require any physically invasive, or potentially harmful procedures [e.g. drug administration, needle insertion, rectal probe, pharyngeal foreign body, electrical or electromagnetic stimulation, etc]? If yes, please outline below the procedures and what safety precautions will be used.		X	
	COMMENTS			
NO.	QUESTION	YES	NO	N/A
32.	Will any treatment be used with potentially unpleasant or harmful side effects? If yes, explain the nature of the side effects and how they will be minimized.		X	
	COMMENTS			
33.	Will any samples of body fluid or body tissues be required specifically for the research that would not be required in the case of ordinary treatment? If yes, explain and list such procedures and techniques.		X	
	COMMENTS			
34.	Are any drugs/devices to be administered? If yes, list any drugs/devices to be used and their approved status.		X	
	COMMENTS			
	<i>GENETIC CONSIDERATIONS</i>			
35.	Will participants be fingerprinted or DNA "fingerprinted"? If yes, motivate why necessary and state how such is to be managed and controlled.		X	
	COMMENTS			
36.	Does the project involve genetic research e.g. somatic cell gene therapy, DNA techniques etc? If yes, list the procedures involved		X	
	COMMENTS			

The undersigned declare that the above questions have been answered truthfully and accurately

STUDENT NAME _____ **SIGNATURE** _____

DATE: _____

SUPERVISOR NAME _____ **SIGNATURE** _____

DATE: _____

Appendix B

All questions are strictly confidential. Please tick or circle one answer per question unless otherwise indicated.

1. Age : 20 - 30 31 – 40 41 – 50 50 and above
2. Race : Black White Indian Coloured Other _____
3. Gender : Male Female
4. Which year did you graduate as a Doctor of Chiropractic? _____
5. In which institution did you graduate as a Doctor of Chiropractic?

6. How long have you been in private practice? _____months _____years
7. What is the average time you spend with each new patient during a consultation?

Less than 5 minutes
6 – 10 minutes
11 – 15 minutes
16 – 20 minutes
more than 20 minutes
8. Do you take a psychosocial history?
Yes No

If you stated “Yes” to question number eight, above, please move onto question 8.1.

- 8.1 What aspects do you tend to focus on in the history (One or more answers are possible)

- Financial Stressors
- Occupational Stressors
- Family Stressors
- Health Stressors
- Others, Please specify _____

9. How often do patients associate their main complaint with stress related issues?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

10. How often do you encounter more serious psychosocial stress in your practice, like child/spousal abuse, drug abuse, etc?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

11. Do you think Chiropractors have a role to play in stress management.
Yes No

If you stated "No" to question number eleven, above, please move onto question 11.1.

11.1 Why don't Chiropractors have a role to play in stress management? Please specify.

12. Chiropractors are equipped with the necessary skills to evaluate psychosocial stressors in patients.

1-----2-----3-----4
Strongly Agree Strongly Disagree

13. Do you think Chiropractors should utilize a psychological stress profile to further enhance their diagnostic abilities?
Yes No

14. In your clinical examination, what are the more common symptoms or signs that you elicit or find that indicate a patient is suffering from chronic stress?(One or more answers are possible)

	Yes	No
Migraines		
Muscle Spasm		
Tension Headaches		
Eczema		
Tremor		
Sweating		
Palpitations		
Chest Pain		
Dizziness		
Breathlessness		
Diarrhoea		
Frequency of micturition		
Insomnia		
Fatigue		
Poor concentration		
Sensory loss		
Weight Loss		
Loss of Libido		
Other:		

14.1 When you do discover any of the above symptoms and signs, does it influence your treatment protocol of that patient?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

15. What is the **most** common primary method of treatment you utilize in the clinical setting when dealing with a stressed patient?

- Manipulation
- Listening
- Exercise therapy
- Referral
- Rehabilitation
- Soft tissue therapy
- Breathing techniques
- Other, Please Specify _____

If you stated "Referral" to question number fifteen, above, please move onto question 15.1 and 15.2.

15.1 Are you involved in an interactive relationship with specialists in regards to the treatment of your stressed patients?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

15.2. If you chose "Referral", who do you most utilize?

- Psychologist
- Psychiatrist
- General Practitioner
- Homeopath
- Other, Please Specify _____

16. How do the patients respond to your stress management protocols?

1-----2-----3-----4
Positively Negatively

17. Indicate your level of agreement with the following statement: "Sometimes when I get very busy I just can't deal with my patient's stress issues like I would usually?"

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

18. In which institution/organization did you learn the stress management techniques you now utilize in your practice?

- Chiropractic University/Technikon
- International Chiropractic College
- Observation/Advice from Chiropractic colleagues
- Observation/Advice from other Health Care Professionals
- Self-study
- Conferences/Workshop
- Other, Please Specify _____

19. Do you think that your Chiropractic tertiary education has equipped you with the necessary skills to effectively implement stress management protocols?

Yes No

If you stated "No" to question number nineteen, above, please move onto question 19.1.

19.1. What components of the Chiropractic curriculum do you think was deficient?

Please Specify _____

IF ANY OF THE PARTICIPANTS WISH TO GET THE RESULTS OF THIS RESEARCH, PLEASE BRING THIS TO THE RESEARCHERS ATTENTION AND IT WILL BE MADE AVAILABLE TO YOU.

Appendix C

LETTER OF INFORMATION – RESEARCH PARTICIPANT

Dear Sir or Madam

I would like to welcome you to my study.

The title of my research project is:

The current role of the Chiropractor in the Patient-Centred Approach to Stress Management.

Researcher : Jitesh Deonarain (084 209 3054)

Supervisor : Mrs Karin Young (031 373 2094)
BA(Ed); B.Ed(Psych); M.Ed (Psych)

Aim of the research :

1. To determine whether Chiropractors utilize patient-centered stress management protocols
2. To determine whether those Chiropractors who utilize patient-centered stress management protocols are competent in regards to these protocols
3. To investigate the factors which may influence Chiropractors utilization/non-utilization of patient-centered stress management protocols

Research procedures

- This questionnaire should not take more than 15 minutes to complete.
- Please answer all questions honestly and to the best of your ability.
- This is not a test.
- There are no wrong answers.

The ***inclusion criteria*** are:

1. Chiropractors must be registered with the Allied Health Professions Council of South Africa.
2. The informed consent form has to be signed and returned.

The ***exclusion criteria*** are:

1. Any Chiropractor who is not a South African resident and not living in the greater Durban area will not be considered for the sample.
2. Any Chiropractor not familiar with the English language will be excluded due to English being the mode of instruction at the Chiropractic institutions in South Africa.
3. Chiropractors who participated in the Focus Group and pilot study will be excluded from the study.
4. Any practitioners that are involved in the development and approval of this research proposal through the Department of Chiropractic will be excluded.

Risks / Discomforts / Costs of the study to the respondents

None

Confidentiality / anonymity

In order to maintain anonymity, the informed consent forms and the questionnaires will be filed randomly in two different folders.

Ethics

If you have an ethical problem with the research please contact Vikesh Singh (031-2042701).

As with all surveys, the information will be treated in the utmost confidence. Your time, opinion, and assistance with this project are invaluable and greatly appreciated.

Yours sincerely,

Jitesh Deonarain
Research student

Mrs Karin Young
Supervisor

Appendix D

INFORMED CONSENT FORM

(TO BE COMPLETED BY THE PARTICIPANTS OF THE RESEARCH)

TITLE OF RESEARCH PROJECT: The current Role of the Chiropractor in the Patient-Centered Approach to Stress Management.

NAME OF SUPERVISOR: Mrs Karin Young (031 373 2094)

NAME OF RESEARCH STUDENT: Jitesh Deonarain (084 2093054)

Please circle the appropriate answer

YES /NO

- | | | | |
|--|-----|-----|----|
| Have you read the research information sheet? | | Yes | No |
| Have you had an opportunity to ask questions regarding this study? | Yes | No | |
| Have you received satisfactory answers to your questions? | Yes | No | |
| Have you had an opportunity to discuss this study? | Yes | No | |
| Have you received enough information about this study? | Yes | No | |
| Do you understand the implications of your involvement in this study? | Yes | No | |
| Do you understand that you are free to | | | |
| a) Withdraw from this study at any time? | | Yes | No |
| b) Withdraw from the study at any time, without reasons given | | Yes | No |
| c) Withdraw from the study at any time without affecting your future health care or relationship with any of the stakeholders in this study. | | Yes | No |
| 8. Do you agree to voluntary participate in the study? | | Yes | No |

If you have answered NO to any of the above, please obtain the necessary information from the researcher and / or supervisor before signing. Thank You.

Please print in block letters:

Research Participant: _____ Signature: _____

Witness Name: _____ Signature: _____

Researcher's Name: _____ Signature: _____

Supervisor's Name: _____ Signature: _____

Appendix E

LETTER OF INFORMATION- FOCUS GROUP

Dear Participant,

I would like to welcome you into the focus group of my study, the title of my research project is:

The current Role of the Chiropractor in the Patient-Centered Approach to Stress Management.

Background to the study:

Psychosocial stress pervades modern life and is known to have an impact on health. A number of Chiropractic patients perceive they are moderately to severely stressed. Interventions that reduce stress, or even the patient's perception of being stressed, may be construed as valid, non-specific clinical interventions. It may be timely for Chiropractors to actively contemplate including stress management routinely in their clinical care protocols.

Objective of the study:

The data obtained by means of this questionnaire will allow for the establishment of the current role of the Chiropractor in the patient-centered approach to stress management.

The questionnaire will only take a few minutes to complete, as most of the questions require you to tick the appropriate answer. There are only a few short written responses that are required.

Your participation in this study is much appreciated and you are assured that your comments and contributions to the discussion will be kept confidential. The results of the discussion will only be used for research purposes.

If you have any further questions please feel free to contact either me or my supervisor.

Kind regards,
Jitesh Deonarain

Appendix F

INFORMED CONSENT FORM

(TO BE COMPLETED BY THE PARTICIPANTS OF THE FOCUS GROUP)

**TITLE OF RESEARCH PROJECT: The Role of the Chiropractor
in the Patient-Centred Approach to Stress Management.**

NAME OF SUPERVISOR:

Mrs Karin Young

NAME OF RESEARCH STUDENT:

Jitesh Deonarain (084 209 3054)

Please circle the appropriate answer

YES /NO

- | | | |
|---|-----|----|
| 1. Have you read the research information sheet? | Yes | No |
| 2. Have you had an opportunity to ask questions regarding this study? | Yes | No |
| 3. Have you received satisfactory answers to your questions? | Yes | No |
| 4. Have you had an opportunity to discuss this study? | Yes | No |
| 5. Have you received enough information about this study? | Yes | No |
| 6. Do you understand the implications of your involvement in this study? | Yes | No |
| 7. Do you understand that you are free to | | |
| a) Withdraw from this study at any time? | Yes | No |
| b) Withdraw from the study at any time, without reasons given | Yes | No |
| c) Withdraw from the study at any time without affecting your future
health care or relationship with any of the stakeholders in this study. | Yes | No |
| 8. Do you agree to voluntary participate in the study? | Yes | No |
| 9. Who have you spoken to regarding this study | | |
-

If you have answered NO to any of the above, please obtain the necessary information from the researcher and / or supervisor before signing. Thank You.

Please print in block letters:

Research Participant: _____ Signature: _____

Witness Name: _____ Signature: _____

Researcher's Name: _____ Signature: _____

Supervisor's Name: _____ Signature: _____

Appendix G
CONFIDENTIALITY STATEMENT – FOCUS GROUP
DECLARATION

IMPORTANT NOTICE:

THIS FORM IS TO BE READ AND FILLED IN BY EVERY MEMBER PARTICIPATING IN THE FOCUS GROUP, BEFORE THE FOCUS GROUP MEETING CONVENES.

1. All information contained in the research documents and any information discussed during the focus group meeting will be kept private and confidential. This is especially binding to any information that may identify any of the participants in the research process.
2. The returned questionnaires will be coded and kept anonymous in the research process.
3. None of the information shall be communicated to any other individual or organisation outside of this specific focus group as to the decisions of this focus group.
4. The information from this focus group will be made public in terms of a journal publication, which will in no way identify any participants of this research.

Once this form has been read and agreed to, please fill in the appropriate information below and sign to acknowledge agreement.

Please Print in block letters:

Member represents	Member's Name	Signature	Contact Details

Appendix H
CODE OF CONDUCT

This form needs to be completed by every member of the Focus Group prior to the commencement of the focus group meeting.

As a member of this committee I agree to abide by the following conditions:

1. All information contained in the research documents and any information discussed during the focus group meeting will be kept private and confidential. This is especially binding to any information that may identify any of the participants in the research process.
2. Due respect to be given to every suggestion and comment by any member of the focus group and be debated with reference to the outcomes of the research.
3. The information gathered from this focus group by the researcher will be made public in terms of a mini dissertation and journal publication. The researcher will ensure that any participants in the focus group and research remain anonymous and confidential.

Member represents	Member's Name	Signature	Contact Details

Appendix I

All questions are strictly confidential. Please be as truthful as possible and tick one box per question unless otherwise indicated.

1. Age : _____
2. Race : Black White Indian Coloured Other _____
3. Gender : Male Female
4. Which tertiary institution was your Chiropractic qualification obtained?

5. Which year did you graduate as a Doctor of Chiropractic? _____
6. How long have you been in private practice? (weeks, months or years?
Please specify time period in your
answer) _____

(If you been in private practice for less than six months, please do not continue)

7. What is the average number of patients you see per working day?
0-10 11-20 21-30 31-40 Greater than 40
7. Do you take a psychosocial history?
Yes No
- 7a. If Yes, what aspects of the history do you ask about? (One or more
answers are
Possible)
Financial Stressors Occupational Stressors Family Stressors
Medical Stressors Others, Please specify _____
8. Do your patients perceive that they are moderately to severely stressed?
Always(100%): Very often(75%): Often(50%):
Sometimes(25%): Never(0%):
9. Do your patients state that stress is the cause of their presenting
pathology which requires Chiropractic treatment?
Always(100%): Very often(75%): Often(50%):
Sometimes(25%): Never(0%):

9. In your examination, do you elicit symptoms or find signs indicative of patients suffering from chronic stress, (ie; migraines, muscle spasm, tension headaches,etc)?

Always(100%): Very often(75%): Often(50%):

Sometimes(25%): Never(0%):

10. Do Chiropractors have a role to play in stress management ?

Yes No

11. If No, why don't Chiropractors have a role to play in stress management?

Lack of the necessary skills Does not fall within the scope of

Chiropractic practice Lack of confidence

Other , Please specify

12. If Yes, how important is stress management protocols in your clinical encounters?

Very important Not Important

13. What is the most common primary method of treatment you utilize in a clinical setting when dealing with a stressed patient?

Manipulation Counseling Exercise therapy Referral

Other , Please Specify _____

14. If you chose "Referral", who do you most utilize?

Psychologist Psychiatrist General Practitioner Homeopath

Other , Please Specify _____

15. Do the patients respond positively to your stress management protocols?

Always(100%): Very often(75%): Often(50%):

Sometimes(25%): Never(0%):

16. Where about did you learn the stress management techniques you now utilize in your practice?

Chiropractic College Observation/Advice from Chiropractic colleagues

Observation/Advice from other Health Care Professionals

Other , Please Specify

17. Do you think that your Chiropractic tertiary education has equipped you with the necessary skills to effectively implement stress management protocols?

Yes No

18. If No, why do you think so?

Lack of time and emphasis spent on stress management education

Lack of educational resources Inexperienced Lecturers

Other , Please Specify _____

19. Do you think it would be beneficial if a Postgraduate course in stress management was offered to Chiropractors?

Yes No

IF ANY OF THE PARTICIPANTS WISH TO GET THE RESULTS OF THIS RESEARCH, PLEASE BRING THIS TO THE RESEARCHERS ATTENTION AND IT WILL BE MADE AVAILABLE TO YOU.

Appendix J

All questions are strictly confidential. Please tick one answer per question unless otherwise indicated.

6. Age : 20 - 30 31 – 40 41 – 50 50 and above

7. Race : Black White Indian Coloured Other _____

8. Gender : Male Female

9. Which year did you graduate as a Doctor of Chiropractic? _____

10. In which institution did you graduate as a Doctor of Chiropractic?

6. How long have you been in private practice? _____ months _____ years

7. What is the average time you spend with each new patient during a consultation?

Less than 5 minutes 6 – 10 minutes 11 – 15 minutes 16 – 20 minutes more than 20 minutes

8. Do you take a psychosocial history?

Yes No

If you stated “Yes” to question number eight, above, please move onto question 8.1.

8.1 What aspects do you tend to focus on in the history (One or more answers are possible)

Financial Stressors Occupational Stressors Family Stressors Health Stressors Others, Please specify

9. How often do patients associate their main complaint with stress related issues?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

10. How often do you encounter more serious psychosocial stress in your practice, like child/spousal abuse, drug abuse, etc?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

11. Do you think Chiropractors have a role to play in stress management.

Yes No

If you stated "No" to question number eleven, above, please move onto question 11.1.

11.1 Why don't Chiropractors have a role to play in stress management? Please specify.

12. Chiropractors are equipped with the necessary skills to evaluate psychosocial stressors in patients.

1-----2-----3-----4
Strongly Agree Strongly Disagree

13. Do you think Chiropractors should utilize a psychological stress profile to further enhance their diagnostic abilities?

Yes No

14. In your clinical examination, what are the more common symptoms or signs that you elicit or find that indicate a patient is suffering from chronic stress?(One or more answers are possible)

	Yes	No
Migraines		
Muscle Spasm		
Tension Headaches		
Eczema		
Tremor		
Sweating		
Palpitations		
Chest Pain		
Dizziness		
Breathlessness		
Diarrhoea		
Frequency of micturition		
Insomnia		
Fatigue		
Poor concentration		
Sensory loss		
Weight Loss		
Loss of Libido		
Other:		

14.2 When you do discover any of the above symptoms and signs, does it influence your treatment protocol of that patient?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

15. What is the most common primary method of treatment you utilize clinical setting when dealing with a stressed patient?

- Manipulation
 Listening
 Exercise therapy
 Referral
 Rehabilitation
 Soft tissue therapy
 Breathing
 Other , Please Specify _____

If you stated "Referral" to question number fifteen, above, please move onto question 15.1 and 15.2.

15.2 Are you involved in an interactive relationship with the specialists in

regards to the treatment of your patients?

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

15.2. If you chose "Referral", who do you most utilize?

- Psychologist Psychiatrist General Practitioner
Homeopath
Other , Please Specify _____

16. How do the patients respond to your stress management protocols?

1-----2-----3-----4
Positively Negatively

17. Indicate your level of agreement with the following statement: "Sometimes when I get very busy I just can't deal with my patient's stress issues like I would usually?"

Always (100%)	Very often (75%)	Often (50%)	Sometimes (25%)	Never (0%)
------------------	---------------------	----------------	--------------------	---------------

18. In which institution/organization did you learn the stress management techniques you now utilize in your practice?

- Chiropractic University/Technikon International Chiropractic College
Observation/Advice from Chiropractic colleagues
Observation/Advice from other Health Care Professionals
Self-study Conferences/Workshop Other Degrees
Other , Please Specify _____

19. Do you think that your Chiropractic tertiary education has equipped you with the necessary skills to effectively implement stress management protocols?

- Yes No

If you stated "No" to question number nineteen, above, please move onto question 19.1.

19.1. What components of the Chiropractic curriculum do you think was deficient?

Please Specify _____

IF ANY OF THE PARTICIPANTS WISH TO GET THE RESULTS OF THIS RESEARCH, PLEASE BRING THIS TO THE RESEARCHERS ATTENTION AND IT WILL BE MADE AVAILABLE TO YOU.

Appendix K

<u>Jitesh Deonarain</u>	-	JD
<u>Karin Young</u>	-	KY
<u>Desigan Pillay</u>	-	DP
<u>Hitesh Manga</u>	-	HM
<u>Ingrid Adamson</u>	-	IA
<u>Warren Botha</u>	-	WB
<u>Sanvir Maharjh</u>	-	SM
<u>Sholini Sookraj</u>	-	SS
<u>Jaunita Vahmaria</u>	-	JV
<u>Charlton Butt</u>	-	CB

JD : Welcome all to the focus group please feel free to add your comments and make it known if there are any questions that need clarification.

KY : Yes, thank you all for being here, the purpose of the focus group is to validate the questionnaire. Please note that all information contained in the research document must be kept confidential and information gathered by the researcher will be made public in terms of a dissertation and that all participants in the focus group, will remain anonymous.

JD : Is there any comments or suggestions in regards to the heading of the questionnaire?

IA : I think that 'Please be truthful as possible' could be removed from the instructions as it should be a given that the questionnaire should be answered truthfully.

CB : I agree with IA, I think we should give the chiropractors the benefit of the doubt.

JD : KY do you agree?

KY : I do, please change the instructions JD.

WB : Another aspect that I don't like about your heading is the fact that you indicated that the chiropractors should tick 'one box' per question; I notice that some of your questions don't have boxes to tick.

JD : Good point, is there any suggestions on how to rectify the problem?

DP : You can change it to please tick one answer per question.

JD : Thanks, that sounds good. KY do you agree with DP?

KY : Perfect, you can go ahead and change the instruction.

JD : Are there any further comments in regards to the instructions?

KY : No, lets move on to the actual questions now JD.

JD : No problem, the first couple questions are in regards to demographics. Any comments in regards to the first question?

SS : I think you should include boxes in so that the chiropractors can tick an answer.

KY : Agreed, it will make data capturing much more easier and will make your questionnaire easier to read.

JD : Noted, considered it changed, if there are no further questions lets move on.

WB : Question 4, please remove tertiary as all chiropractors study at a tertiary education.

JD : Agreed.

SS : Again, rather give them options in 6, so just make a space for months and years for the chiropractors to fill in.

JD : Noted.

KY : Please remove the exclusion of 'if you been in private practice for less than six months, please don't continue' as this is not part of your exclusion criteria. Another thing I want removed is question 7 as it doesn't have any implications in your study.

JD : But I want to find out about time constraints.

HM : You rather ask about the average time spent with each patient.

KY : Yes, that is more relevant and please sort out your numbering of the questionnaire.

SS : Don't forget to give them optional blocks again.

JD : Thanks, will make the appropriate changes.

SM : Your subsequent question doesn't flow, you must state that if they stated yes, they should move on to the next question and have that question directly below the main question.

DP : Agreed your questionnaire is quite hard to follow like this.

KY : Please sort that out, you need to introduce your follow-up questions more clearly. Let's move on.

WB : Don't forget to sort out the numbering.

KY : Whilst we are discussing the format of your questionnaire, I rather you have a block format for questions 8 and 9.

CB : Yes, you can look at my questionnaire as I have done something similar.

KY : Fantastic.

JD : Thanks. Any further comments on question 8 and 9?

JV : Why do you want to know if patients perceive themselves as being stressed?

JD : I want to know if they associate their complaints with stress related issues.

JV : I don't think this question assists in any way.

KY : Agreed, rather ask how often patients associate their complaint with stress related issues.

IA : Please stipulate that you want to know about the main complaint as patients often come with other minor problems.

KY : Agreed, please make the appropriate changes, we must make this questionnaire easy and concise so that the proper information is gained and there is no confusion.

JD : Ok, will change questions 8 and 9 to read more clearly.

KY : Explain question 9?

JD : I want to know if chiropractors pick up symptoms or signs of stress in their patients.

KY : Ok, but in regards to your literature review and your objectives, you want to find out what is the most common signs and symptoms that are found.

SS : Agreed, please include a table that the chiropractors can choose from as it makes everything easier and simple.

JD : Any other suggestions to question 9?

- HM : It would also be interesting to see if these signs and symptoms influenced their practice protocols.
- KY : True, I think you should have a table with the common signs and symptoms and you should also have a follow-up question to the table. It's not necessary to know how often they pick up signs and symptoms of stress.
- JD : Yes maam, will do that. Lets move on.
- CB : Question 12 doesn't make sense.
- KY : Please remove this as it doesn't apply to your aims and objectives.
- JD : Done.
- SM : Please leave question 11 as an open ended question as there could be a myriad of reasons. And don't forget to tabulate questions.
- KY : Please add more options to question 13 and I also think it would be interesting to know how often they refer to specialists. Please lets use a scale for question 15. Thinking about it, you should add a question to find out if chiropractors are influenced with time constraints.
- JD : Agreed.
- HM : Just going back, it would be a good idea to find out if Chiropractors are equipped with necessary skills and then ask how do patients respond to treatment. After that, you can ask where they acquired their skills and if it was sufficient.
- WB : Skipping to question 18, please leave it open, it would be interesting to know what parts of the curriculum is deficient. Also remove question 19, I don't think it applies.
- KY : Agreed, rather have a question about a psychological stress profile as it is a potent tool. You can ask me about this after this.
- JD : Will do maam.
- KY : The questionnaire wasn't that long and we seem to have concluded quite quickly, please can we have final comments from the group.
- SM : I'm happy with the proposed questions, just watch out for the numbering and speak to me after this if you need any further help.
- DP : I'm ok, constructive. Excited about the outcome.

CB : Please be careful of formatting, I'll help you with this.

HM : I'm happy.

SS : So am I.

JD : Thanks everyone for helping me with this study, your input as been invaluable.
Can I kindly have all your feedback forms and comments. Thanks again.

KY : Perfect, please give me the amended questionnaire as soon as you done.

JD : Will do. Thanks again everybody.

THE END

Appendix L



D U R B A N
UNIVERSITY of
TECHNOLOGY

Faculty of Health Sciences

ETHICS CLEARANCE CERTIFICATE

Student Name	Mr J. Deonarain	Student No	20200714
Ethics Reference Number	FHSEC 032/07	Date of FRC Approval	29/10/07
Research Title:	The current role of the Chiropractor in the Patient-Centered approach to Stress Management		

In terms of the ethical considerations for the conduct of research in the Faculty of Health Sciences, Durban University of Technology, this proposal meets with Institutional requirements and confirms the following ethical obligations:

1. The researcher has read and understood the research ethics policy and procedures as endorsed by the Durban University of Technology, has sufficiently answered all questions pertaining to ethics in the DUT 186 and agrees to comply with them.
2. The researcher will report any serious adverse events pertaining to the research to the Faculty of Health Sciences Research Ethics Committee.
3. The researcher will submit any major additions or changes to the research proposal after approval has been granted to the Faculty of Health Sciences Research Committee for consideration.
4. The researcher, with the supervisor and co-researchers will take full responsibility in ensuring that the protocol is adhered to.
5. **The following section must be completed if the research involves human participants:**

	YES	NO	N/A
❖ Provision has been made to obtain informed consent of the participants	✓		
❖ Potential psychological and physical risks have been considered and minimised	✓		
❖ Provision has been made to avoid undue intrusion with regard to participants and community	✓		
❖ Rights of participants will be safe-guarded in relation to:			
- Measures for the protection of anonymity and the maintenance of Confidentiality.	✓		
- Access to research information and findings.	✓		
- Termination of involvement without compromise	✓		
- Misleading promises regarding benefits of the research	✓		

Deonarain
SIGNATURE OF STUDENT/RESEARCHER

14/02/09
DATE

Kyang
SIGNATURE OF SUPERVISOR/S

19/6/09
DATE

SIGNATURE OF HEAD OF DEPARTMENT

DATE

Willy
SIGNATURE: CHAIRPERSON OF RESEARCH ETHICS COMMITTEE

18/06/2009
DATE