AN INVESTIGATION OF THE FACTORS AFFECTING THE CAREER CHOICE OF SELECTED HEALTH-CARE STUDENTS (PHYSIOTHERAPY, CHIROPRACTIC, MEDICINE AND OCCUPATIONAL THERAPY) IN KWAZULU NATAL

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by

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A dissertation submitted to the Faculty of Health Sciences, in partial compliance with the requirements for a
Master's Degree in Technology: Chiropractic at the
Durban University of Technology.

I, Sanvir H. Maharaj,
do hereby declare that this dissertation represents my own work
in both conception and execution, except where specific assistance is sought and duly acknowledged

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DEDICATION

I would like to dedicate this work to:

Bhagavan Sri Sathya Sai Baba

Durga Mathaa

Raam

Ba

For giving me strength, courage and divine guidance.

And

My loving and ever supportive parents, Romilla and Heeraman.
Your love defined me and your strength inspired me.
I love you both.

As well as

My loving brother Priyavarth and my precious nephew Aum.

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ABSTRACT

The aim of this study was to investigate the factors affecting the career choice of selected health-care students (physiotherapy, chiropractic, medicine and occupational therapy) in KwaZulu Natal. Multiple reasons exist for choosing careers. However, the set of factors involved when students commit to at least 4 to 7 years of their lives to these alternative and mainstream health care professions are of particular interest to this study.

This was a demographic-epidemiological, cross-sectional survey-type quantitative study, based on a pre-validated questionnaire which was administered to the participants. The questionnaire was distributed to 29 first year chiropractic students of the Durban University of Technology, 32 first year physiotherapy and 22 occupational therapy students of the University of KwaZulu Natal, and 55 first year medical students of the Nelson Mandela School of Medicine.

The results revealed that parents were a major factor influencing career choice (68.1%), as were significant other people (42%). However, siblings, peers and television did not have a major influence. Only television had a differential influence on the student groups ($p<0.001$). The medical students (20%) were influenced by television to a greater extent than the other professions. The majority of respondents obtained information from professionals visiting schools (56.5%), while family and guidance counsellors were also important sources of information (52.2% and 50.7% respectively).

These results also revealed that chiropractic students were more likely to use the Internet to find out about careers than the other student groups. Previous past experience with a professional from their chosen career field did have a relatively strong influence (46.4%) whereas physiotherapists and chiropractors were more likely than the other two groups to be influenced by a professional from that career.

Working with people was the most important personal factor influencing career choice. The altruistic factor of helping others was the second most important factor. The least important personal factors were prestige, variety, lifestyle and enjoyment of working with their hands.

Another result indicated that the ability to define personal goals was important for medical students but it was not very important for occupational therapy students. The joy of working with their hands was more important for chiropractic and physiotherapy students. The motivation to help others was more important to occupational therapy students.

Finally, the results showed that prestige was most important for chiropractic students. A good work atmosphere was the most important work-related factor (75.4%), followed by the ability to run their own office (64.5%) and working conditions (55.1%). Of least importance was the presence of blood (7.2%). “The ability to run your own office” was significantly different between the student groups (p=0009) and chiropractic students were significantly influenced by this factor.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Multiple reasons exist for choosing careers such as chiropractic, occupational therapy, medicine and physiotherapy. However, the set of factors involved when students commit at least 4 to 7 years of their lives to these alternative and mainstream health care professions are of particular interest to this study.

A study by Sukovieff (1989) found that funding is of primary importance when choosing and committing to a career. And it was found that a lack of funding for tertiary education could be a reason for not applying for particular courses. Although, Watson (2004) found that the possibility of receiving a sponsorship/bursary highly influenced the choice of a particular career especially if tuition fees were financially demanding. Rubin and Biekeman (1999) highlighted that chiropractic students did not have the same opportunities for funding or bursaries as students studying commerce, law, medicine or other scientific fields of study.

Chuenyane (1983) found that schooling played a significant role in career choices especially the type of school attended because some schools, such as the former private South African schools which were predominantly attended by White students had good resources. Their study also highlighted that they had more awareness and understanding of most careers while other government funded schools did not have these privileges.

Micallef and Gatt (2004) found that gender also influenced career choices. They reported that in the past females were not encouraged to further their studies and were discouraged from male dominated professions such as engineering and medicine. Yet,

although it is still found that women avoid male dominated occupations, there is a small increase towards growing numbers in such professions.

More recently Cutler *et al.* (2006) indicated that personal factors such as prestige, personality type and lifestyle preference played an important role in future career choices. Cooperstein and Schwartz (1992) conducted a study in which 272 certified occupational therapists were interviewed. They found that factors like challenge, variety in a profession and the desire to help people, were some of the primary reasons they chose their careers.

Van As (2005) found that guidance counsellors were able to influence scholars in choosing a career but generally had a low understanding of healthcare and in particular chiropractic. According to De Almeida *et al.* (1998), contact with a qualified professional from a particular field could affect career choice significantly. Furthemore Singaravelu *et al.* (2005) stated that significant others, including the influence of family members, peers and loved ones, played a pivotal role in steering students toward a career path.

To date, no study has been conducted in South Africa to assess and compare the factors affecting career choices by chiropractic and mainstream health care students. This study, aims at determining, in the South African context, which main factors influenced career choices in medicine, occupational therapy, physiotherapy and the chiropractic professions from selected tertiary institutions in KwaZulu Natal. The results from this study might aid the chiropractic profession in growing positively and in striving to include disenfranchised sectors of the population into the profession as a whole from a patient to practitioner level.

1.2 OBJECTIVES OF THE STUDY

1.2.1 Objectives

A) To determine the demographic profile of the physiotherapy, chiropractic, medical and occupational therapy student groups in KwaZulu Natal.

B) To investigate the factors affecting career choice of selected health-care students from physiotherapy, chiropractic, medicine and occupational therapy In KwaZulu Natal.

C) To compare factors affecting career choices between the various groups from an inter-group and intra group perspective in KwaZulu Natal.

1.3 RATIONALE

It is important to the chiropractic profession to know why students would choose mainstream health-care professions over chiropractic so that they could identify and address these factors to favourably promote this profession.

The majority of South Africa's population is indigenous African. A study is needed to determine which factors affected their choice of career in order to attract more Africans into the chiropractic profession which is at present lacking the demographic profile of South Africa.

1.4 STATISTICAL ANALYSIS

The analysis of most of the questions consisted of a simple frequency count (simple descriptive analysis) with the results analyzed as percentages. The data was analyzed to demonstrate demographic and epidemiological factors, and employed cross-tabular analysis and chi-square statistical evaluation. The data is displayed by means of frequency tables, pie charts and bar graphs. A p-value equal to or less than 0,05 was considered to be statistically significant. The statistical programme used to process the data was SPSS version 13.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The choice of an occupation is an important decision for every school leaver. At the end of compulsory schooling, further education and training may be undertaken in the form of grades 10 to 12. Thereafter, students decide whether they want to start working or further their education. Career choice is dependent on various factors (Ferry *et al*., (2000).

According to the literature, the factors affecting career choices are very diverse. Amongst the more important ones are: funding; type of school attended; cultural factors race and gender; job experience and personal factors prestige; lifestyle preference; personality type and commitment) (Sukovieff, 1989; Chuenyane; 1983; Makhubu; 2000; Micallef and Gatt, 2004; Watson, 2004; Singaravelu *et al*., 2005; Harris *et al*., 2005 and Ramsey *et al*., 2004).

Other primary factors include: enthusiasm; challenge; variety in a profession; motivation to help others; financial reward and the ability to define ones own personal goals. (Kerka, 2003; Willcockson and Phelps, 2004; Ososki *et al*., 2006, Fleming *et al*., 2005 and Rubin and Biekeman, 1999).

2.2 FUNDING AND SCHOOL FACTORS

2.2.1) Funding/Cost of course being considered

Sukovieff (1989) conducted a study aimed at a sample of 184 graduates from Regina School in Saskatchewan. Participants were interviewed approximately 2 years after graduating from high school. The authors reported that a lack of money or funding moderately influenced graduates' career decisions. Funding was reported to be moderately important in choosing and committing to a career.

The career aspirations of 729 grade 11 and 12 science students from 20 rural and urban high schools in Western Australia were investigated by Young *et al.* (1997). The results revealed that financial constraints were an important factor influencing a student's career choice.

In a recent study investigated by Bryant *et al.* (2005) it was found that parental influence on their school going children negatively impinged on their career decisions. It was reported that adverse economic conditions reduced low-income families (who were mostly Black) ability to find tertiary education.

2.2.2) Bursaries/Scholarships

Scarbecz and Ross (2006) proposed that the possibility of a sponsorship or bursary could significantly motivate a student to choose a particular profession especially if tuition fees were financially demanding. Chiropractic students do not have the same opportunities in terms of funding and bursaries as compared to students studying commerce, law, medicine and other scientific fields of study (Rubin and Biekeman, 1999).

Watson (2004) reported that scholarships help to improve the enrollment, retention and thus graduation of students in most U.S colleges of engineering. During a survey carried out by De Almeida *et al.* (1998) 499 final year students from 49 different high schools

across Portugal, were asked to complete a questionnaire. The researchers investigated the influence of different factors, such as expected salary and job satisfaction, on a student's decision to choose a higher education course in one of the physical sciences or engineering. The results revealed that a significant number of students were encouraged by the possibility of sponsorship for higher education in sciences. This indicates that a greater number of students would enrol in professional courses if they were given financial aid.

A study conducted by Young *et al.* (1997) revealed that factors like the availability of scholarships were vital in influencing a student's career choice. Winston (1998) conducted research in libraries and information science. It provided a basis for identifying those factors that have an impact on the decisions of individuals to choose a particular profession and/or professional speciality. It was reported that factors that influenced individuals to accept recruitment into the library profession included the availability of financial aid and/or scholarships.

2.2.3) Type of school attended

Chuenyane (1983) proposed that schooling played a significant role in career choice, especially the type of school attended. The former model C schools, or formerly White schools, had good resources and maintained awareness and understanding of most careers while the other government funded schools did not have these privileges. His study highlighted that students in traditionally African schools have always had difficulties when making decisions about their careers on account of the limited career options available to them. The quality of education still varied considerably, But this was not unique to South Africa (Chuenyane, 1983).

Senf *et al.* (2003) conducted a study where the researchers reviewed 36 articles regarding the choice of family medicine as a career with the aim of assessing factors that influenced it as a career choice. Two studies were found where government schools had the highest proportion of students going into family medicine, followed by private schools.

Van der Berg 2002 found that in some Latin American countries, the poorer population received an inferior quality of schooling with the result that individuals received a primary education whose quality is 35% lower than that of the wealthier population. It was evident that students from poorer schools were generally less well informed than the other students. This was because the poorer schools did not have the capacity to concentrate on peripheral aspects of their student's education other than the core educational requirements.

The results from a study by Young *et al.* (1997) identified factors affecting participation and completion of post-compulsory schooling and higher education in rural and remote areas of Western Australia. This included a lack of courses at schools and tertiary level. She also reported that there was also a lack of comprehensive grade 11 and 12 courses facilitating access to higher education as well as reduced post-school education which was in contrast to metropolitan areas.

Brock and Cammish (1997) cited in their research negative factors such as inaccessible schools, lack of resources and poorly qualified teachers as deterrents in academic participation. The results revealed that parents in some countries, were very reluctant to send their daughters to school because of the lack of female teachers and facilities for their accommodation as well as the lack of adequate security.

2.2.4) Seminars and career days

Singaravelu *et al.* 2005 examined career development behavior of students, specifically that of: certainty of career choice; major choice and environmental factors influencing career choice. They reported that factors such as interaction with students, and staff, career planning and participation in campus activities such as seminars and career days, positively influenced the student's career choice.

Sukovieff (1989) conducted a study to examine the factors influencing students' career selection. The most important factor was found to be an individuals own interest, followed by career education materials from career days and career interest surveys. A study conducted by Hughes and Karp (2004) revealed that career guidance interventions such as career days positively influenced a student's career development in terms of deciding on and understanding careers. Students reported that the key factors that influenced them to pursue a teaching career were volunteer activities and being involved in school activities such as career days (Ososki *et al*., 2006).

Jones and Larke (2005) identified various factors with respect to Hispanic and African American colledge student's decision to choose or decline an agriculture related career. They reported that factors such as prior work experience and exposure to careers through experiences such as internships, cooperative work programs and career fairs were significantly important.

2.3 CULTURAL FACTORS

2.3.1) Race

Makhubu (2000) conducted a study that revealed that the majority of the indigenous African population of South Africa have varied expectations when comparing mainstream health care and alternative medicine. She found that traditional indigenous Africans strongly believed in acquiring medication after consulting a doctor or a traditional healer,

whereas health professionals would be considered as ineffective if they didn't prescribe medication.

In a recent study investigated by Jones and Larke (2005) it was found that Hispanics were found to view agriculture and agriculture related careers negatively. The demand for graduates, particularly Hispanic graduates and other people of colour in the field of agriculture related careers continue to exceed the supply. Although respondents in the study perceived that limited career opportunities existed, career opportunities in agriculture and related fields were actually good (Jones and Larke , 2005).

The results of a study by Singaravelu *et al.* (2005) revealed that when looking at ethnic minorities in the United States, environmental factors such as family, culture and community have been found to significantly influence their career development behaviour. It was shown that for some, academic excellence in courses like medicine bring honour to the family while shorter courses like teaching were not seen as such (Singaravelu *et al*., 2005).

Career choices may be affected by access to guidance counsellors at school, societal and early schooling experiences as well as race and gender. Various ethnic groups value different occupations and this influences the career path taken (Kerka, 2003).

Young *et al.* (1997) conducted a study that compared the career aspirations of 729 students from 20 rural and urban high schools in Western Australia. There were distinct differences between the career choices of rural and urban students. It was evident that rural students tended to choose their careers more on the basis of their experiences, family support and advice, gender and belief, as well as value systems. Family support and advice did not seem to have a significant influence on the urban students.

2.3.2) Gender

Micallef and Gatt (2004) conducted a recent study in Malta. They found that females were not encouraged to further their studies and were discouraged from the male dominated professions such as engineering and medicine. However in recent times, it was found that women often avoid choosing male dominated careers, but studies have shown that more and more females are continuing with tertiary education and entering the traditional male dominated professions. Watson (2004) also found that more females are now willing to cross perceived gender barriers regarding careers.

In a study conducted by Brock and Cammish (1997) 6 countries were selected for investigation viz Bangladesh, Cameroon, India, Jamaica, Sierra Leone and Vanuatu. Students from schools in these countries were interviewed to ascertain their perceptions on gender educational factors affecting the female participation in education. It was reported in all the countries that difficulties in physical access to schools adversely affected girls more than boys, disadvantaging females to a greater extent. A major deterrent to female participation in various educational opportunities was a fundamental cultural bias in favour of males in all the countries except Jamaica.

Harris *et al.* (2005) conducted a survey of medical resident doctors at the children's hospital of Philadelphia by means of an anonymous written questionnaire. It was noted that gender as a factor affecting career choice was more important to female residents in the pursuit of a career. It seemed to be a strong motivational factor when considering a career in the male dominated field of medicine.

The influence of gender, role models, encouragement and personal characteristics on the career choice of medical students was investigated by Connelly *et al.* (2003). The sample composed of 526 fourth year and 1139 second year medical students. The authors reported that gender was a significant factor affecting career choice for both students and residents.

The sociological factors affecting career aspiration level of high school seniors were investigated by Hoover (1999) to determine the significant factors that affected career aspiration for high school seniors in suburban schools. Gender was found to be a significant factor and females were found to have higher career aspirations.

2.4 PAST EXPERIENCE

2.4.1) Past job experience and past work experience with a professional from the career field chosen

The factors affecting enrollment in undergraduate engineering programmes was investigated by Watson, (2004). The researcher reported that the employers of engineering interns and graduates have a significant influence on students. Further it was found that past experience with professionals from this field seemed to increase a students interest in that career.

Sukovieff, (1989), conducted a study with the purpose of examining how teachers, peers, parents, guidance counsellors and factors such as lack of money, past work experiences and high school class, influenced a student's career choice. Class materials, past work experiences and students personal interests were revealed to significantly influence a student's career decision. These results are similar to a study by Jones and Larke (2005) who found that agriculture students were highly influenced by prior work experience in a career field and experimental exposure to careers through experiences such as internships, career fairs and experience with a professional.

A study conducted by Ramsey *et al.* (2004) assessed the influence of an International Health Experience programme on medical students career choices. This is a programme developed for medical students during which they are sent to developing countries to gain field experience and develop as healthcare professionals. The results revealed that these participants like the students from Watson's engineering study, believed that their

participation had positive influences on their career and it motivated them to pursue future international health work.

The factors affecting medical students choices of speciality was investigated by Soethout *et al.* (2004). The researchers noted that a students prior work experience in healthcare and clinical institutions was vital. They also showed internships and role models were just as important.

2.5 PERSONAL FACTORS

2.5.1) Prestige of a career

Singaravelu *et al.* (2005) examined factors influencing students choice of major subjects and found that out of 214 undergraduates (144 international and 70 domestic), status and prestige of a career were more important considerations for international students than for the domestic students. Prestige can be linked to the Wilkinson (1996) study, which highlights that in 9 years perceptions have not changed.

The factors affecting science undergraduates choices of teaching as a career was investigated by Ososki *et al.* (2006). This study was aimed at undergraduates at Humboldt State University. The researchers reported that students, who were not considering teaching as a career, saw teaching as a low status job, negatively perceived in the community and by semi-professionals. It was also reported that parents in the study commented that low university entrance requirements for aspiring teachers had lowered the status of teaching and resulted in a lower quality teaching force with lower pay.

Cutler *et al.* (2006) conducted a study to investigate medical student's perceptions of the field of psychiatry and to identify the impact of these perceptions on their career choices. This study was conducted with 2 classes of students at an urban, private university

medical school. There were 131 third year students and 117 fourth year students who responded to the survey. Researchers noted that all respondents, irrespective of their class or their level of interest in a career in psychiatry, generally rated status and prestige of psychiatry as having a negative impact on their interest in the field.

2.5.2) Lifestyle preference

Harris *et al.* (2005) surveyed current and previous resident doctors at the children's hospital of Philadelphia U.S. to determine factors motivating their career choices. The authors reported issues such as lifestyle preference as being an important determinant for career choices particularly for female residents who were 30 years or younger.

A study conducted by Cutler *et al.* (2006) reported that students found psychiatry to be an intellectually stimulating field that offered an attractive lifestyle. Students seriously considering a psychiatric career reported being significantly more positively influenced by a psychiatrist's lifestyle and the satisfaction of working with psychiatric patients.

2.5.3) Personality Type

A study conducted by Young *et al.* (1997) revealed that a person was more likely to select a career in science and engineering if they believed themselves to have the personality for those courses. It was also reported that those who categorized themselves as intelligent also tended to aspire to careers in science and engineering. This was confirmed by De Almeida *et al.* (1998) study who found that females who had crossed over the gender career barrier, believed themselves to be harder working, tender, more interested in people, and more enthusiastic as well as being more self-sufficient as future engineers. It was also reported that future scientists saw their personalities of being more task centered, tough minded, interested in ideas, systematic as being better equipped to be scientists.

2.5.4) Commitment

The International Health Experience programme was designed for medical students and consisted of preparatory course work and field experiences in a developing country. A survey was conducted by Ramsey *et al.* (2004) to assess the career influence of the International Health Experience programme participation. The results revealed that most participants believed that the program enhanced their commitment to their field.

2.5.5) Enthusiasm

Twelve years ago Risser and Laskin (1996) analysed the factors that attracted women to the field of oral and maxillofacial surgery. One hundred and seven surveys were administered to female surgeons while 105 to oral and maxillofacial surgeons. The excitement and the enthusiasm for the profession were reported to be the most commonly mentioned factors affecting their choice of career.

Soethout *et al.* (2004) conducted a study to identify factors that were associated with medical doctors' choice of speciality. The focus was on recently graduated doctors in European countries. The results revealed that 62% to 68% of postgraduate medical students considered enthusiasm as a personal factor to be significant in making career decisions. Other studies have also highlighted that such personal factors such as enthusiasm, self-motivation and interest to be significant factors affecting the choice of potential careers (Kerka 2003). This also indicates that although financial reward has an influence on such career choices, personal factors have more of a positive impact.

2.5.6) Challenge

2.5.7) Variety

Willcockson and Phelps (2004) conducted a survey to determine where students obtained career information and who or what influenced their career selection. The goal of their study was to encourage high school students to enter mental health science

fields. It was reported that students in high school wanted their ideal career to provide variety as well as challenge, which excluded office bound careers.

Galeazzi *et al.* (2003) examined the impact of factors hypothesized to affect the choice of psychiatry as a speciality. Questionnaires were administered to 97 Italian medical school graduates sitting for admission examinations to psychiatric residencies while 82 of their colleagues sat for an admission examination to an internal medicine residency. The results of the study revealed that one of the 5 leading factors selected by future psychiatrists as determinents for the choice of speciality was the intellectual challenge of the discipline.

These results compared favourably with a study by Harland *et al.* (2005) in which the results revealed that students were looking for a course that challenged them. Results can also be compared to a study carried out by Willcockson and Phelps (2004). These results not only revealed that students wanted a challenging career but also stated they wanted variety.

The factors affecting the career choice of male and female civil engineering students leaving higher education institutions in the U.K. were examined by Wilkinson (1996). The researchers reported that the 3 most important factors were the opportunity to do interesting work, the opportunity to do varied work and the training programme for graduates.

2.5.8) Motivation to help others

The personal satisfaction and fulfillment derived from teaching, was cited as a desirable factor (Ososki *et al.* 2006). Students emphasized the importance a good teacher could make on their motivation to help others as well as their contribution to the community. The results of the Ososki *et al.* (2006) study revealed that a number of mature students had moved to teaching from better paying jobs because they wanted to do something that they enjoyed and that satisfied their altruistic need to help others.

Baboolal and Hutchinson (2007) conducted a study to determine the factors that influenced career choices among first year medical students. A questionnaire was administered to 170 first year medical students from the University of West Indies, St Augustine's campus. It was reported that helping others, financial reward and prestige were major factors influencing their choice of career.

2.5.9) Ability to define personal goals

Two hundred and seventy two certified occupational therapists were interviewed during a study conducted by Cooperstein and Schwartz (1992). The researchers revealed that factors like challenge, variety in a profession and the ability to define personal goals were some of the primary reasons occupational therapists chose their careers.

A study conducted by Rubin and Biekeman (1999) revealed that the desire to help others emerged as an important and central factor in choosing a chiropractic degree. They proposed that the higher intake of chiropractic numbers was because students had been advised by school counsellors that they could define personal income goals.

2.5.10) Joy of working with people

Students perceived teaching as an attractive option because it would enable them to live in their region and play a rewarding role in their community (Ososki *et al*., 2006). The Ososki *et al*. (2006) study revealed that the most influential factor was the enjoyment of working with children and the belief that they could make a difference in a child's life.

The factors that determine the attractiveness of radiography as a career choice, was investigated by Coombs *et al*. (2003). School students, radiography students and qualified radiographers were interviewed. The authors reported that when participants were asked to describe the best aspects of working as a radiographer, the most frequent response was the opportunity to work with patients. The interaction with the patients was thought to contribute directly to high levels of job satisfaction.

These results can be compared with the Baxter *et al.* (1996) that was carried out with the objective of examining factors affecting career choices of medical students. The results revealed that both male and female students ranked intellectual challenge and contact with patients as among the more important factors.

2.5.11) Joy of working with their hands

A study by De Almeida *et al*. (1998) revealed that the most influential factors were the intellectual satisfaction of studying science, personal encouragement given by parents, scientific hobbies as well as fiddling with gadgets at home and using their hands.

2.6 SOCIO-ECONOMIC FACTORS

2.6.1) Domestic circumstances

Graduates from Regina school in Saskatchewan, revealed that socio-economic factors were found to be significant motivating factors in respect of a career choice (Sukovieff, 1989). They believed that these factors on their own, limited choices and negatively influenced the career path taken.

Past and present residents at a children's hospital of Philadelphia were surveyed by means of an anonymous written questionnaire (Harris *et al*., (2005). The aim of the study was to determine factors motivating residents career choices. The researchers reported that residents interested in general pediatrics, considered lifestyle and domestic circumstances such as personal financial issues as important.

The study conducted by Soethout *et al.* (2004) revealed that medical doctors considered the factor of domestic circumstances as important for speciality choice. Domestic circumstances was reported as a factor influencing career choice in 18% to 40% of research participants.

2.6.2) Job opportunities and societal need

In exploring the consequences of careers in which there may be limited job opportunities, Jones and Larke (2005) asked all Hispanic and African American graduates who received undergraduate degrees from the college of agriculture and life sciences at Texas University U.S.A to complete a questionnaire on their views of agriculture being a prosperous career. The results revealed that respondents perceived the opportunities for viable, prosperous careers in agriculture-related fields as being very limited. The perception of having limited job opportunities in agriculture and related sciences led respondents in this study to choose other careers.

Even as far back as 1970's, Gleich (1978) reported societal demands as a motivating factor in a career choice. This is because 249 medical technology students in an Introduction to Medical Technology course at the University of Iowa were surveyed and it was found that the societal demand for medical technologists was reported to be a highly motivating factor in career choice. This data was similar to Azizzadeh *et al.* (2003) survey in which 160 medical students were surveyed and it was shown career opportunities, meaning demand for such careers attracted students to the medical field.

The Ososki *et al.* (2006) study revealed that students viewed teaching as a career that offers limited job opportunities, poor career progression and limited promotion opportunities. It was reported that teachers are not rewarded for good performance.

2.6.3) High variety and broad spectrum of jobs

The results from data gathered by Willcockson and Phelps (2004) indicated that students in high school regarded their ideal career as not being in an office and as having a high variety and broad spectrum of opportunities. These students wanted careers that were intellectually demanding as well as engaged in helping people. It was however, not clear which of these factors were most important or if there were other reasons a career might have been chosen.

Park *et al.* (2003) conducted a research project aimed at identifying the factors that determine the attractiveness of physiotherapy as a career choice. School pupils, physiotherapy students and qualified physiotherapists were interviewed. It was reported that all individuals stated that work variety was very important.

The factors affecting the career choice of male and female civil engineering students leaving higher education institutes in the U.K. were investigated by Wilkinson (1996). The researchers revealed that womens decisions to enter their careers related to the type of work. It was reported that it was related to the varied job locations and the characteristics of the job on offer as well as the broad spectrum of opportunities on offer.

2.6.4) Working in a healthcare environment

Health professionals who had previously engaged in International Health Experiences, were surveyed during a study by Ramsey *et al.* (2004). It was reported that more than 20% of students graduating from U.S medical schools in 2003, participated in an International Health Experience during their undergraduate medical training, compared with just 6% of students graduating in 1984. It was noted that working in a health care environment motivated students to pursue their careers and to seek cross-cultural understanding as well as fulfilling altruistic ideals.

2.6.5) Socializers

According to Baboolal and Hutchinson (2007) individuals who have advised or influenced the career path taken by the student are known as socializers, They include guidance counsellors; teachers; family; friends; significant others; peers; visiting professionals and health practitioners in the students life. It also includes Television, media and the Internet.

However Sukovieff (1989) claims that parents were clearly the most important sources of external influence on graduate's educational and occupational decision. Graduates rated their mother's influence as slightly higher than their father's. He also reported that teachers were the second most influential factor after parents and that teachers were the most frequently mentioned extra-familial sources. Interestingly, he also found that they were more influential than the counsellors concerning career decisions. But Singaravelu *et al.* (2005) stated that the results from his study revealed that school guidance counsellors were found to have a significant influence in career choice and that students benefit from career counselling. It was reported that some international students arrive from countries where formal guidance systems do not exist and hence, opportunities for career exploration were limited.

However Willcockson and Phelps (2004) conducted a study the results of which revealed that school guidance counsellors were only mentioned as significant in career choice by 3

respondents. It was reported that a possible reason was the fact that students saw their counsellors much more rarely than other teachers, family or friends.

More than 50 studies from electronic databases as well as journal articles were reviewed in a meta analysis by Hughes and Karp (2004). The authors revealed that career guidance at school as a whole, positively influenced student's career choice. It was also reported that career guidance at schools positively influenced career decision-making, understanding of careers and career related adjustments. It was noted that career guidance aimed at junior high school students had the largest effect on the career choice of students.

According to Young *et al.* (1997) members of student's families, particularly mothers, had a significant influence on the career path taken. It was also noted that influential family members who worked in a certain field were vital in influencing a career choice. This was again highlighted in a more recent study in which 791 undergraduate students enrolled in introductory psychology at 2 universities. The effects of family on learning experiences and goals were examined. Parental encouragement was reported to significantly influence learning experiences and career choice in students (Ferry, 2000), Whereas Willcockson and Phelps (2004) stated that the highest number of external responses for sources of information was the Internet, books and television.

The study conducted by Law and Arthur (2002) investigated the factors influencing Hong Kong school students choice of career in nursing. 1246 students were surveyed. The results from the questionnaire revealed that mass media was the main source of information that helped students learn about the profession of nursing.

Winston (1998) conducted a study in library and information sciences to broaden the number of applicants in these fields. The results revealed that the list of factors affecting the recruitment of individuals into professions, or that have an impact on the career decision making process, include, family members, friends, peers, teachers, counsellors and other role models. These results are confirmed by more recent studies like the Willcockson and Phelps (2004) study where researchers revealed that in terms of

influence on career choice, family ranked the highest. Teachers, friends and people already in the field of interest had the second highest ranking as well as being important sources of information.

The influences of career choice on first year students of engineering at Howard University, Colorado School of Mines, Stamford University and the University of Washington U.S.A were examined by Fleming *et al.* (2005). The results of the study revealed that having a parent in an engineering occupation increased the child's probability of selecting engineering as a major. It was also reported that having a parent as an engineer created the perception that becoming an engineer was a realistic goal, and supported the student's commitment to the goal of becoming an engineer. These results can be compared to the findings of the De Almeida *et al.* (1998) study where physicists, chemists, computer scientists and engineers were found to be attracted to their fields and that interest in that field increased remarkably if a family member was part of the field or in that particular occupation. It was also reported that potential physicists were significantly influenced by guest speakers, visiting professionals, links with local industry, science clubs and competitions.

2.6.6) The lack of awareness of professions

According to Jones and Larke (2005) participants claimed that there were limited career opportunities in agriculture and agriculture related fields but this was due to the lack of awareness of professions and lack of information leading to these false perceptions. However, it was found that career opportunities were actually expanding in those fields and were projected to increase.

Van As (2005) conducted a study to investigate the school guidance counsellors' knowledge and perception about the chiropractic profession in South Africa. The results revealed that there is a lack of awareness among school guidance counsellors about the chiropractic profession.

2.6.7) The lack of available information regarding professions

The study of Young *et al*. (1997) revealed that a significant factor was a lack of information about courses, careers, entry requirements, entry procedures and detailed up to date information on units, personnel and practices. It was also reported that the lack of information was higher in rural schools than in urban schools of Western Australia.

2.7 WORK RELATED FACTORS

Work related factors pertain to work issues such as the expected income of the career, work atmosphere, work conditions and working hours. The ability to be one's own boss, to design one's work schedule as well as the ability to run one's own office were included (Rubin and Biekeman, 1999).

Male and female civil engineering students consider benefits such as having a company car and a pension plan, before making career decisions (Wilkinson, 1996). However the results of this study suggested that salary was a significantly more important factor in choosing a career for men, than for women. The authors reported that there were no significant differences between the sexes, in regards to, the opportunity to do interesting work as well as work conditions and working hours. These results were confirmed by a recent study carried out by Fleming *et al.* (2005) where financial reward was a key motivational factor for one's choice of career. The researchers examined the impact of potential earning power and prestige on both engineering and non-engineering majors. The results revealed that female engineering students, unlike their non-engineering counterparts, reported that financial reward and prestige were of great importance to their career choice.

Chan and Willet (2004) conducted a study to examine the factors affecting participation in obstetrics amongst obstetricians. The researchers used physicians from Ontario Canada

in this study. The results revealed that a lower number of females participate in obstetrics because female physicians preferred working fewer hours than men.

The results of the Ososki *et al.* (2006) study revealed that students considered teaching as a profession due to the favourable schedule of teaching which includes summers off, good working hours and the ability to balance family and a job. However, It was reported that the most discouraging factors were that some students just don't enjoy working with kids or don't want to teach. Other discouraging factors reported were student's negative attitudes as well as lack of patience, lack of teaching skills and the inability to work with younger age groups.

A study conducted by Rubin and Biekeman (1999) revealed that most students believe that chiropractic provides the opportunity to be your own boss, design your own work schedule and run your office exactly the way envisioned.

The factors affecting the career choice in medical students were assessed by Allen, (1999). The results of the study revealed that a large number of participants wanted to study medicine in the hope of running their own practice and being their own boss as well as creating a good working atmosphere. It was thought that participants believed that with running a private practice, work schedule could be adjusted according to ones own preference.

2.8 CONCLUSION

It is therefore clear from the literature review, that many studies involving career choices were conducted worldwide. Various factors were revealed to be important in making a career decision. No studies of this nature have been undertaken in South Africa. It is important to the chiropractic profession to know why students would choose mainstream health care professions over chiropractic. This is so that the chiropractic profession could identify and address these factors positively in order to favourably promote the profession. Therefore, this paper will be of interest investigating the factors affecting

career choices of selected health-care students (physiotherapy, chiropractic, medicine and occupational therapy) in KwaZulu Natal.

CHAPTER 3

MATERIALS AND METHODS

3.1 RESEARCH DESIGN

This study was a demographic/epidemiological, cross-sectional survey-type quantitative study, based on a pre-validated questionnaire.

3.2 QUESTIONNAIRE CONSTRUCTION

The questionnaire was designed based on the factors identified from the literature review. Full text articles as well as journal articles from all over the world were used to identify factors affecting career choices. Articles involving professions not directly related to the medical field were also used. These professions included teaching, agriculture and engineering.

3.3 QUESTIONNAIRE REFINEMENT – Focus Group and Pilot Study

The questionnaire was then submitted to a Focus Group for pilot testing.

<u>The focus group consisted of:</u>

1. The researcher
2. Research supervisor
3. One first year chiropractic, medical, physiotherapy and occupational therapy student (Four students in total)
4. One lecturer from the chiropractic department

Each member of the focus group received:

1. Informed Consent Form. (Appendix A)
2. Letter of Information. (Appendix B)
3. Confidentiality Statement. (Appendix C)
4. Code of Conduct. (Appendix D)
5. A copy of the Questionnaire. (Appendix H)

The purpose of the Focus Group was to answer the following questions:

1) Are questions clearly understood?
2) Are instructions clear?
3) Is the order of questions appropriate?
4) Are the objectives of the study clearly understood by both researcher and respondents?

The participants of the Focus Group completed the “original” questionnaire. Relevant changes were made to streamline the questionnaire and ensure its content, criterion, concurrent and predictive validity.

3.4.1 INCLUSION CRITERIA :

A) Participants had to be registered for their first year of either chiropractic, physiotherapy, occupational therapy or medicine in KwaZulu Natal.

B) Repeating students as well as extended first year students were included.

C) Only South African citizens were eligible for the study.

D) Students of all races and gender were included.

E) Only students who were eighteen years of age and over were included.

3.4.2 EXCLUSION CRITERIA :

A) Students who were not registered as first year chiropractic, physiotherapy, Occupational therapy or medical students were excluded.

B) The questionnaire had to be completed in full to be considered valid. If any question was omitted, then the questionnaire was considered invalid and omitted from the study.

C) Foreign students were excluded.

D) Anyone in the first year class of 2007 who did not fulfill any of the inclusion criteria were automatically excluded.

E) Anyone under eighteen years of age was excluded.

3.5 SAMPLING PROCEDURE

The central applications office was contacted in order to determine the 3 most popular mainstream health sciences with the most number of applicants. The response received from the central applications office detailed the exact number of applicants over the last 5 years at the Durban University of Technology and the University of KwaZulu Natal. It was evident from the number of applicants that medicine, physiotherapy and occupational therapy were the most popular mainstream health sciences. This validated the inclusion of these health professions into this study.

The questionnaire was distributed (with permission from the respective heads of department) to 29 first year chiropractic students of the Durban University of Technology, 32 first year physiotherapy and 22 occupational therapy students of the University of KwaZulu Natal, and 55 first year medical students of the Nelson Mandela School of Medicine.

3.6 ADMINISTRATION OF THE QUESTIONNAIRE

1. Permission was requested from the heads of the respective departments involved (Chiropractic, Physiotherapy, Occupational Therapy and Medicine) to administer the questionnaires to the first year class of 2007.

2. Once permission was granted by the respective departments, the questionnaires were administered to the participants on the day and time permitted by the head of department.

3. Class registers were printed out and administered to the research participants to sign in order to monitor response rates.

4. Participants received an Informed Consent Form (appendix 8).

5. The questionnaire (appendix 1) for current learners was administered in a semi-supervised fashion. For the purpose of this research, questionnaires were administered to the chiropractic first year students to complete in a group environment. The medical, physiotherapy and occupational therapy first year students had the questionnaires administered in a similar fashion but on a different day. They were given the same instructions. Students, who had any questions or comments, were answered promptly. All participants received an Information Letter (Appendix 7). The researcher was on hand if they had any questions or queries regarding the questionnaire.

6. A time limit of 20 minutes was set for the research participants to complete the questionnaires.

7. The researcher collected the questionnaires personally following the 20 minute time lapse.

8. As answers were confidential, the questionnaires were stored in a locked filing cabinet in the custody of the researcher. Only the researcher and the research supervisor(s) had access to the questionnaires.

9. Data analysis was then undertaken.

3.7 DATA ANALYSIS

The analysis of the majority of the questions consisted of a simple frequency count (simple descriptive analysis) with results being calculated as percentages. The data was analysed to demonstrate demographic and epidemiological factors and employed cross-tabular analysis and chi square statistical evaluation. A p-value equal to or less than 0,05 was considered to be statistically significant.

Descriptive objectives were analysed using frequency tables and bar charts in the case of categorical variables. Ordinal variables were described using medians and inter-quartile ranges, with graphical representation using box and whisker plots.

Responses to the questionnaire were compared between the four groups of respondents using Pearson's chi square tests for categorical variables, Kruskal-Wallis tests for ordinal variables and ANOVA for quantitative normal variables. The data is presented in Chapter 4 in the form of frequency tables, pie charts and bar graphs. The programme used to process this data was SPSS version 13.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

The sample size for the present study was three hundred and twelve. It consisted of two hundred and eleven medical students from the Nelson Mandela School of Medicine, thirty eight chiropractic students from the Durban University of Technology, thirty eight physiotherapy students and twenty five occupational therapy students from the University of KwaZulu Natal.

One hundred and fifty five students or 50% overall participated in the research process. One hundred and fifty medical students, four chiropractic students, two physiotherapy students and one occupational therapy student were absent on the day of the interviews and hence did not participate in the study.

Out of a total sample of one hundred and fifty five, seventeen questionnaires were excluded from the research, as they did not meet the inclusion criteria. Seven questionnaires from two medical students, two physiotherapy students, two chiropractic students and one occupational therapy student were excluded due to the fact that the participants were minors. The remaining ten questionnaires were excluded because they were incomplete and these were from four medical students, three chiropractic students, two physiotherapy students and one occupational therapy student. The final number of valid questionnaires for this study was one hundred and thirty eight or 44% of the total maximum sample of three hundred and twelve.

4.2 Demographics

4.2.1 Age

Figure 1:Mean age of student groups

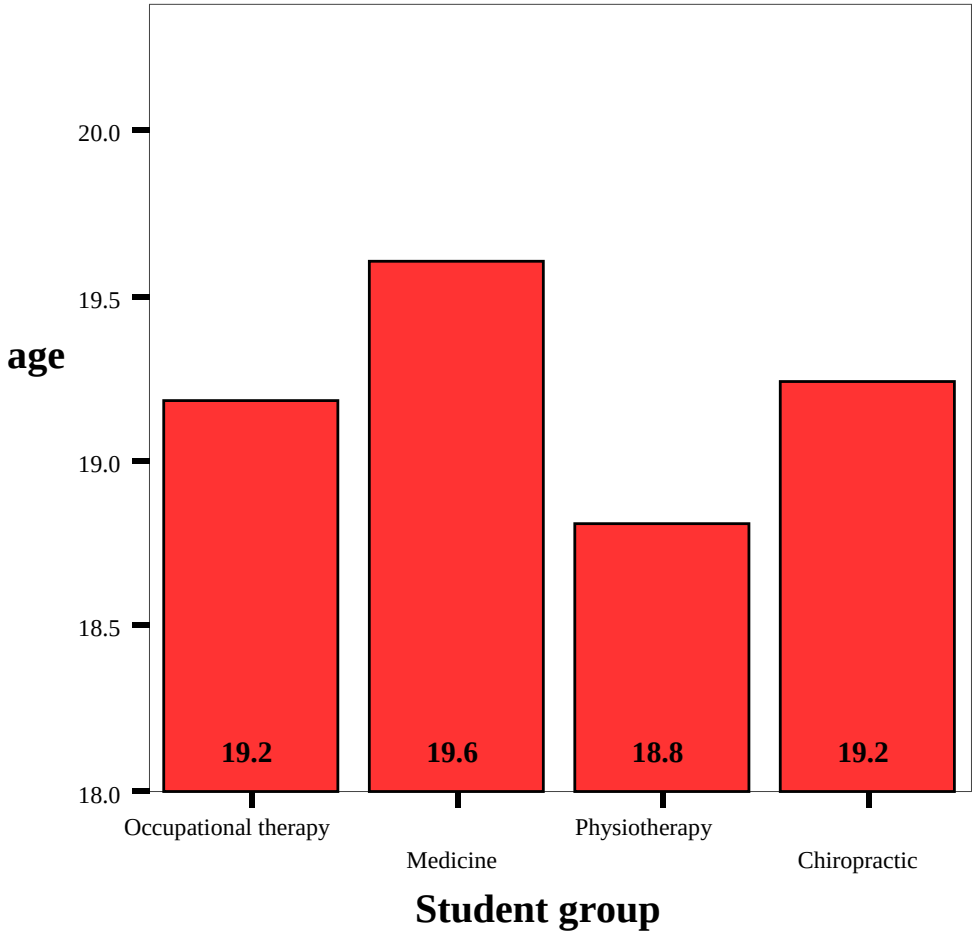


Figure 1 above shows the mean ages of each of the student groups and in the overall sample. The physiotherapy students were slightly younger than the other groups, while the medical students were the oldest. The overall mean age was 19.28 years (SD 2.25 years).

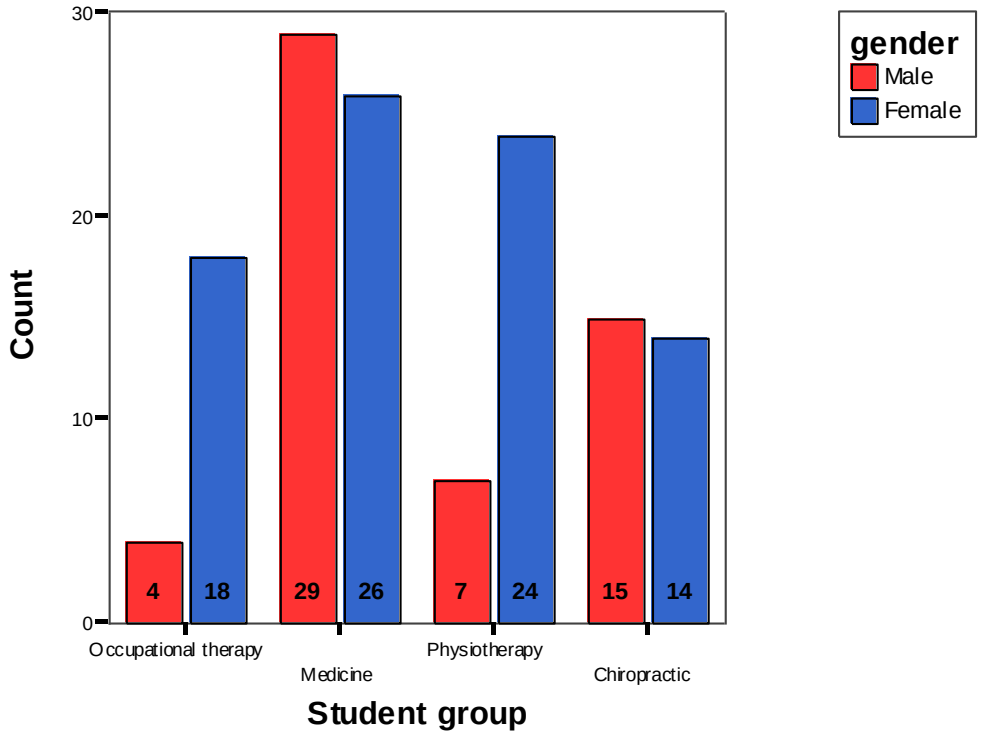
Table 1: ANOVA test for comparison of mean age between groups

	Sum of Squares	df	Mean Square	F	P value
Between Groups	12.878	4	4.293	0.843	0.473
Within Groups	682.658	134	5.094		
Total	695.536	138			

The ages of the four groups were not significantly different (p=0.473 – Table 1).

4.2.2Gender

Figure 2: Frequency of gender by student group

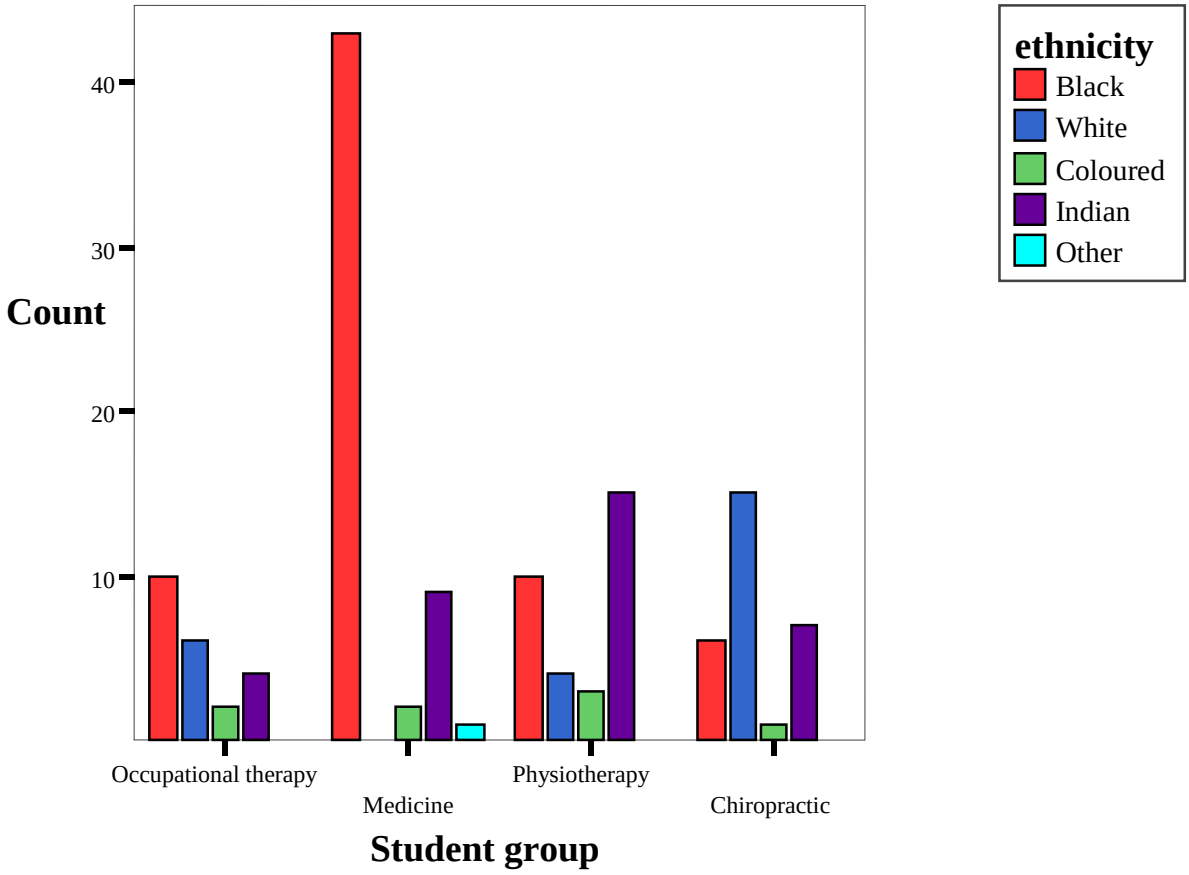


Pearson's chi square =13.64, p=0.003

Figure 2 reflects that there were more females in the sample. However, by student group the proportions varied significantly (p=0.003). While occupational therapy and physiotherapy displayed vastly higher numbers of female students, medicine and chiropractic were more evenly balanced with a slightly higher number of male students.

4.2.3 Ethnicity

Figure 3: Student group by ethnicity

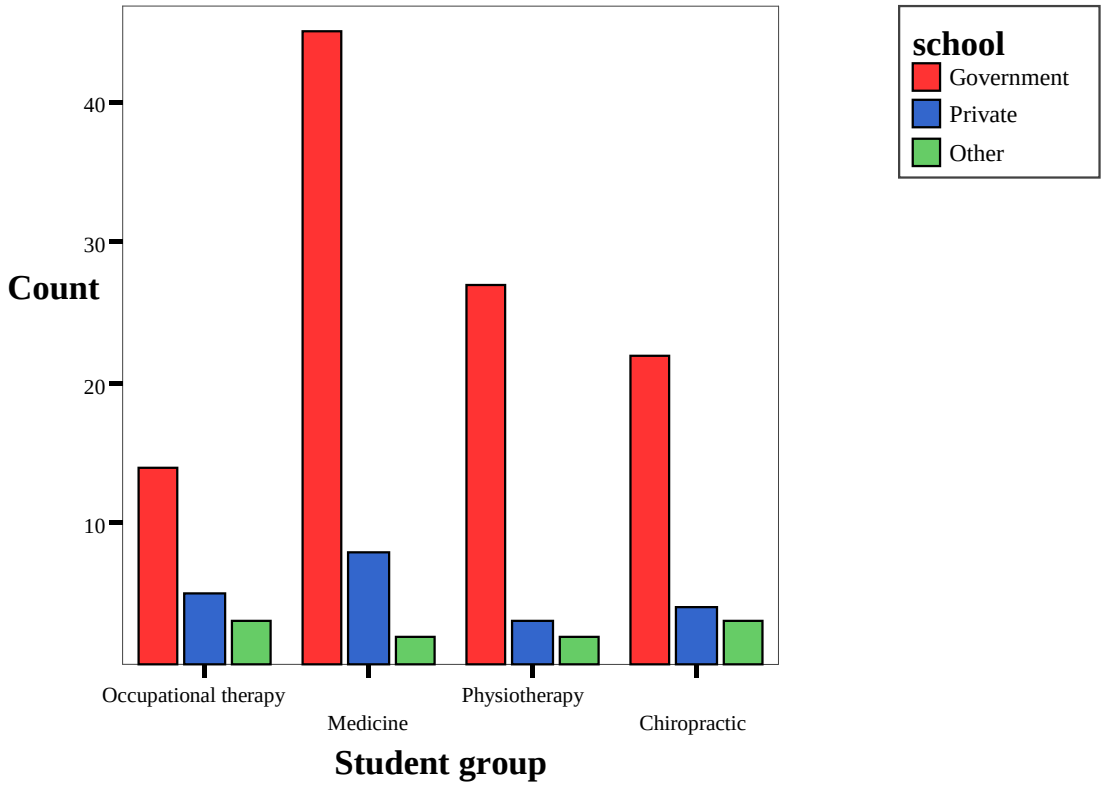


Ethnicity was also significantly different by student group ($p<0.001$). Figure 3 reflects that both medicine and occupational therapy students had majority Black students. Chiropractic students were majority White while physiotherapy students, majority Indian.

4.3 FACTORS AFFECTING CAREER CHOICE

4.3.1 Type of school attended by student group

Figure 4: Student group by type of school



Pearson's chi square 5.139, p=0.526

It is evident from Figure 4 that the most common school attended by all students groups were government schools. The proportion that attended private schools was highest in occupational therapy students. There was no significant difference between the student groups in terms of the type of school they attended (p=0.526).

4.3.2 Cost of course

Figure 5: Number of responses to "Cost of course" by student group

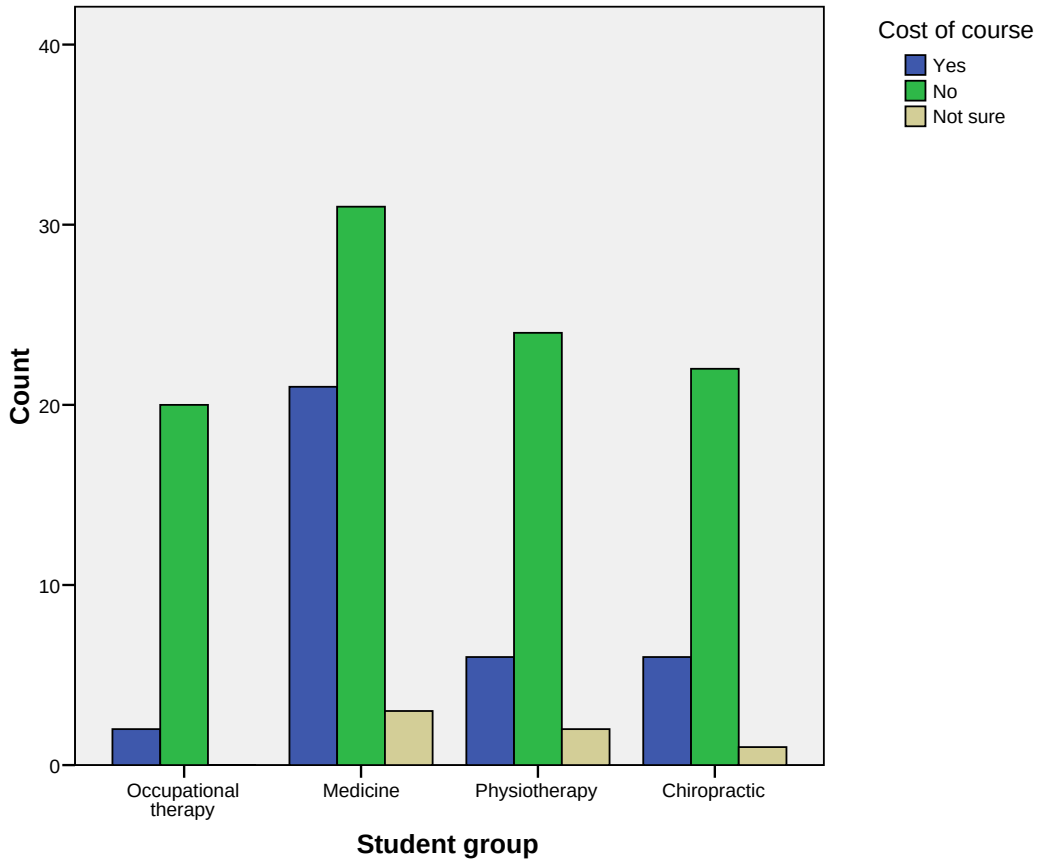
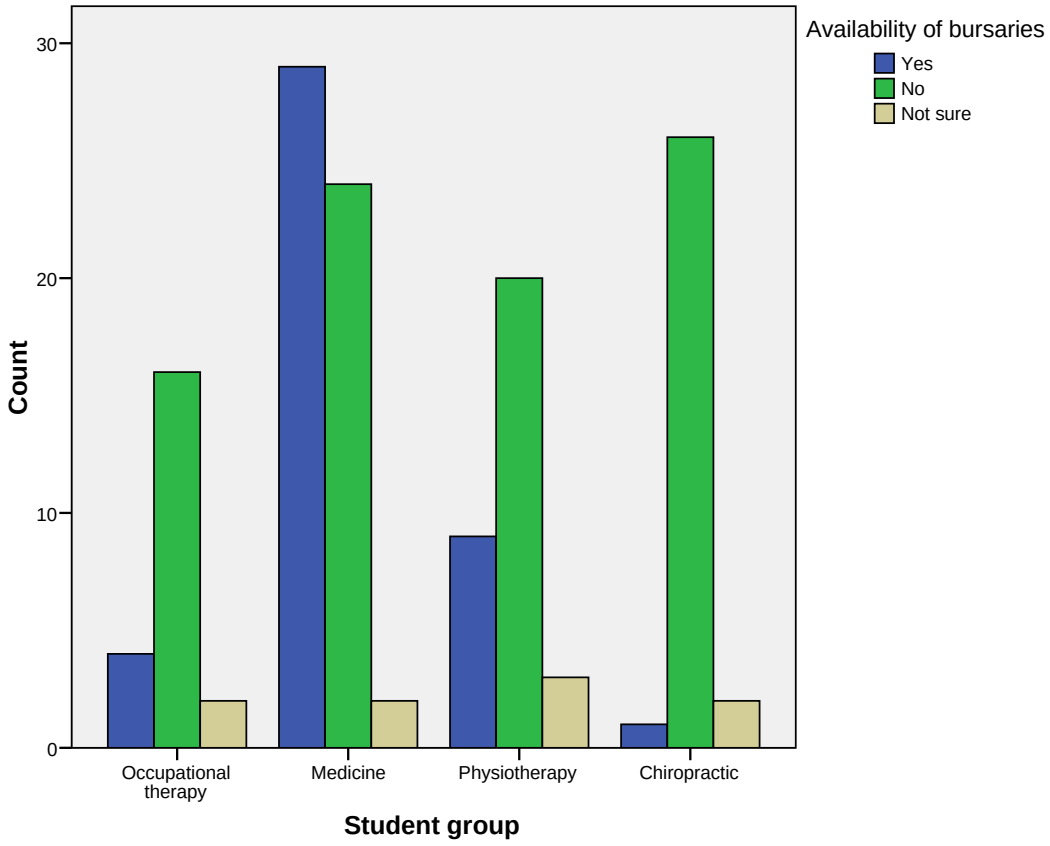


Figure 5 reveals that medical students were more inclined to consider the cost of the course than the other health disciplines. The majority of occupational therapy students did not consider the cost of the course to be important.

4.3.3 Availability of Bursaries

Figure 6: Number of responses to "Availability of bursaries" by student group



It is evident from Figure 6 that the majority of all medical students considered the availability of bursaries to be important while a vast majority of chiropractic students did not consider it to be important.

4.3.4 Lack of bursaries

Figure 7: Number of responses to "Lack of bursaries" by student group

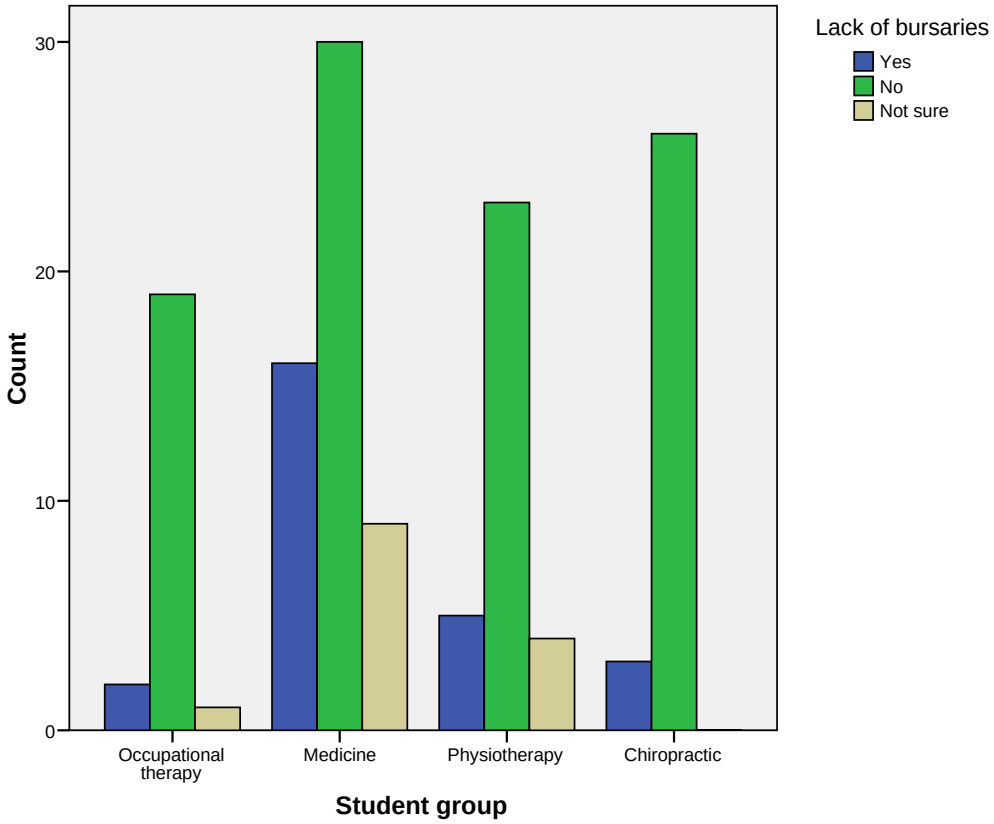


Figure 7 reflects that a larger number of medical students regarded the lack of bursaries as an important factor as compared to the other health professions. The majority of chiropractic students were not influenced by the lack of bursaries.

Table 2: Comparison of responses to question 5, by student group:

Were the following factors vital in choosing your profession?

(Cost of course, availability of bursaries and lack of bursaries)

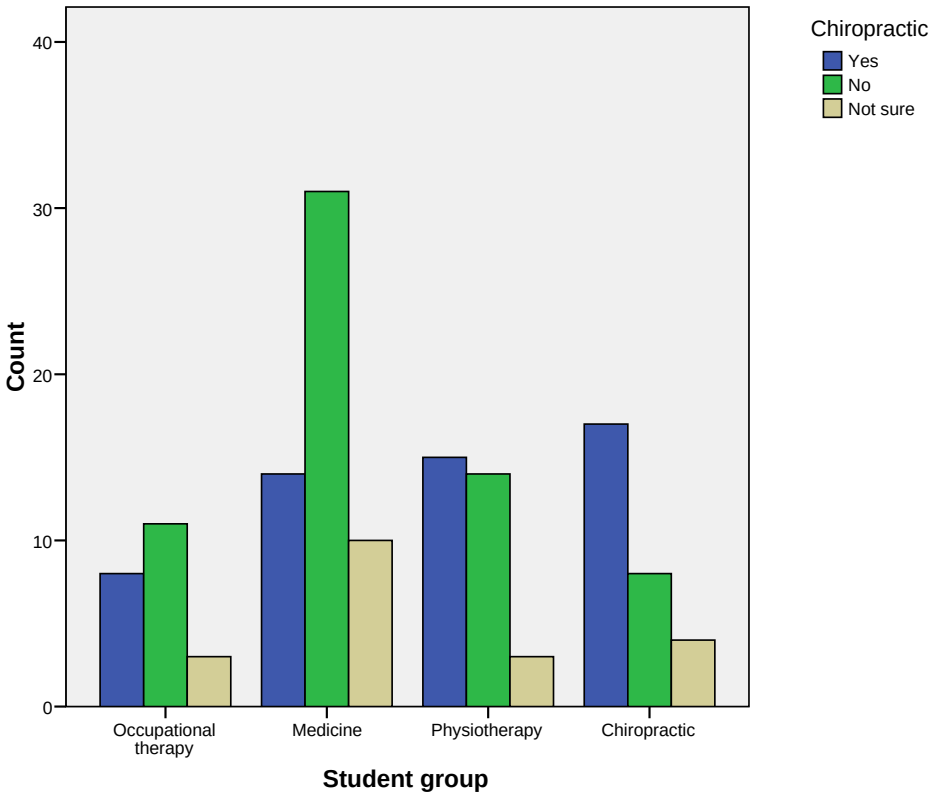
		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		n	%	n	%	n	%	n	%	n	%
Cost of course [1]	Yes	2	9.1%	21	38.2%	6	18.8%	6	20.7 %	35	25.4%
	No	20	90.9%	31	56.4%	24	75.0%	22	75.9 %	97	70.3%
	Not sure	0	.0%	3	5.5%	2	6.3%	1	3.4%	6	4.3%
Availability of bursaries [2]	Yes	4	18.2%	29	52.7%	9	28.1%	1	3.4%	43	31.2%
	No	16	72.7%	24	43.6%	20	62.5%	26	89.7 %	86	62.3%
	Not sure	2	9.1%	2	3.6%	3	9.4%	2	6.9%	9	6.5%
Lack of bursaries [3]	Yes	2	9.1%	16	29.1%	5	15.6%	3	10.3 %	26	18.8%
	No	19	86.4%	30	54.5%	23	71.9%	26	89.7 %	98	71.0%
	Not sure	1	4.5%	9	16.4%	4	12.5%	0	.0%	14	10.1%

1 p=0.083
2 p<0.001
3 p=0.016

Table 2 shows that the majority of respondents reported that cost was not a consideration when choosing their career (70.3%), while neither were the availability or lack of bursaries. There was a significant difference in responses to the availability (62.3%) and lack of bursaries (71.0%) by student group ($p<0.001$ and $p=0.016$ respectively). The medical students were more concerned with availability and lack of bursaries than the other student groups.

4.3.5 Were there mechanisms to obtain information at School?

Figure 8: Frequency of responses to whether information on chiropractic was available at school to student groups



It is evident from figure 8 that the majority of chiropractic students obtained information on chiropractic at school while the majority of medical students revealed that information on chiropractic was unavailable at school.

Figure 9: Frequency of responses to whether information on medicine was available at school to student groups

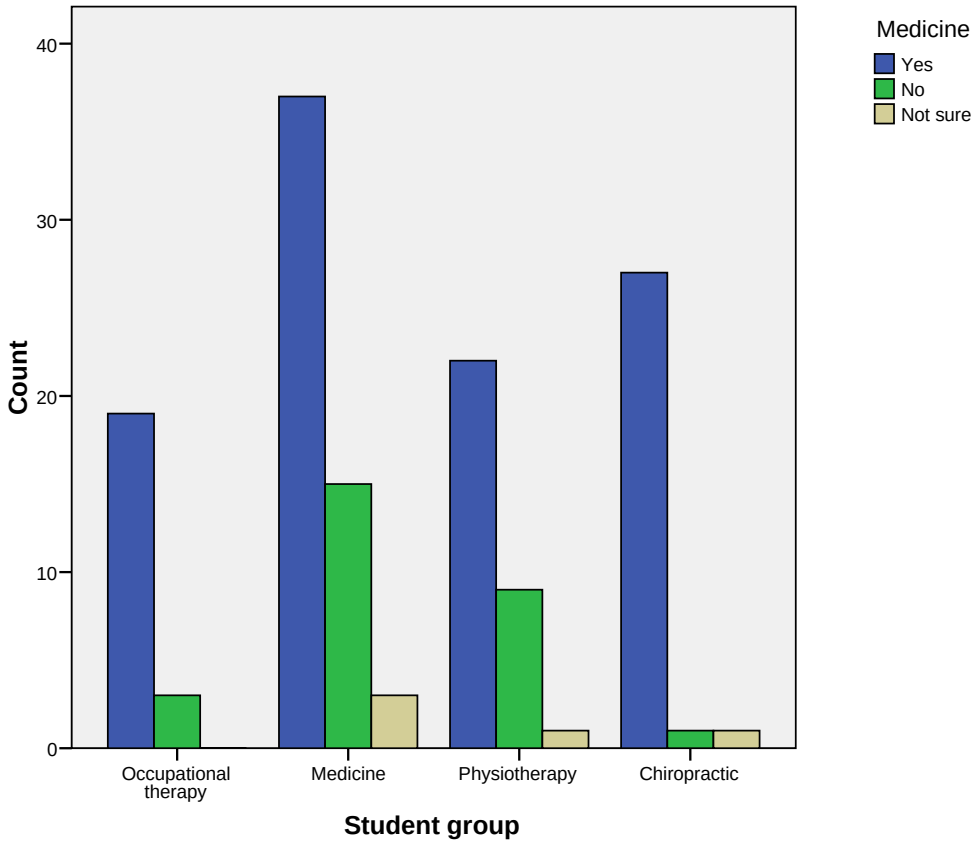
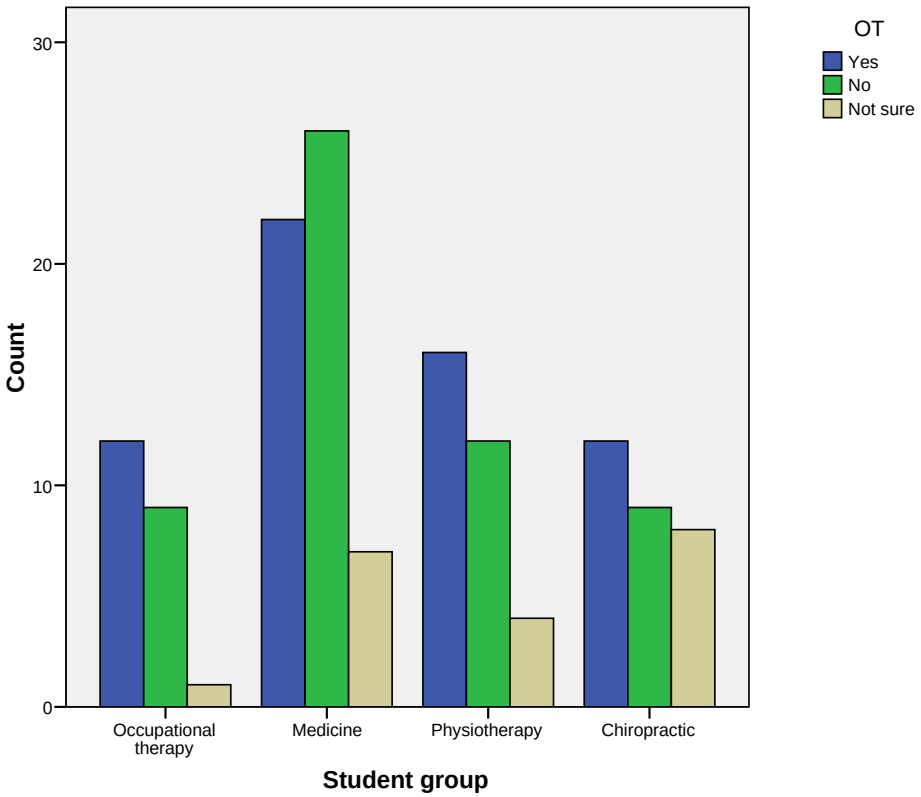


Figure 9 reflects that the vast majority of chiropractic students were able to obtain information on the medical profession at school but medical students were more likely to have difficulty obtaining information on medicine at school.

Figure 10: Frequency of responses to whether information on occupational therapy was available at school to student groups



It is evident from Figure 10 that the majority of occupational therapy students were able to obtain information on occupational therapy at school. Medical students were more likely to have difficulty obtaining information on occupational therapy at school.

Figure 11: Frequency of responses to whether information on physiotherapy was available at school to student groups

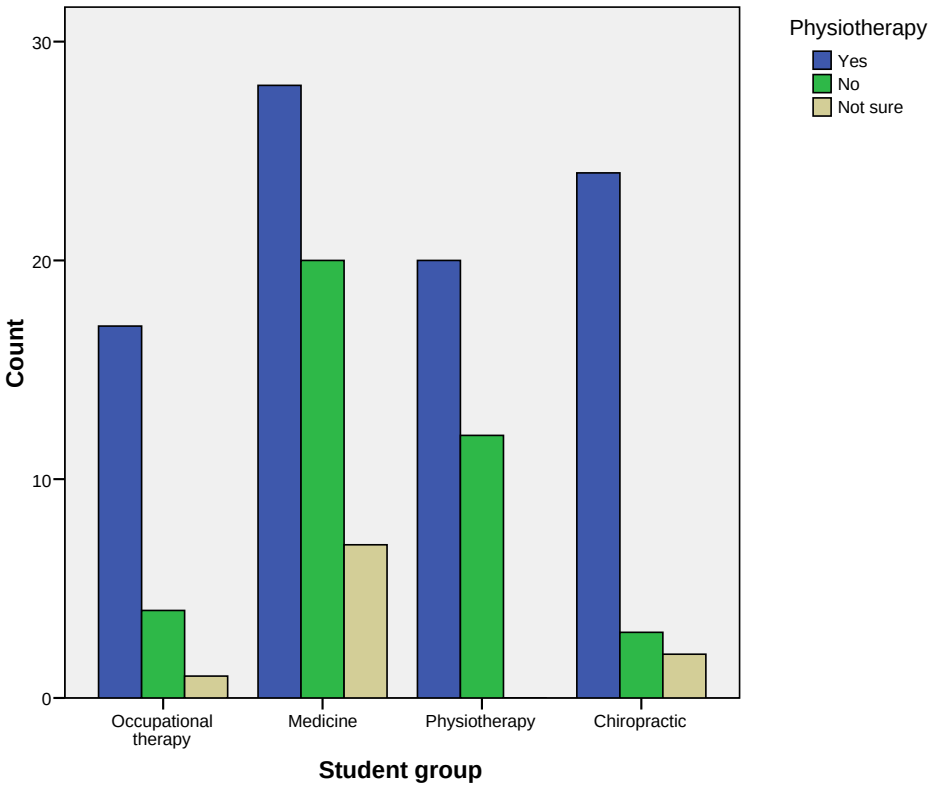


Figure 11 reflects that the vast majority of chiropractic students obtained information on physiotherapy at school while a larger number of physiotherapy students were unable to.

Table 3: Comparison of responses to Question 7a by student group

Was information available to you about the following professions at school?

Was information available to you about the following professions at school?		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		n	%	n	%	n	%	n	%	n	%
Chiropractic [1]	Yes	8	36.4%	14	25.5%	15	46.9%	17	58.6%	54	39.1%
	No	11	50.0%	31	56.4%	14	43.8%	8	27.6%	64	46.4%
	Not sure	3	13.6%	10	18.2%	3	9.4%	4	13.8%	20	14.5%
Medicine [2]	Yes	19	86.4%	37	67.3%	22	68.8%	27	93.1%	105	76.1%
	No	3	13.6%	15	27.3%	9	28.1%	1	3.4%	28	20.3%
	Not sure	0	.0%	3	5.5%	1	3.1%	1	3.4%	5	3.6%
OT [3]	Yes	12	54.5%	22	40.0%	16	50.0%	12	41.4%	62	44.9%
	No	9	40.9%	26	47.3%	12	37.5%	9	31.0%	56	40.6%
	Not sure	1	4.5%	7	12.7%	4	12.5%	8	27.6%	20	14.5%
Physiotherapy [4]	Yes	17	77.3%	28	50.9%	20	62.5%	24	82.8%	89	64.5%
	No	4	18.2%	20	36.4%	12	37.5%	3	10.3%	39	28.3%
	Not sure	1	4.5%	7	12.7%	0	.0%	2	6.9%	10	7.2%

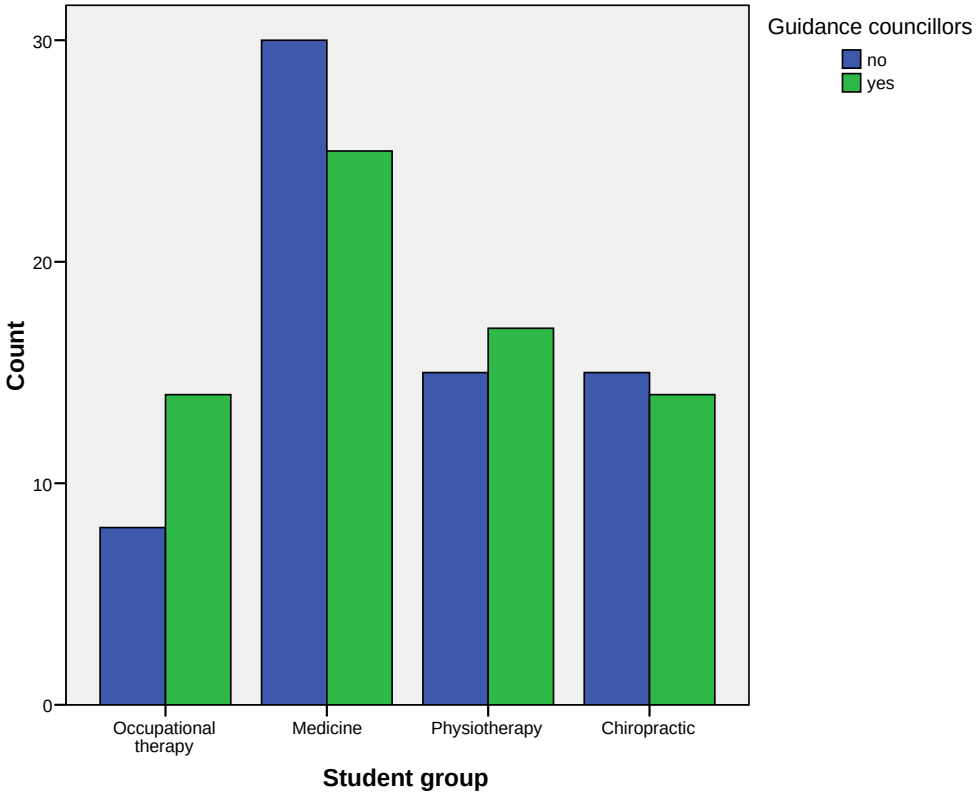
1 p=0.102
2 p=0.111
3 p=0.278
4 p=0.022

It is evident from Table 3 that the majority of participants obtained information about medicine as a career from their school (76.1%), however, for the other careers the response was not as positive. Table 3 reflects that only 39% of the total number of students obtained information about chiropractic.

Table 3 reveals that in the case of information about chiropractic, the chiropractic student group were more likely to respond “yes” but the difference was not statistically significant (p=0.102). For information about physiotherapy, a significant difference was observed between the student groups, with the chiropractic students reporting the highest percentage of “yes” responses and the medical students reporting the lowest.

4.3.6 Source of information

Figure 12: Frequency of responses to whether information was available from guidance counsellors to student groups



It is evident from Figure 12 that a larger number of medical students did not obtain information from guidance counsellors. The majority of occupational therapy students did obtain information on careers from guidance counsellors.

Figure 13: Frequency of responses to whether information was available from teachers to student groups

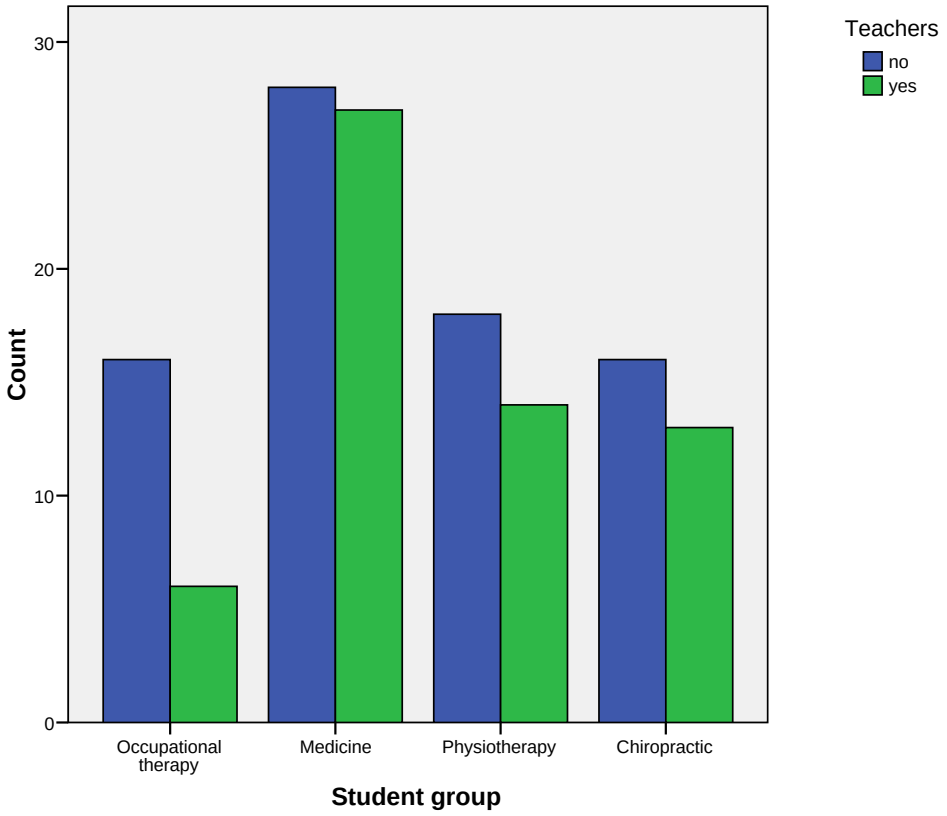
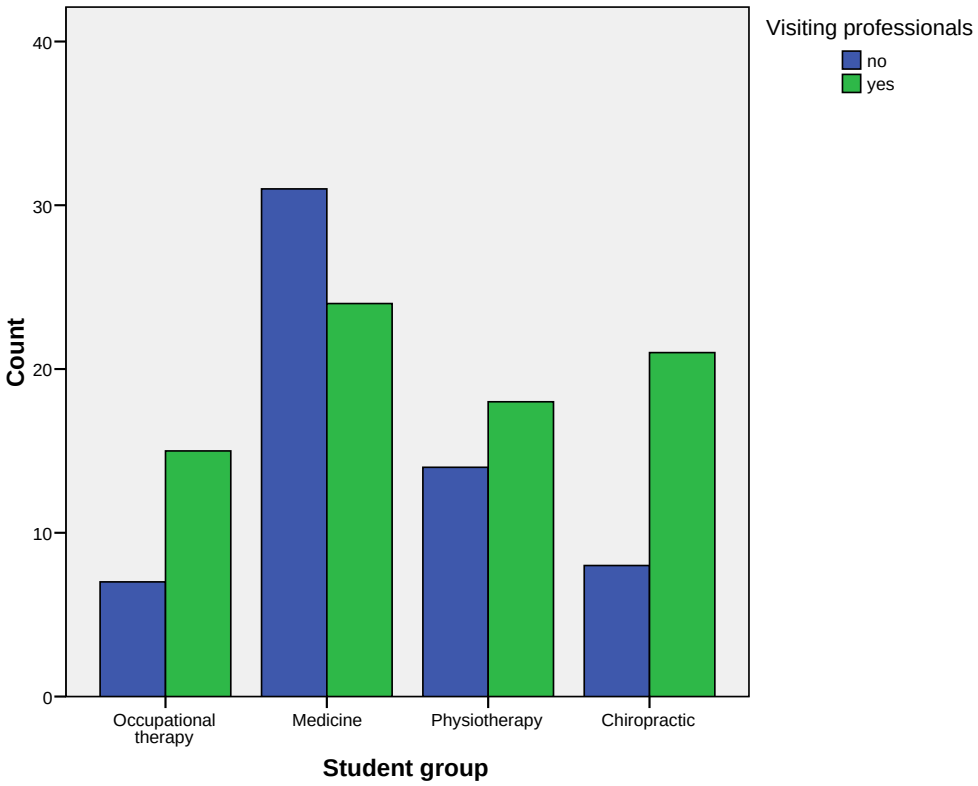


Figure 13 reflects that a vast majority of occupational therapy students did not obtain information from teachers while a significantly large number of medical students did.

Figure 14: Frequency of responses to whether information was available from visiting professionals to student group



It is evident from Figure 14 that the majority of medical students did not receive career information from visiting professionals while the vast majority of chiropractic students did receive career information.

Figure 15: Frequency of responses to whether information was available from others to student groups

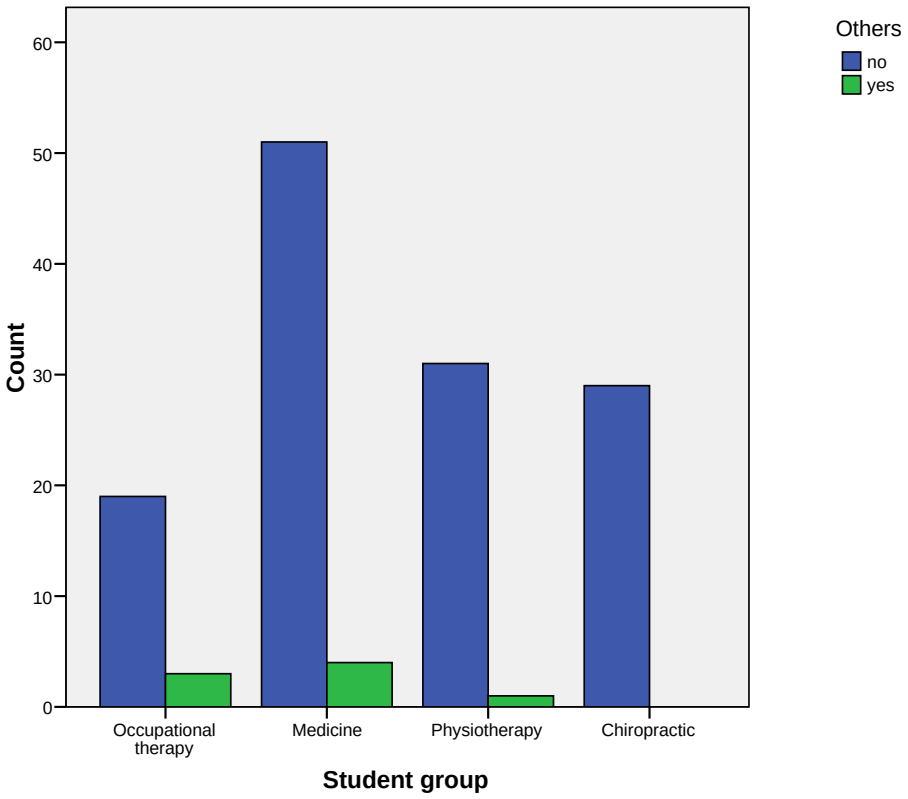
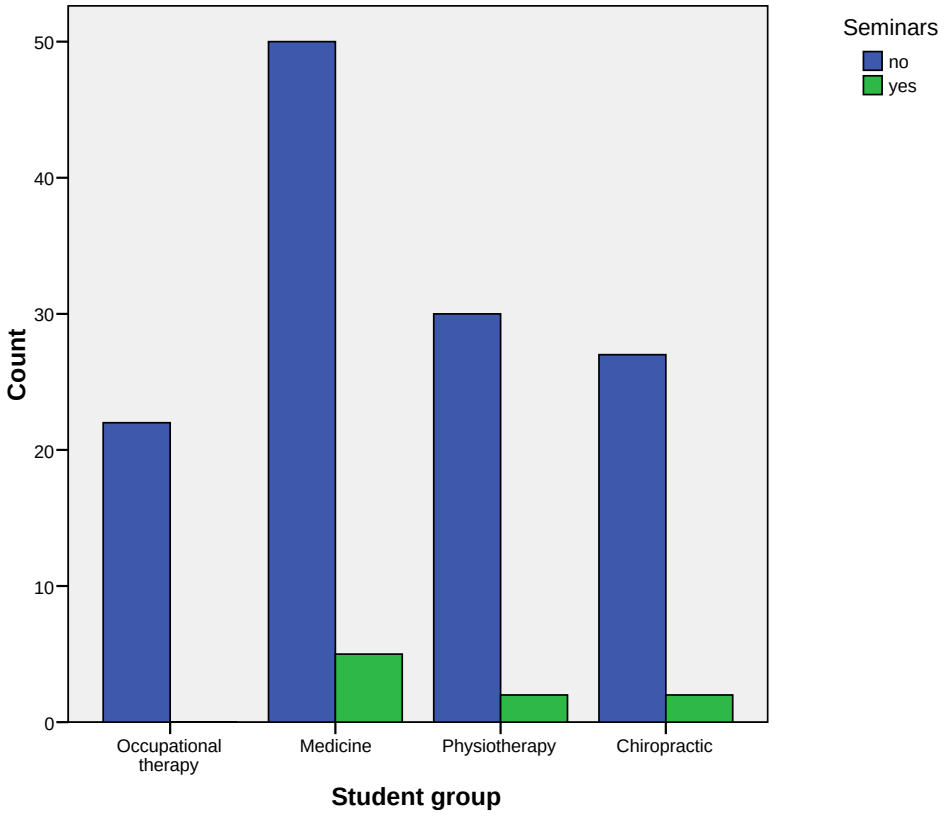


Figure 15 reflects that the entire population of the chiropractic students did not receive information from “others”. Occupational therapy students were more likely to obtain career information from “others”.

Figure 16: Frequency of responses to whether information was available from seminars to student groups



It is evident from Figure 16 that the entire population of the occupational therapy students did not obtain information from seminars while a significant number of medical students did receive information from these lectures.

Figure 17: Frequency of responses to whether information was available from the internet to student groups

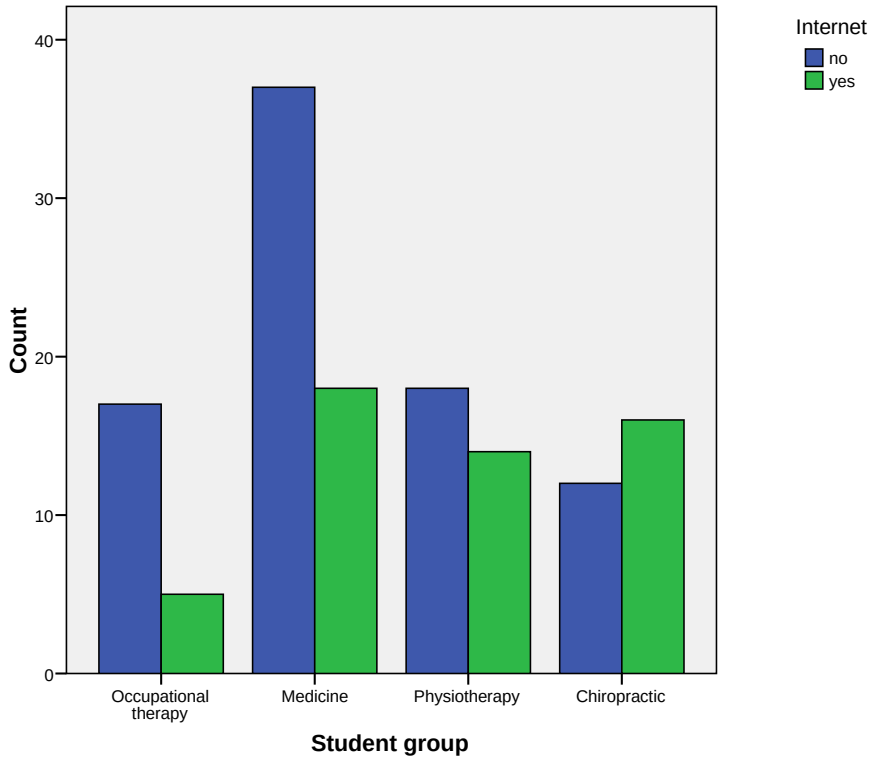
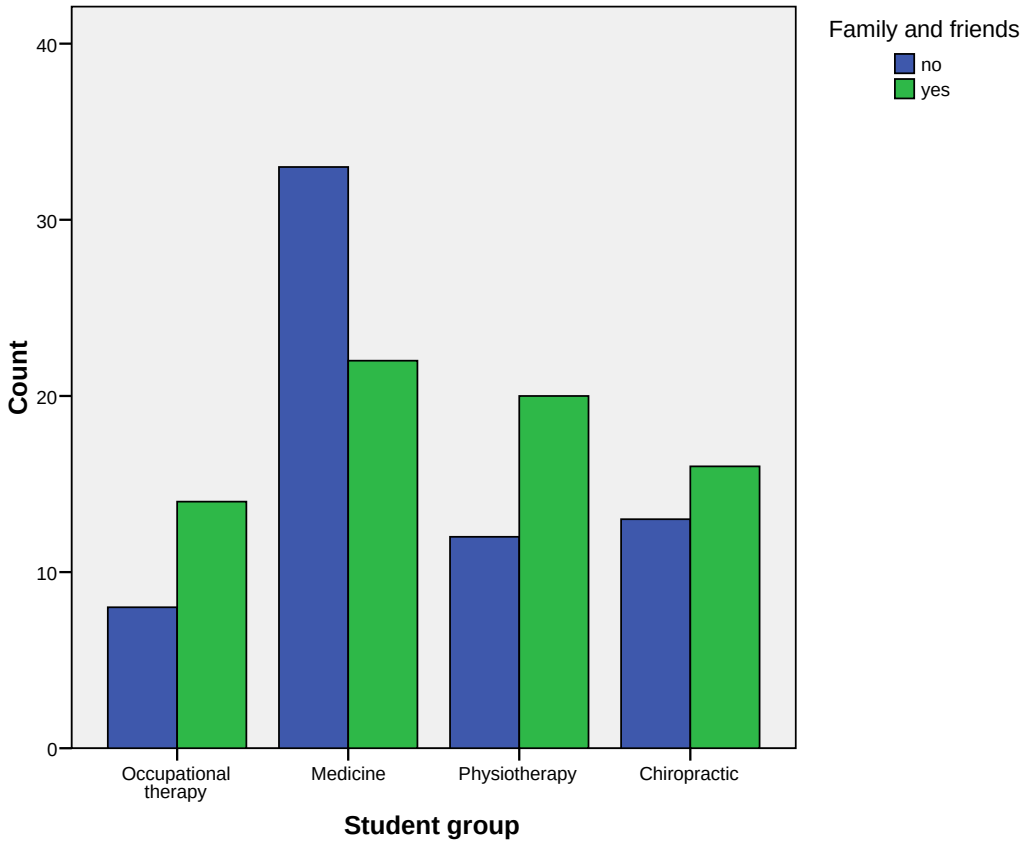


Figure 17 reflects that the vast majority of the occupational therapy students did not obtain career information from the Internet while the majority of the chiropractic student population did.

Figure 18: Frequency of responses to whether information was available from family and friends to student groups



It is evident from Figure 18 that the majority of the medical student population did not receive career information from family and friends while the majority of the occupational therapy student population did.

Figure 19: Frequency of responses to whether information was available from career days to student groups

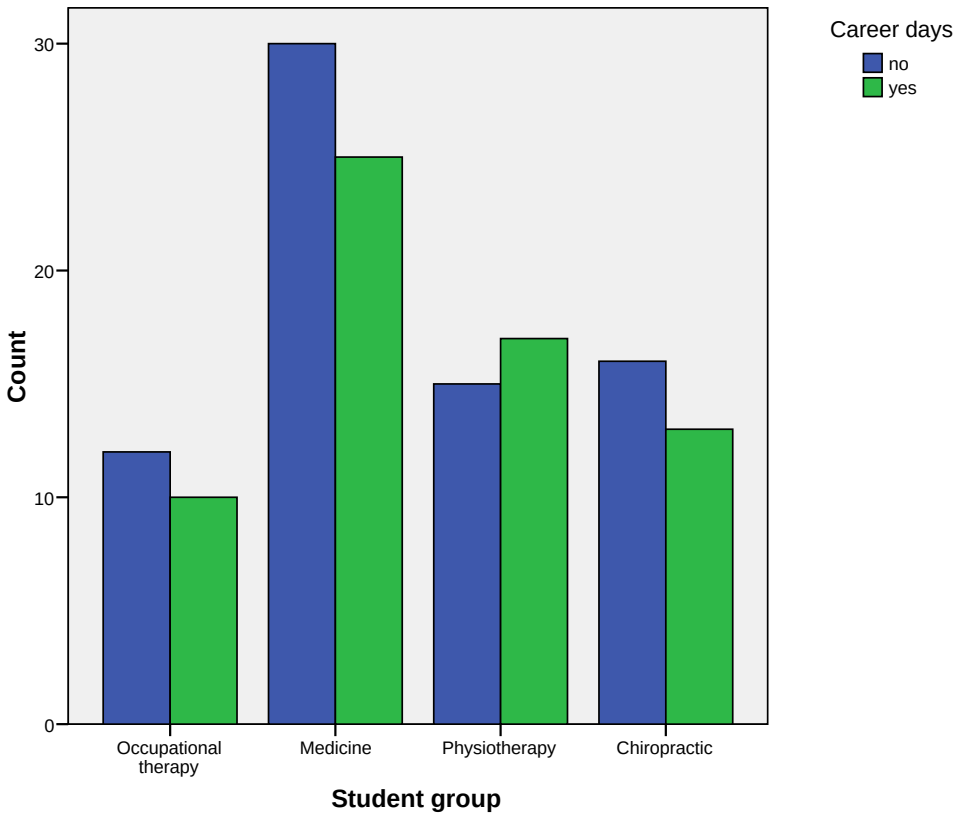


Figure 19 reflects that the majority of the chiropractic student population did not obtain information from career days. The majority of physiotherapy students did receive information from career days.

Table 4: Comparison of responses to Question 7b by student group

(Where did you receive this information (in 7A) from?)

		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		n	%	n	%	n	%	n	%	n	%
Guidance counsellors [1]	no	8	36.4%	30	54.5%	15	46.9%	15	51.7%	68	49.3%
	yes	14	63.6%	25	45.5%	17	53.1%	14	48.3%	70	50.7%
Teachers [2]	no	16	72.7%	28	50.9%	18	56.3%	16	55.2%	78	56.5%
	yes	6	27.3%	27	49.1%	14	43.8%	13	44.8%	60	43.5%
Visiting professionals [3]	no	7	31.8%	31	56.4%	14	43.8%	8	27.6%	60	43.5%
	yes	15	68.2%	24	43.6%	18	56.3%	21	72.4%	78	56.5%
Others [4]	no	19	86.4%	51	92.7%	31	96.9%	29	100.0%	130	94.2%
	yes	3	13.6%	4	7.3%	1	3.1%	0	.0%	8	5.8%
Seminars [5]	no	22	100.0%	50	90.9%	30	93.8%	27	93.1%	129	93.5%
	yes	0	.0%	5	9.1%	2	6.3%	2	6.9%	9	6.5%
Internet [6]	no	17	77.3%	37	67.3%	18	56.3%	12	42.9%	84	61.3%
	yes	5	22.7%	18	32.7%	14	43.8%	16	57.1%	53	38.7%
Family and friends [7]	no	8	36.4%	33	60.0%	12	37.5%	13	44.8%	66	47.8%
	yes	14	63.6%	22	40.0%	20	62.5%	16	55.2%	72	52.2%
Career days [8]	no	12	54.5%	30	54.5%	15	46.9%	16	55.2%	73	52.9%
	yes	10	45.5%	25	45.5%	17	53.1%	13	44.8%	65	47.1%

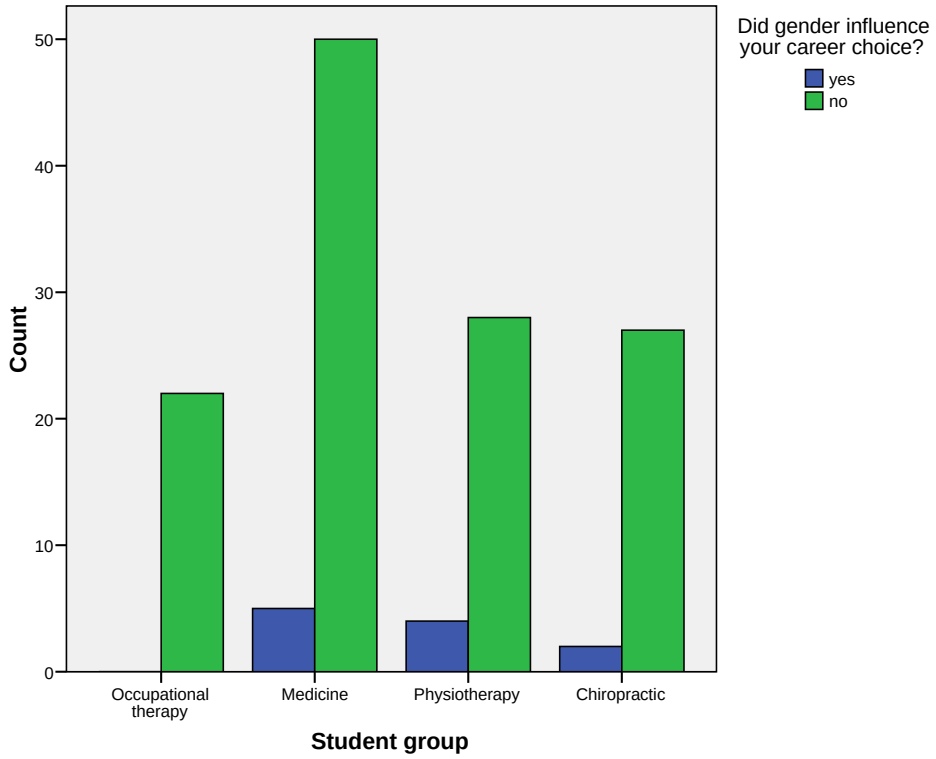
1 p=0.528
2 p=0.380
3 p=0.048
4 p=0.179
5 p=0.544
6 p=0.056
7 p=0.117
8 p=0.894

Table 4 reflects that the majority of respondents obtained information from visiting professionals (56.5%), while family and guidance counsellors were also important sources of information (52.2% and 50.7% respectively). This also depicts that the source of information was not different between the student groups, except in the case of visiting professionals (p=0.048) where chiropractic students were more likely to answer “yes” to this option than the other student groups (72% of chiropractors compared with 56% of physiotherapists, 44% of medical students and 68% of Occupational therapists). Use of the Internet was borderline non-significantly different between the student groups (p=0.056). Chiropractic students were more likely to use the Internet to find out about careers than the other student groups.

4.3.7 Gender

Figure 20: Frequency of responses to Question 8 from student groups

(Did gender influence your career choice)



It is evident from Figure 20 that a significant number of the physiotherapy student population were influenced by gender with regards to career choice. The entire occupational therapy student population did not let gender influence their career decision.

4.3.8 Past experience with a professional from the career field chosen

Figure 21: Frequency of responses to Question 9a from student group

(Did an experience with a professional influence your career choice?)

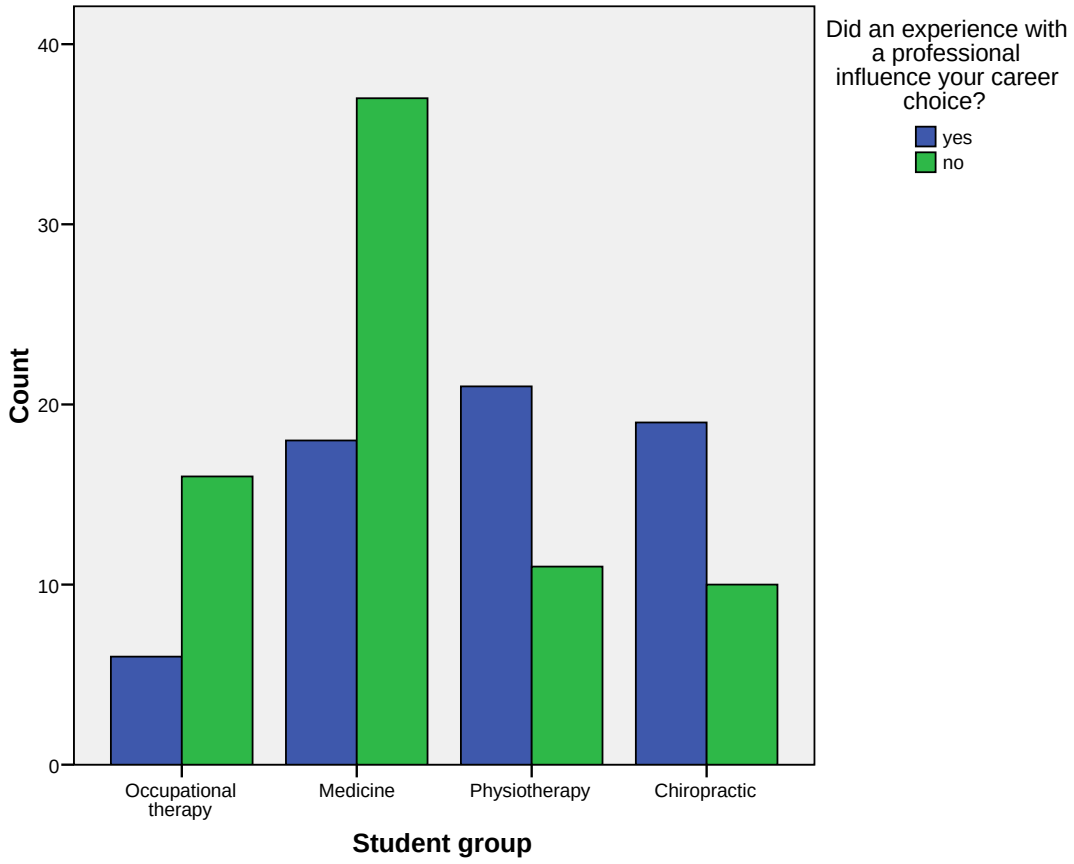


Figure 21 reflects that the majority of the physiotherapy student population was influenced by a professional from the career field chosen while a vast majority of the occupational therapy student population were not.

Table 5: Comparison of responses to Questions 8 and 9a by student group

Did gender influence your career choice?

Did an experience with a professional influence your career choice?

		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Did gender influence your career choice? [1]	yes	0	.0%	5	9.1%	4	12.5%	2	6.9%	11	8.0%
	no	22	100.0%	50	90.9%	28	87.5%	27	93.1%	127	92.0%
Did an experience with a professional influence your career choice? [2]	yes	6	27.3%	18	32.7%	21	65.6%	19	65.5%	64	46.4%
	no	16	72.7%	37	67.3%	11	34.4%	10	34.5%	74	53.6%

1 p=0.401
2 p=0.001

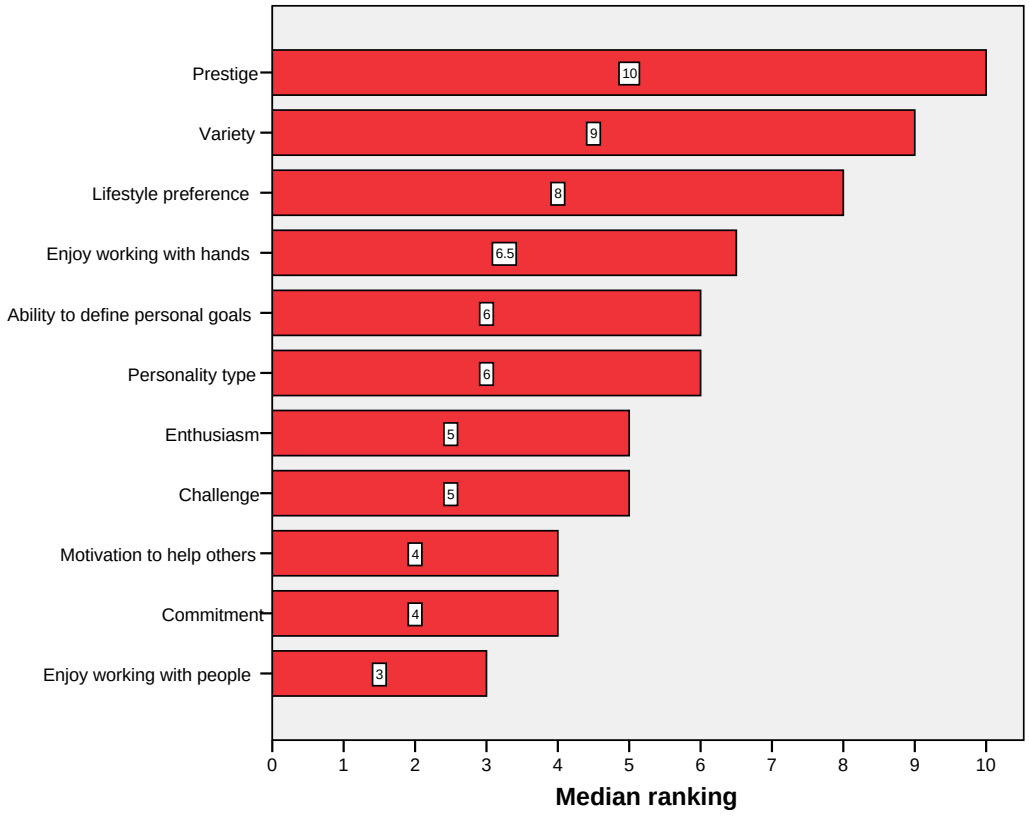
It is evident from Table 5 that gender was definitely not a strong influence on career choice (92% reported that gender did not influence their career choice). However, past experience with a professional from their chosen career field did have a relatively stronger influence (46.4%).

The next section displays the results obtained for the following personal factors influencing career choice in chiropractic, medical, physiotherapy and occupational therapy students.

4.3.9 Personal Factors

4.3.9.1) Prestige
4.3.9.2) Variety
4.3.9.3) Lifestyle Preference
4.3.9.4) Joy of working with their hands
4.3.9.5) Personality type
4.3.9.6) Ability to define personal goals
4.3.9.7) Challenge
4.3.9.8) Enthusiasm
4.3.9.9) Commitment
4.3.9.10) Motivation to help others
4.3.9.11) Enjoy working with people

Figure 22: Ranking of personal factors in terms of importance for career choice



It is evident from Figure 22 that the most important factor was the enjoyment of working with people while the least important factor was prestige of a career.

Figure 23: Median ranking of personal factors by student groups

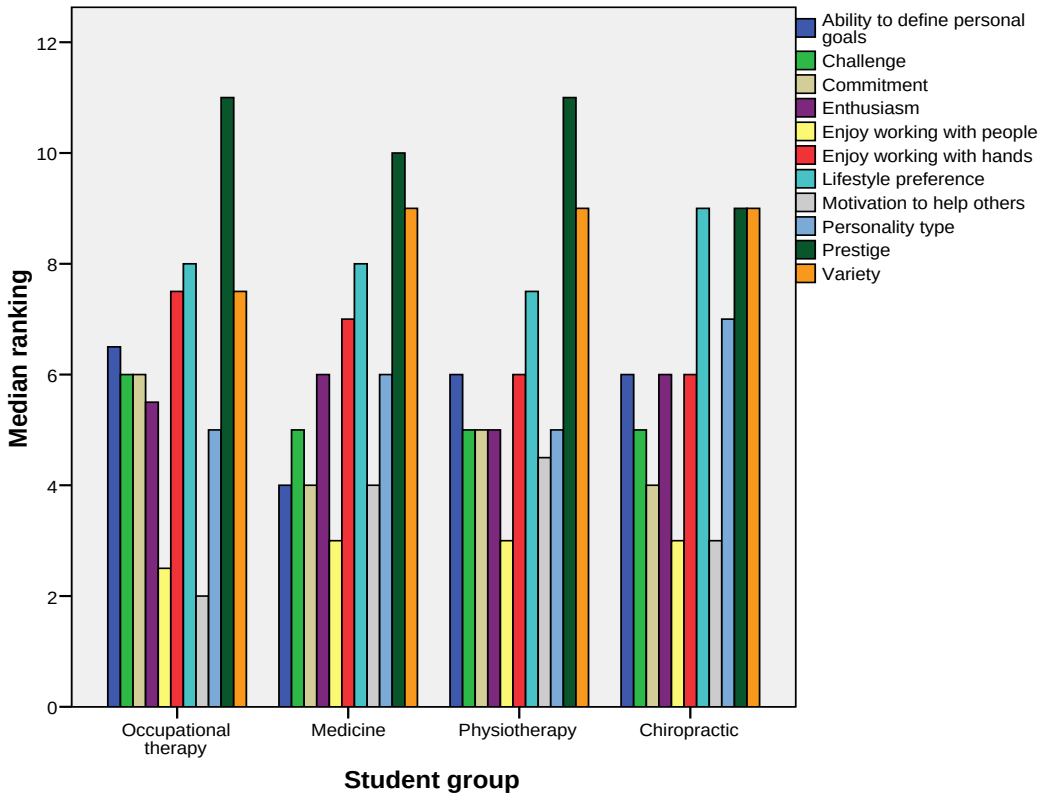


Figure 23 reflects that the occupational therapy students were highly motivated by the need to help others. The medical and physiotherapy students were highly influenced by the enjoyment of working with people. The chiropractic student population was equally influenced by the motivation to help others and the enjoyment of working with people.

Table 6: Comparison of responses to question 10 by student group

Rank the following personal factors according to your level of importance. Please rank them from the highest level of importance to the lowest.

	Student group				
	Occupational therapy	Medicine	Physiotherapy	Chiropractic	Total
	Median	Median	Median	Median	Median
Ability to define personal goals [1]	7	4	6	6	6
Challenge [2]	6	5	5	5	5
Commitment [3]	6	4	5	4	4
Enthusiasm [4]	6	6	5	6	5
Enjoy working with people [5]	3	3	3	3	3
Enjoy working with hands [6]	8	7	6	6	7
Lifestyle preference [7]	8	8	8	9	8
Motivation to help others [8]	2	4	5	3	4
Personality type [9]	5	6	5	7	6
Prestige [10]	11	10	11	9	10
Variety [11]	8	9	9	9	9

1 p=0.032
2 p=0.415
3 p=0.140
4 p=0.264
5 p=0.203
6 p=0.023
7 p=0.944
8 p=0.002
9 p=0.164
10 p=0.044
11 p=0.549

Participants were asked to rank the given personal factors according to their level of importance in choosing their career. The lower the ranking, the more important was the factor in determining career choice.

Figure 22 reflects that the highest-ranking factors (least important) were prestige, variety, lifestyle preference and enjoyment of working with their hands. The altruistic factors of helping others and commitment ranked second lowest with a median score of 4 on a scale of 1 to 11, meaning they were the second most important factor, while working with people ranked the lowest (most important).

It was evident from figure 23 that significant differences between the student groups were observed for the ranking of various personal factors in their career choices. These were

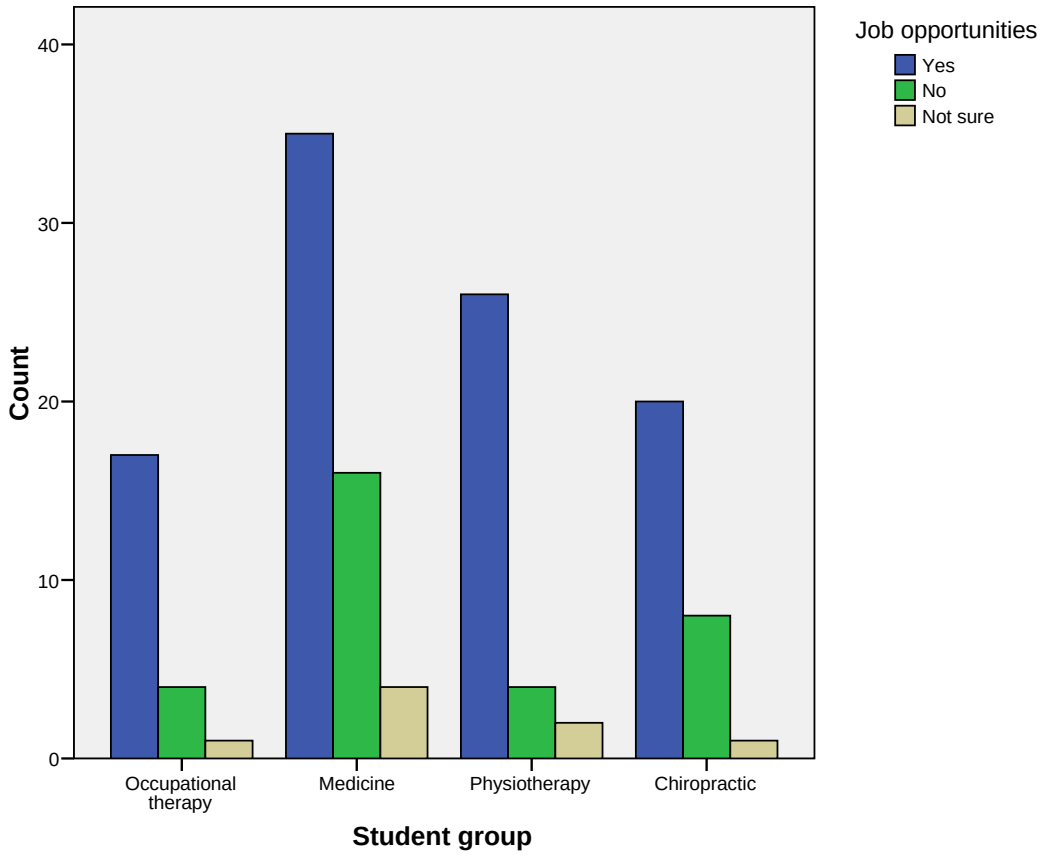
the ability to define personal goals, the joy of working with hands, motivation to help others, and prestige. The higher the median rank for a particular student group, the less important that factor was in determining their career choice. For instance the ability to define personal goals was important for medical students but it was not very important for occupational therapy students.

The next section displays the results obtained for the following socio-economic factors influencing career choice in chiropractic, medical, physiotherapy and occupational therapy students.

4.3.10 Socio-economic factors

4.3.10.1) Job opportunities
4.3.10.2) Societal need
4.3.10.3) Working in a healthcare environment
4.3.10.4) Domestic circumstances
4.3.10.5) High variety and broad spectrum of jobs

Figure 24: Frequency of responses to Question 11 – Job opportunities by student group



It is evident from Figure 24 that the vast majority of physiotherapy students are influenced by job opportunities in making a career choice while a significant portion of the medical student population are not.

Figure 25: Frequency of responses to Question 11 – Societal need by student group

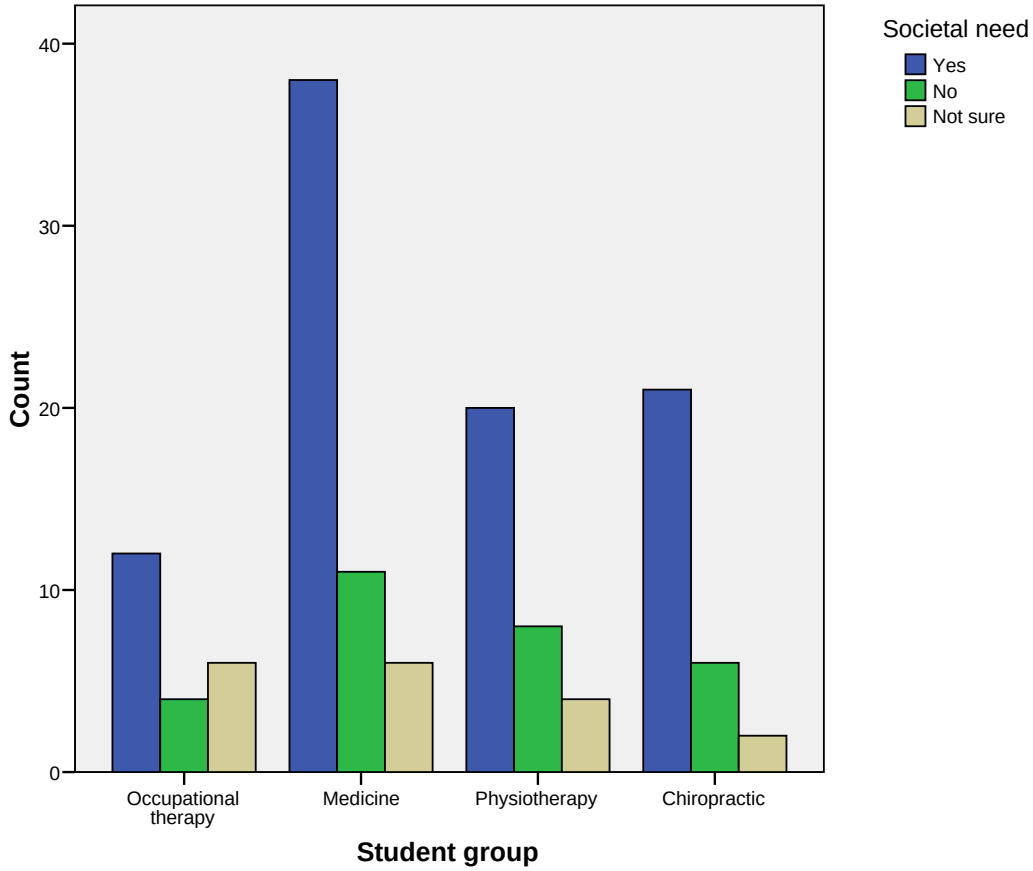
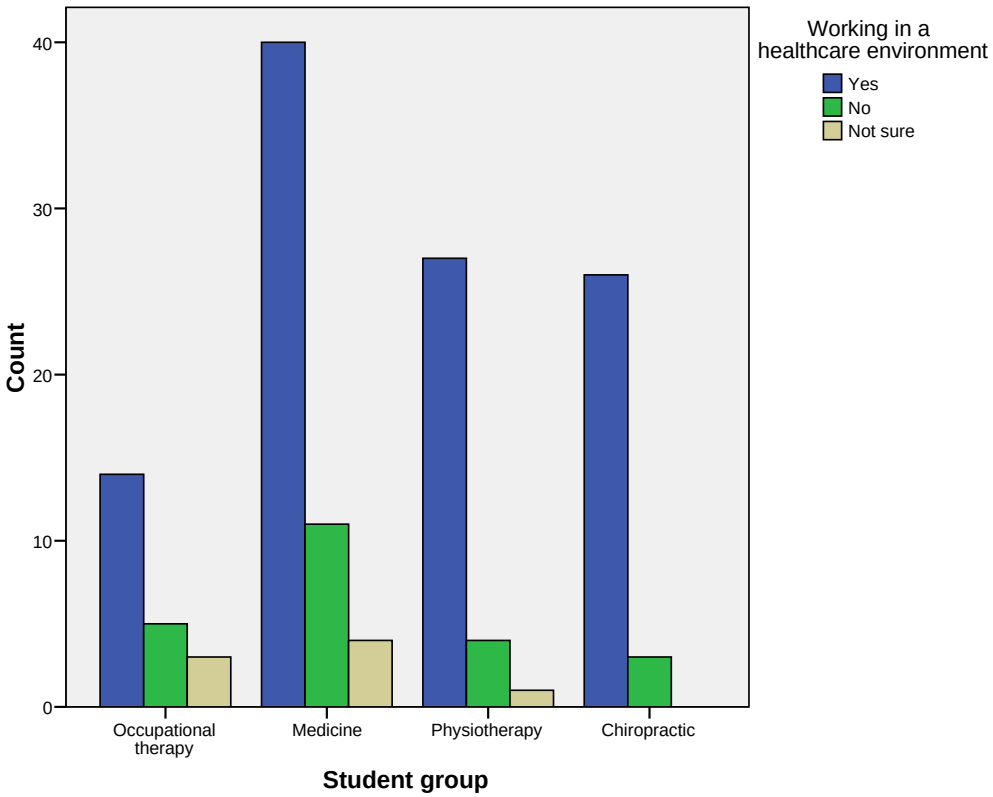


Figure 25 reflects that the vast majority of chiropractic students were highly influenced by societal need in making a career choice while a significant number of the physiotherapy student population were not.

Figure 26: Frequency of responses to Question 11 – Working in a healthcare environment by student group



It is evident from Figure 26 that the vast majority of the chiropractic student population were influenced by the possibility of working in a health care environment while a significant portion of occupational therapy students were not.

Figure 27: Frequency of responses to Question 11 – Domestic circumstances by student group

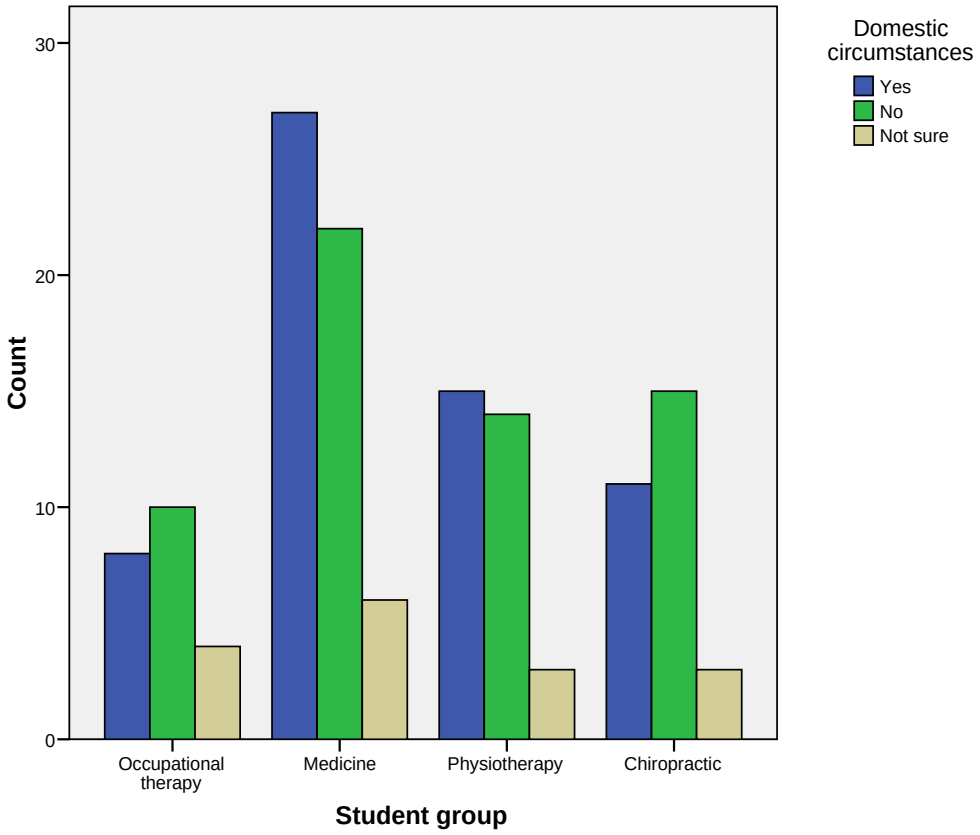
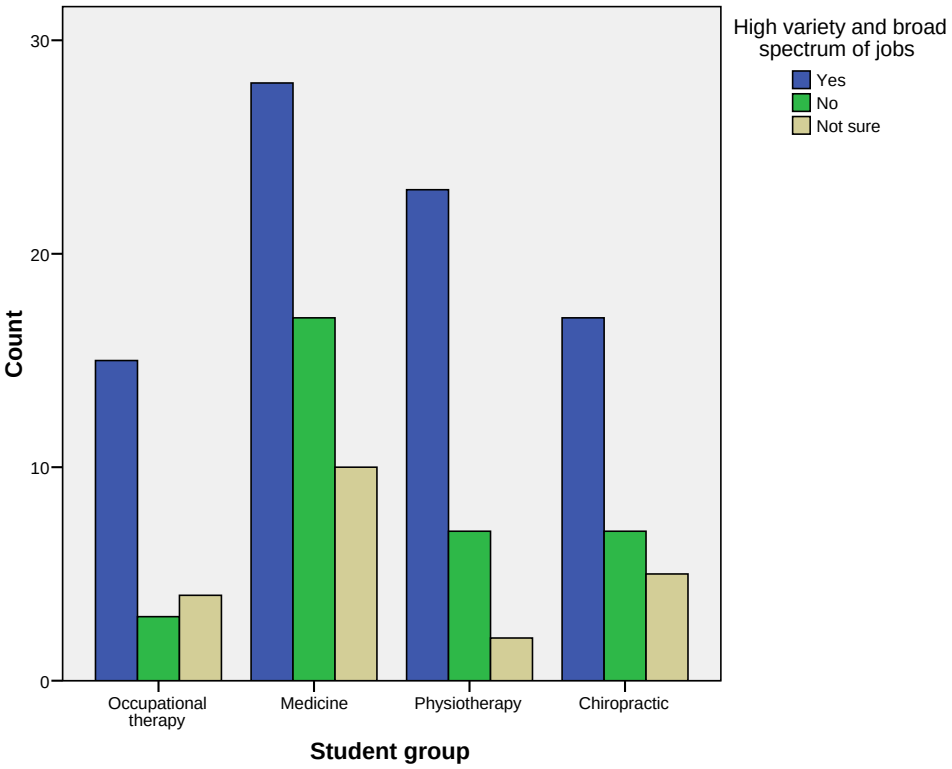


Figure 27 reflects that the majority of the medical student population was influenced by domestic circumstances while the majority of chiropractic students were not.

Figure 28: Frequency of responses to Question 11 – High variety and broad spectrum of jobs by student group



It is evident from Figure 28 that the vast majority of the physiotherapy student population were influenced by the high variety and broad spectrum of jobs while a significant portion of medical students were not.

Table 7: Comparison of responses to question 11 regarding socio-economic factors affecting career choice by student group

		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		Count	%	Count	%	Count	%	Count	%	Count	%
Job opportunities [1]	Yes	17	77.3%	35	63.6%	26	81.3%	20	69.0%	98	71.0%
	No	4	18.2%	16	29.1%	4	12.5%	8	27.6%	32	23.2%
	Not sure	1	4.5%	4	7.3%	2	6.3%	1	3.4%	8	5.8%
Societal need [2]	Yes	12	54.5%	38	69.1%	20	62.5%	21	72.4%	91	65.9%
	No	4	18.2%	11	20.0%	8	25.0%	6	20.7%	29	21.0%
	Not sure	6	27.3%	6	10.9%	4	12.5%	2	6.9%	18	13.0%
Working in a healthcare environment [3]	Yes	14	63.6%	40	72.7%	27	84.4%	26	89.7%	107	77.5%
	No	5	22.7%	11	20.0%	4	12.5%	3	10.3%	23	16.7%
	Not sure	3	13.6%	4	7.3%	1	3.1%	0	.0%	8	5.8%
Domestic circumstances [4]	Yes	8	36.4%	27	49.1%	15	46.9%	11	37.9%	61	44.2%
	No	10	45.5%	22	40.0%	14	43.8%	15	51.7%	61	44.2%
	Not sure	4	18.2%	6	10.9%	3	9.4%	3	10.3%	16	11.6%
High variety and broad spectrum of jobs [5]	Yes	15	68.2%	28	50.9%	23	71.9%	17	58.6%	83	60.1%
	No	3	13.6%	17	30.9%	7	21.9%	7	24.1%	34	24.6%
	Not sure	4	18.2%	10	18.2%	2	6.3%	5	17.2%	21	15.2%

1 p=0.614
2 p=0.473
3 p=0.242
4 p=0.865
5 p=0.419

It is evident from Table 7 that working in a health care environment was an important factor influencing a career choice (77.5%) while job opportunities (71%) and societal need (66%) and high variety (60%) were also important. Domestic circumstances were not as important (44.2%).

Table 7 also reflects that none of the factors mentioned in question 11 were significantly different between the student groups at determining their career choices.

The next section displays the results obtained for the following factors influencing career choices in chiropractic, medical, physiotherapy and occupational therapy students.

4.3.11 Socializers:

4.3.11.1) Parents

4.3.11.2) Siblings

4.3.11.3) Significant others

4.3.11.4) Peers

4.3.11.5) TV

4.3.11.6) Printed media

Figure 29: Frequency of responses to Question 12: Were you influenced by parents?

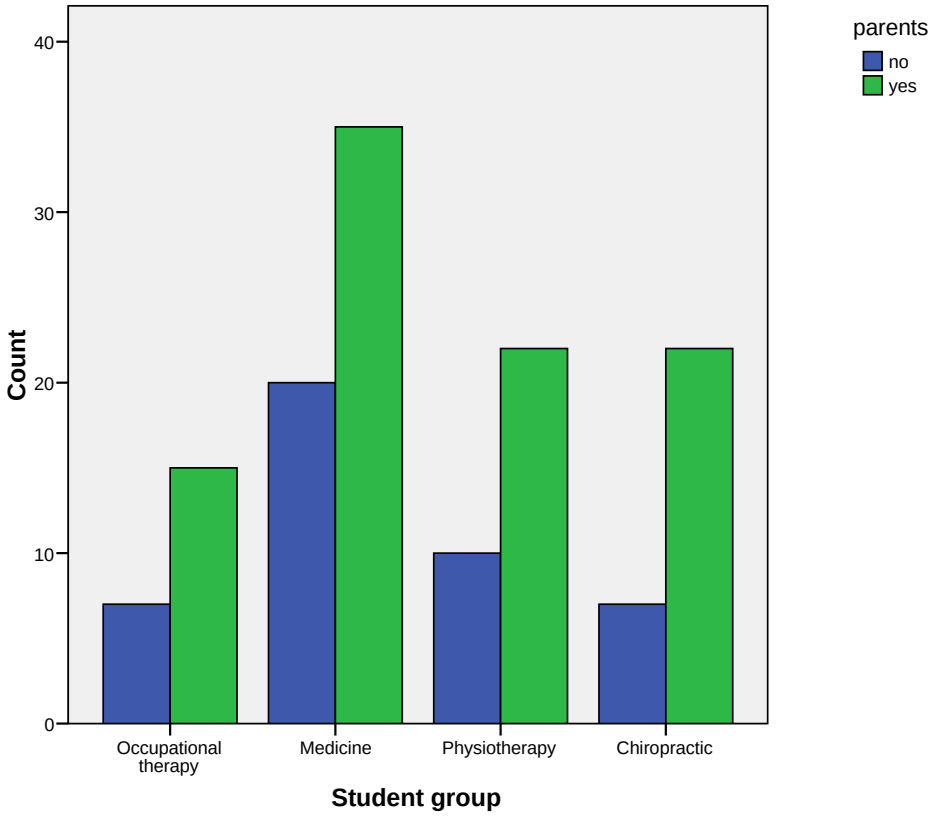
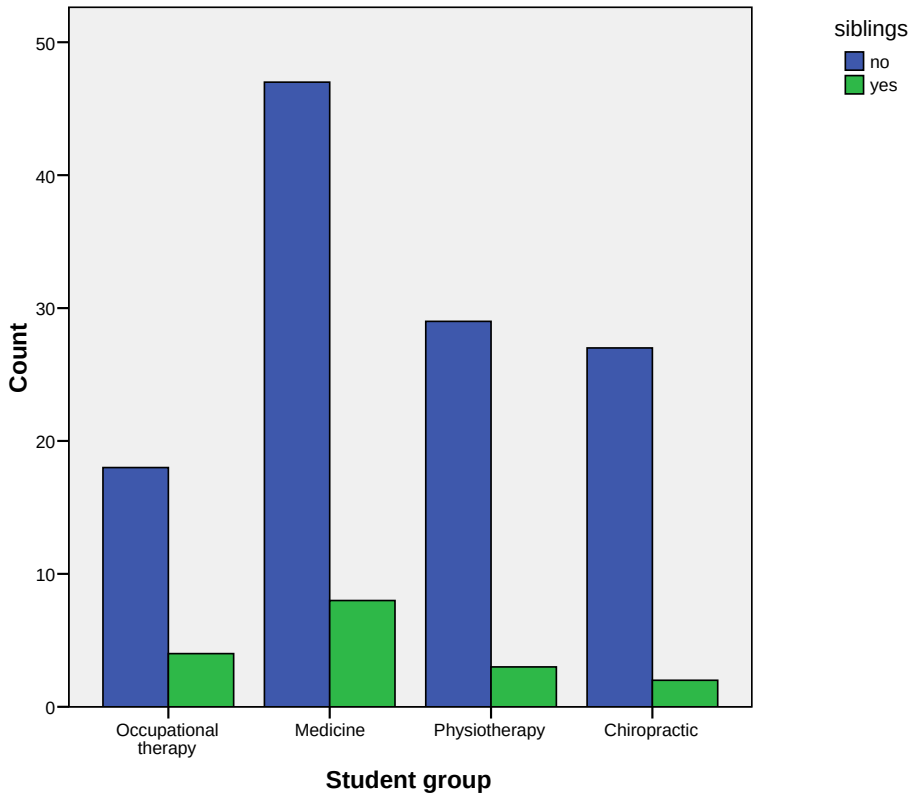


Figure 29 reflects that a major portion of chiropractic students were influenced by parents in making a career choice while a significant portion of the medical student population were not influenced by their parents.

Figure 30: Frequency of responses to Question 12: Were you influenced by siblings?



It is evident from Figure 30 that occupational therapy students were more likely to be influenced by siblings in making a career choice. The majority of chiropractic students however, were not influenced by their siblings.

Figure 31: Frequency of responses to Question 12: Were you influenced by others?

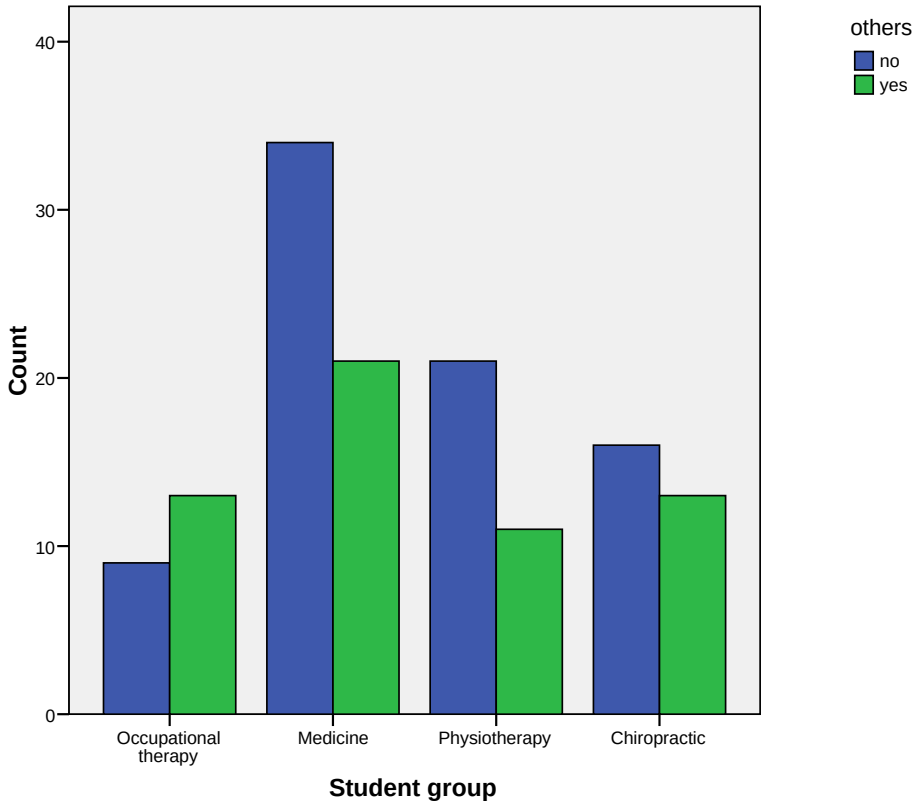
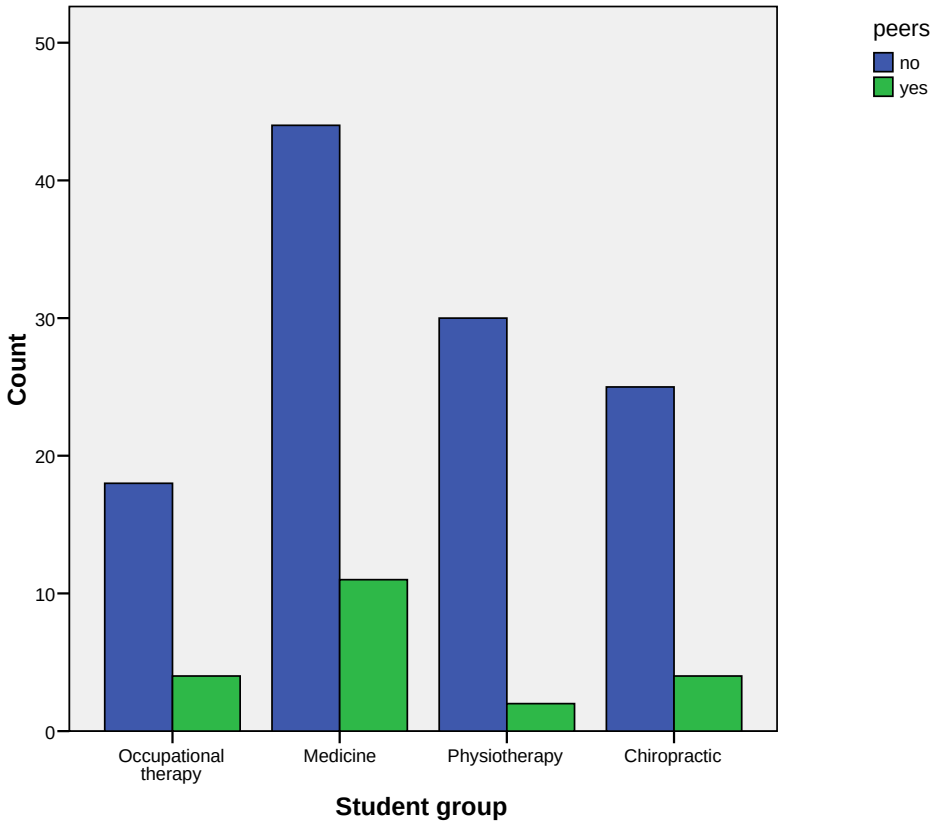


Figure 31 reflects that the majority of occupational therapy students were influenced by others while the majority of physiotherapy students were not.

Figure 32: Frequency of responses to Question 12: Were you influenced by peers?



It is evident from Figure 32 that peers influenced a significant portion of the medical students while having no effect on the vast majority of physiotherapy student population.

Figure 33: Frequency of responses to Question 12: Were you influenced by television?

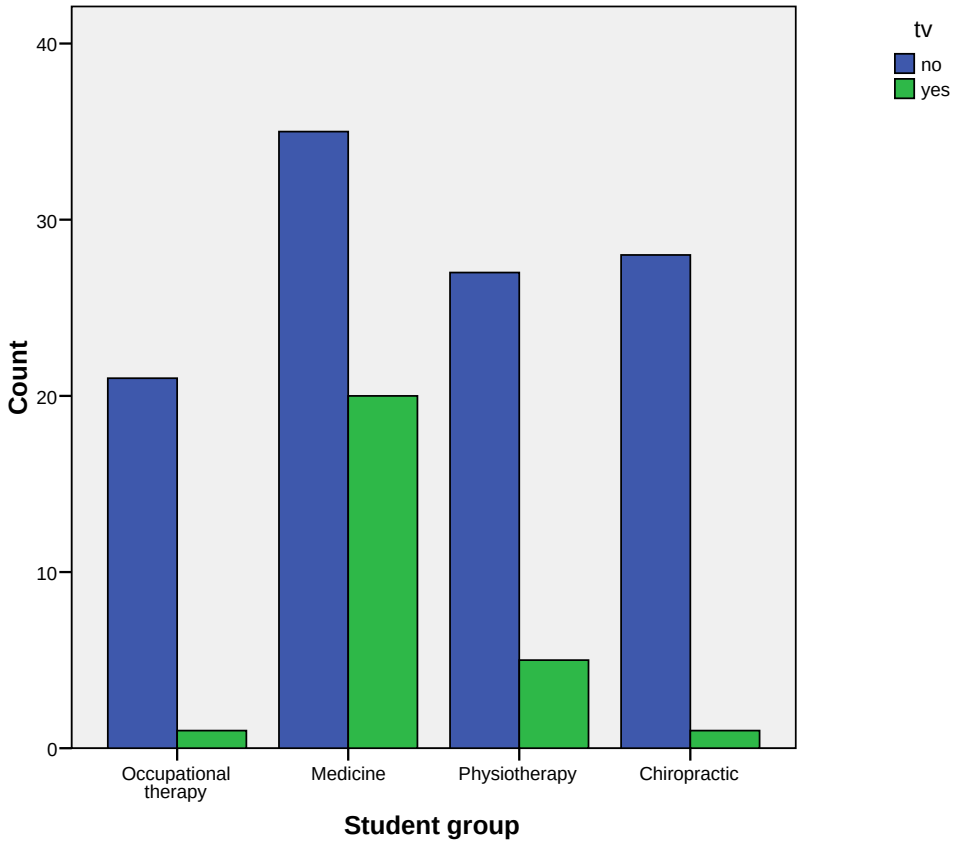
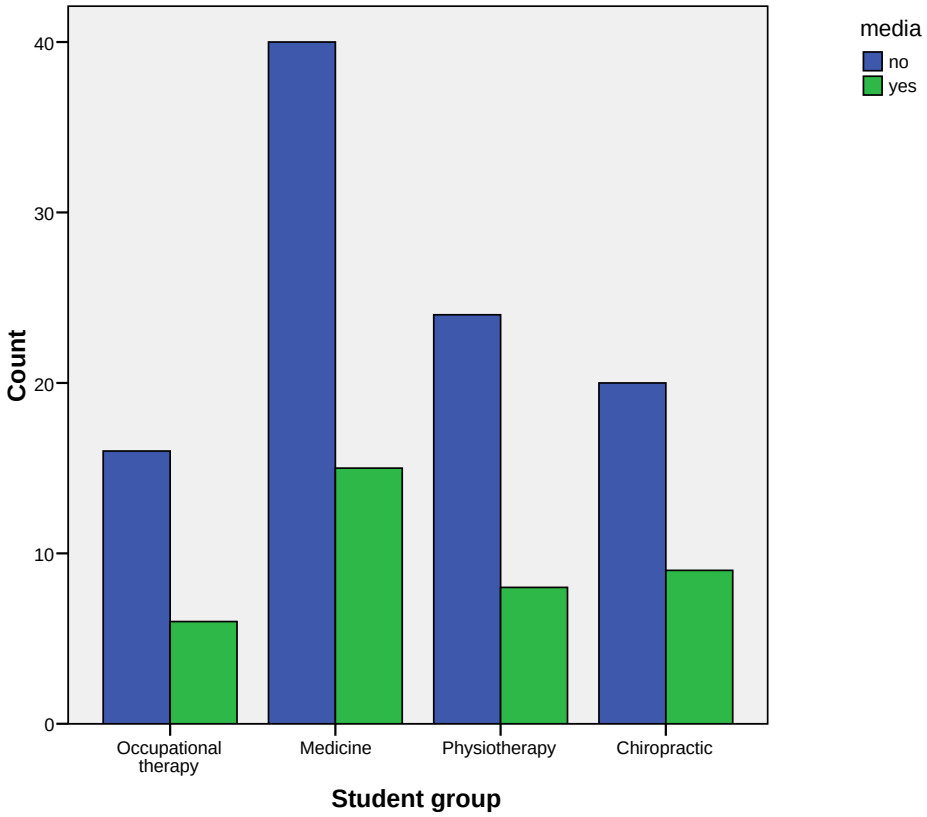


Figure 33 depicts that television influenced a significant portion of the medical student population while having no effect on the vast majority of chiropractic student population.

Figure 34: Frequency of responses to Question 12: Were you influenced by the media?



It is evident from Figure 33 that media influenced a significant portion of chiropractic students while having no effect on the vast majority of the physiotherapy student population.

Table 8: Comparison of responses to question 12 involving the effect of socializer factors on career choice by student group

		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Parents [1]	no	7	31.8%	20	36.4%	10	31.3%	7	24.1%	44	31.9%
	yes	15	68.2%	35	63.6%	22	68.8%	22	75.9%	94	68.1%
Siblings [2]	no	18	81.8%	47	85.5%	29	90.6%	27	93.1%	121	87.7%
	yes	4	18.2%	8	14.5%	3	9.4%	2	6.9%	17	12.3%
Others [3]	no	9	40.9%	34	61.8%	21	65.6%	16	55.2%	80	58.0%
	yes	13	59.1%	21	38.2%	11	34.4%	13	44.8%	58	42.0%
Peers [4]	no	18	81.8%	44	80.0%	30	93.8%	25	86.2%	117	84.8%
	yes	4	18.2%	11	20.0%	2	6.3%	4	13.8%	21	15.2%
Television [5]	no	21	95.5%	35	63.6%	27	84.4%	28	96.6%	111	80.4%
	yes	1	4.5%	20	36.4%	5	15.6%	1	3.4%	27	19.6%
Media [6]	no	16	72.7%	40	72.7%	24	75.0%	20	69.0%	100	72.5%
	yes	6	27.3%	15	27.3%	8	25.0%	9	31.0%	38	27.5%

1 p=0.725
2 p=0.573
3 p=0.281
4 p=0.367
5 p<0.001
6 p=0.963

It is evident from Table 8 that parents were a further factor influencing career choice (68.1%), as were significant other people (42%). However, siblings, peers and TV did not have a big influence.

Table 8 also reflects that only television had a differential influence on the different student groups ($p<0.001$). The medical students showed a higher percentage of “yes” responses to TV than the other professions.

4.3.12) Lack of awareness

Figure 35: Median response to question 13 by student group

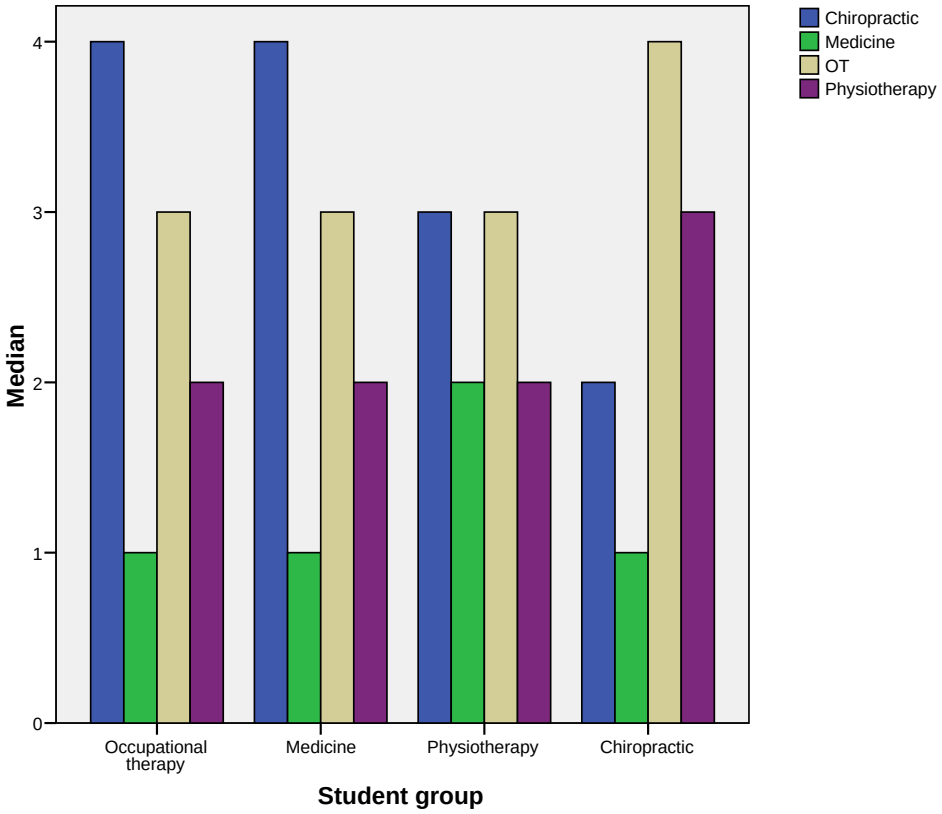


Figure 35 reflects that occupational therapy and medical students had the lowest awareness of the chiropractic profession. The chiropractic student population had the lowest awareness of occupational therapy.

Table 9: Median responses to question 13 involving lack of awareness by student group

	Student group				
	Occupational therapy	Medicine	Physiotherapy	Chiropractic	Total
	Median	Median	Median	Median	Median
Chiropractic [1]	4	4	3	2	4
Medicine [2]	1	1	2	1	1
OT [3]	3	3	3	4	3
Physiotherapy[4]	2	2	2	3	2

1 p<0.001
2 p<0.001
3 p<0.001
4 p<0.001

Table 9 reflects that before studying most participants ranked their level of understanding of medicine as the highest, followed by physiotherapy, occupational therapy and chiropractic.

Figure 35 depicts that there were significant differences between the four student groups in terms of how much they knew about the professions before they started studying ($p<0.001$ for all professions). This suggests that level of knowledge about a subject influences career choice.

The next section displays the results obtained for the following work related factors influencing career choice in chiropractic, medical, physiotherapy and occupational therapy students.

4.3.13 Work related factors

4.3.13.1) Expected income
4.3.13.2) Working hours
4.3.13.3) Working conditions
4.3.13.4) Ability to design your own work schedule
4.3.13.5) The ability to run your own office
4.3.13.6) Good work atmosphere
4.3.13.7) I don’t like blood

Figure 36: Frequency of responses to Question 14 – Expected income by student group

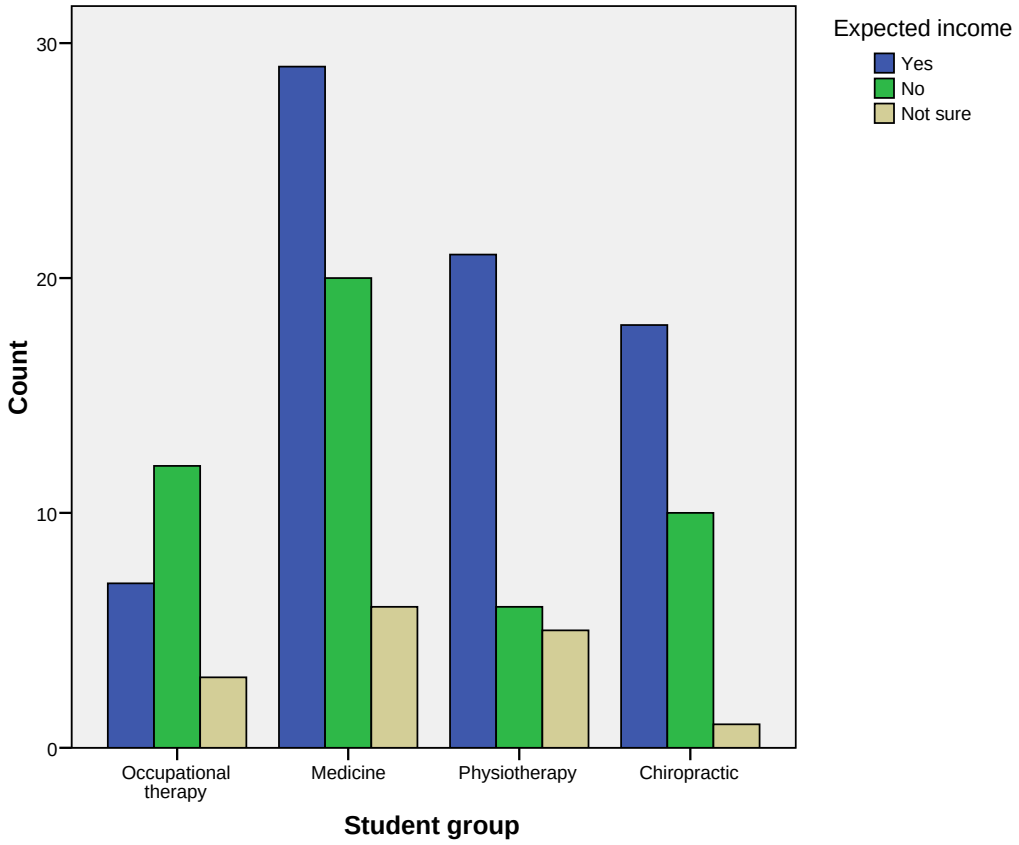
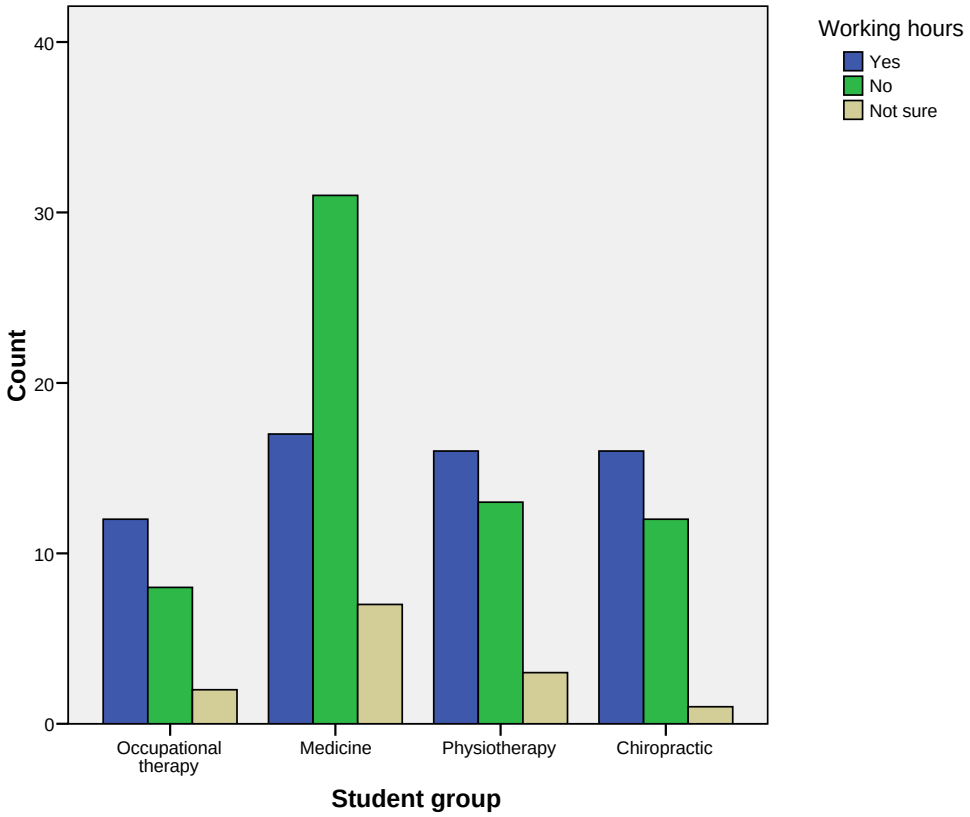


Figure 36 reflects that the vast majority of physiotherapy students were influenced by the expected income of a profession while the majority of occupational therapy students were not influenced by income.

Figure 37: Frequency of responses to Question 14 – Working hours by student group



It is evident from Figure 37 that the majority of chiropractic students were influenced by working hours while the majority of medical students were not.

Figure 38: Frequency of responses to Question 14 – Working conditions by student group

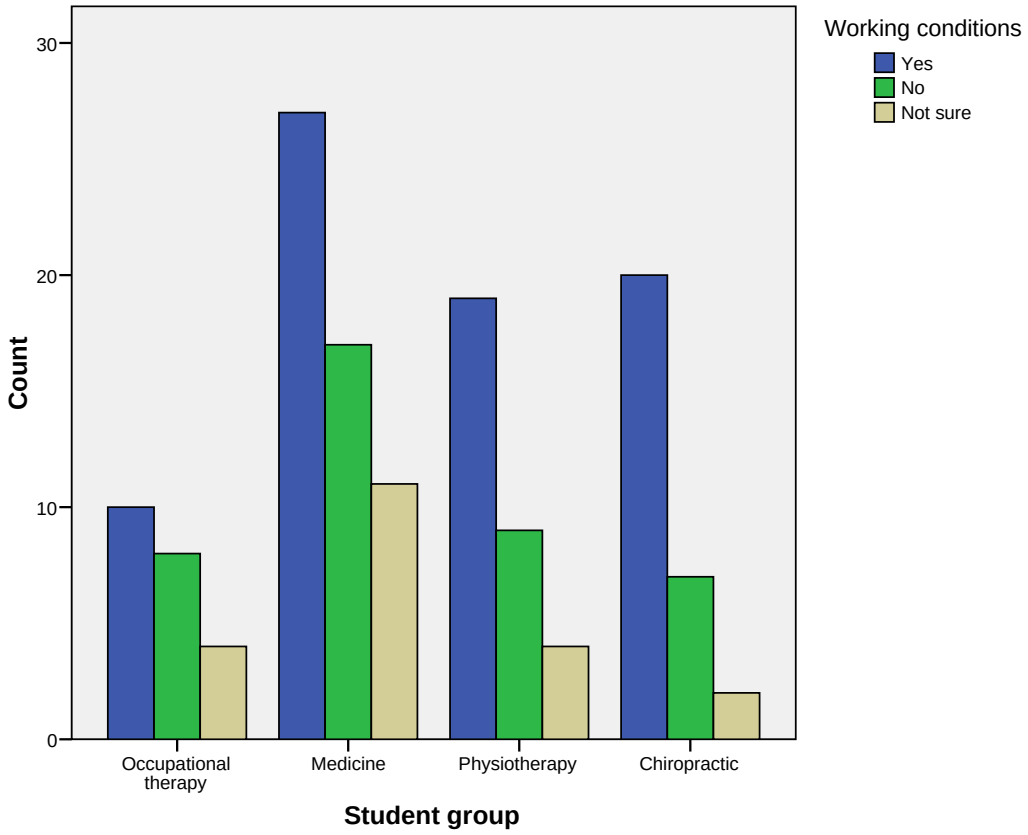
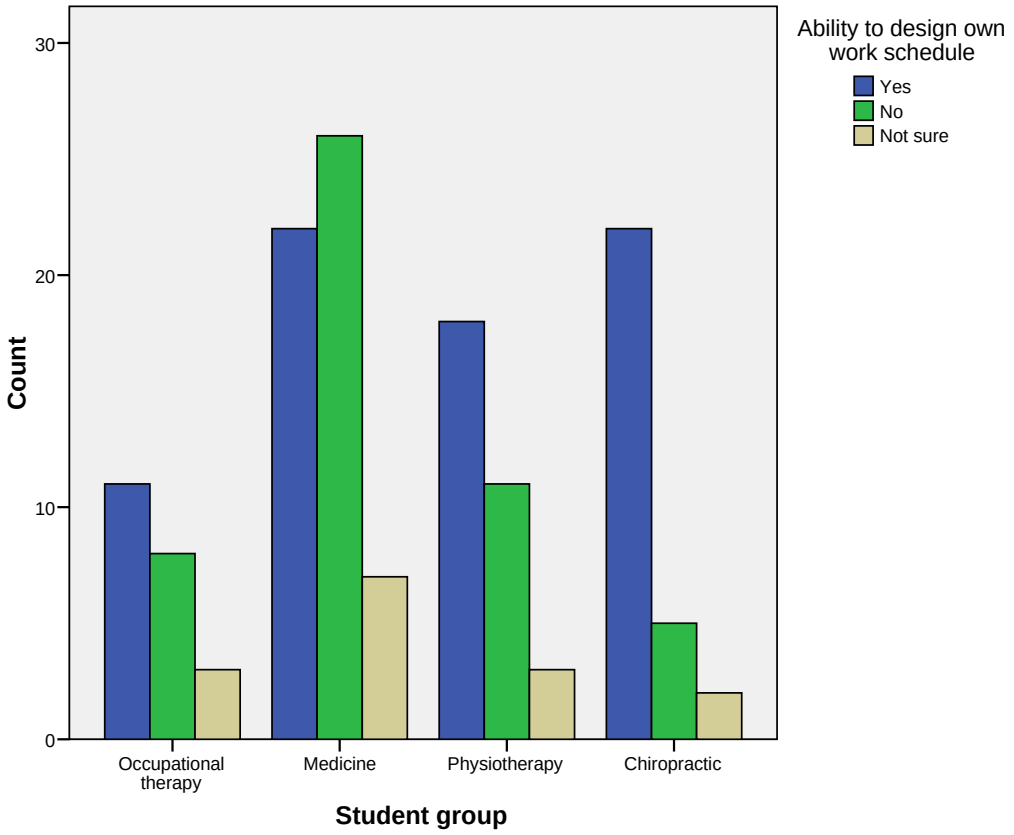


Figure 38 depicts that the vast majority of chiropractic students were influenced by working conditions while a significant number of occupational therapy students were not.

Figure 39: Frequency of responses to Question 14 – Ability to design own work schedule by student group



It is evident from Figure 39 that the vast majority of the chiropractic student population were influenced by the ability to design ones own work schedule while the majority of medical students were not.

Figure 40: Frequency of responses to Question 14 – Ability to run own office by student group

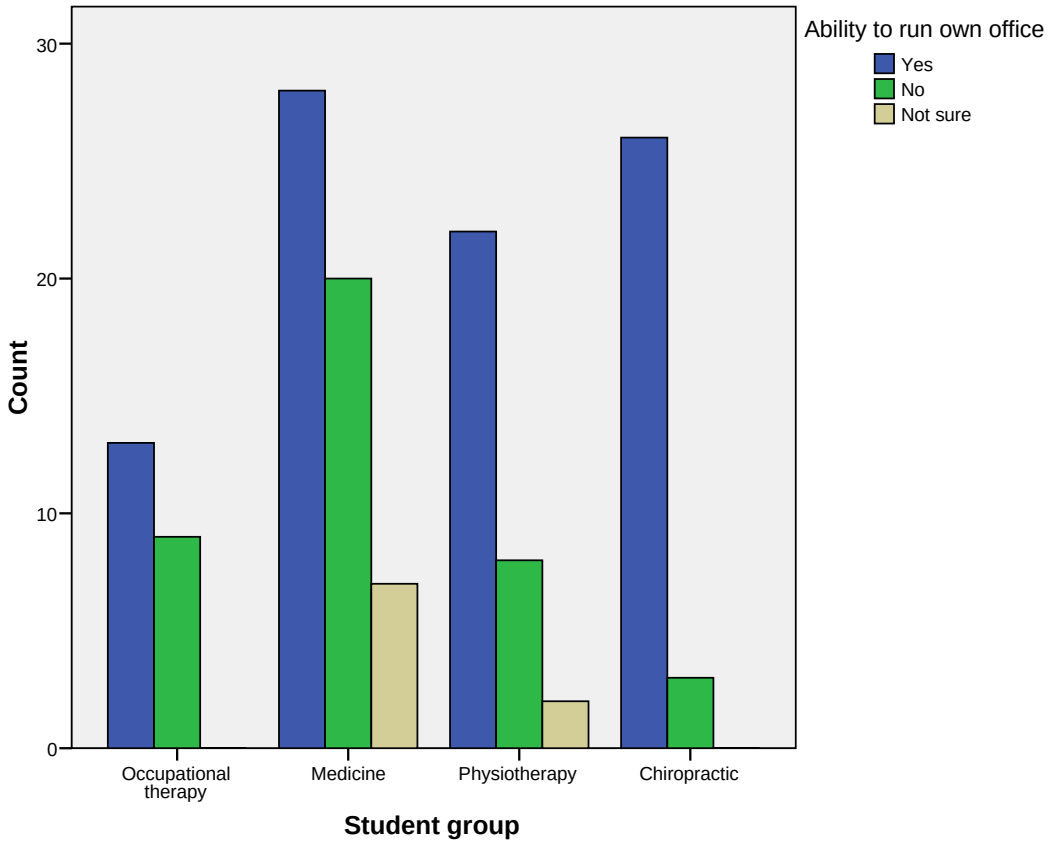
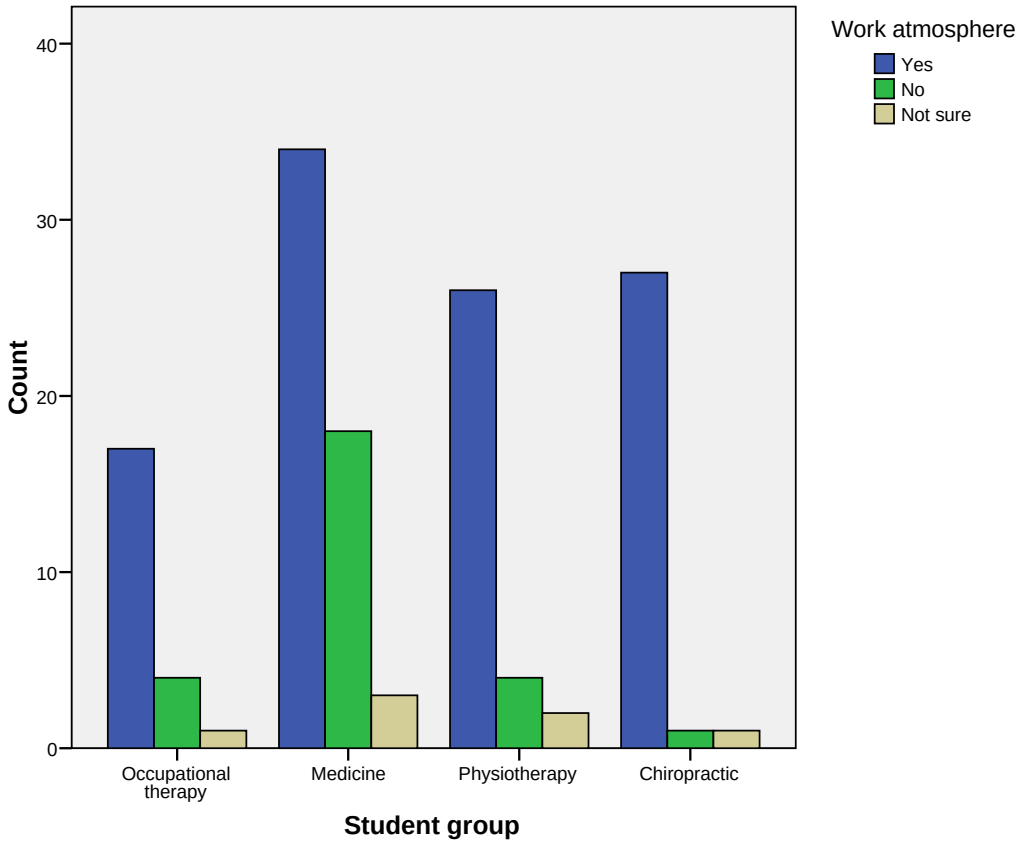


Figure 40 reflects that the vast majority of chiropractic students were influenced by the ability to run ones own office while the majority of occupational therapy student population was not.

Figure 41: Frequency of responses to Question 14 – Work atmosphere by student group



It is evident from Figure 41 that work atmosphere influenced a major portion of chiropractic students. Medical students however, were more likely not to be influenced by work atmosphere.

Figure 42: Frequency of responses to Question 14 – I don't like blood by student group

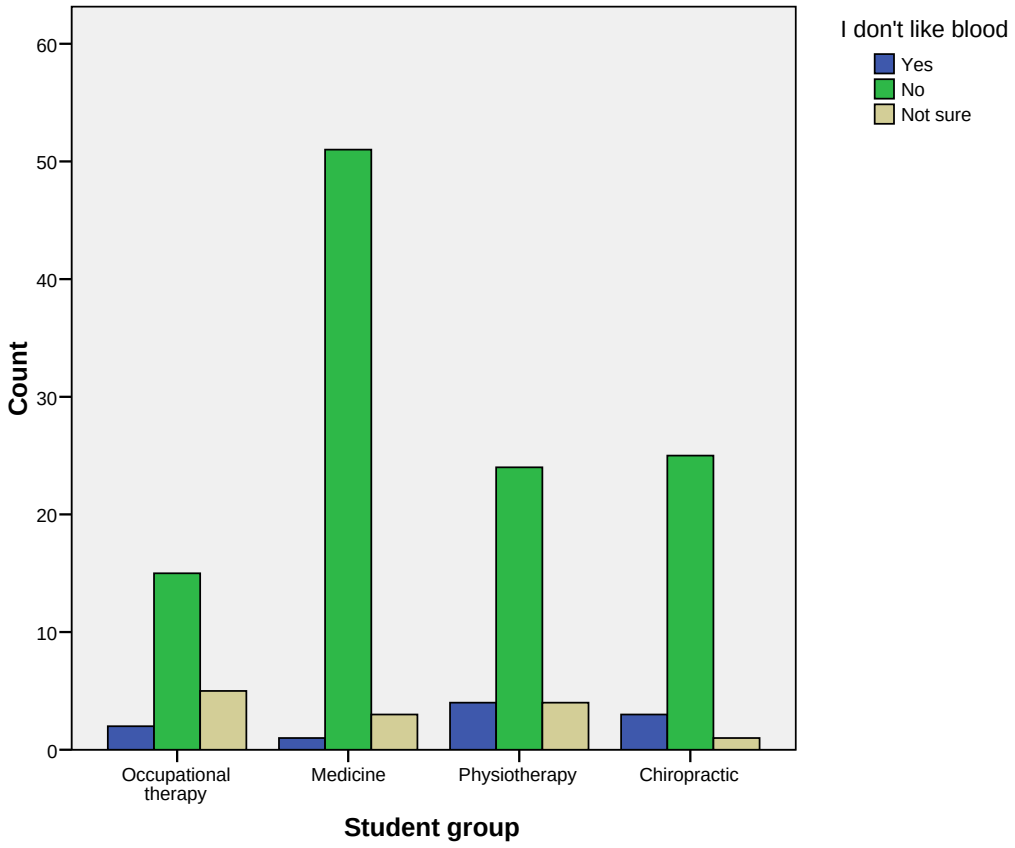


Figure 42 reflects that physiotherapy students were more likely to be influenced by the dislike of blood while a vast majority of the medical student population were not.

Table 10: Responses to question 14 relating to work-related factor affecting career choice by student group

		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Expected income [1]	Yes	7	31.8%	29	52.7%	21	65.6%	18	62.1%	75	54.3%
	No	12	54.5%	20	36.4%	6	18.8%	10	34.5%	48	34.8%
	Not sure	3	13.6%	6	10.9%	5	15.6%	1	3.4%	15	10.9%
Working hours [2]	Yes	12	54.5%	17	30.9%	16	50.0%	16	55.2%	61	44.2%
	No	8	36.4%	31	56.4%	13	40.6%	12	41.4%	64	46.4%
	Not sure	2	9.1%	7	12.7%	3	9.4%	1	3.4%	13	9.4%
Working conditions [3]	Yes	10	45.5%	27	49.1%	19	59.4%	20	69.0%	76	55.1%
	No	8	36.4%	17	30.9%	9	28.1%	7	24.1%	41	29.7%
	Not sure	4	18.2%	11	20.0%	4	12.5%	2	6.9%	21	15.2%
Ability to design own work schedule [4]	Yes	11	50.0%	22	40.0%	18	56.3%	22	75.9%	73	52.9%
	No	8	36.4%	26	47.3%	11	34.4%	5	17.2%	50	36.2%
	Not sure	3	13.6%	7	12.7%	3	9.4%	2	6.9%	15	10.9%
Ability to run own office [5]	Yes	13	59.1%	28	50.9%	22	68.8%	26	89.7%	89	64.5%
	No	9	40.9%	20	36.4%	8	25.0%	3	10.3%	40	29.0%
	Not sure	0	.0%	7	12.7%	2	6.3%	0	.0%	9	6.5%
Work atmosphere[6]	Yes	17	77.3%	34	61.8%	26	81.3%	27	93.1%	104	75.4%
	No	4	18.2%	18	32.7%	4	12.5%	1	3.4%	27	19.6%
	Not sure	1	4.5%	3	5.5%	2	6.3%	1	3.4%	7	5.1%
I don't like blood [7]	Yes	2	9.1%	1	1.8%	4	12.5%	3	10.3%	10	7.2%
	No	15	68.2%	51	92.7%	24	75.0%	25	86.2%	115	83.3%
	Not sure	5	22.7%	3	5.5%	4	12.5%	1	3.4%	13	9.4%

1 p=0.112
2 p=0.273
3 p=0.548
4 p=0.112
5 p=0.009
6 p=0.051
7 p=0.064

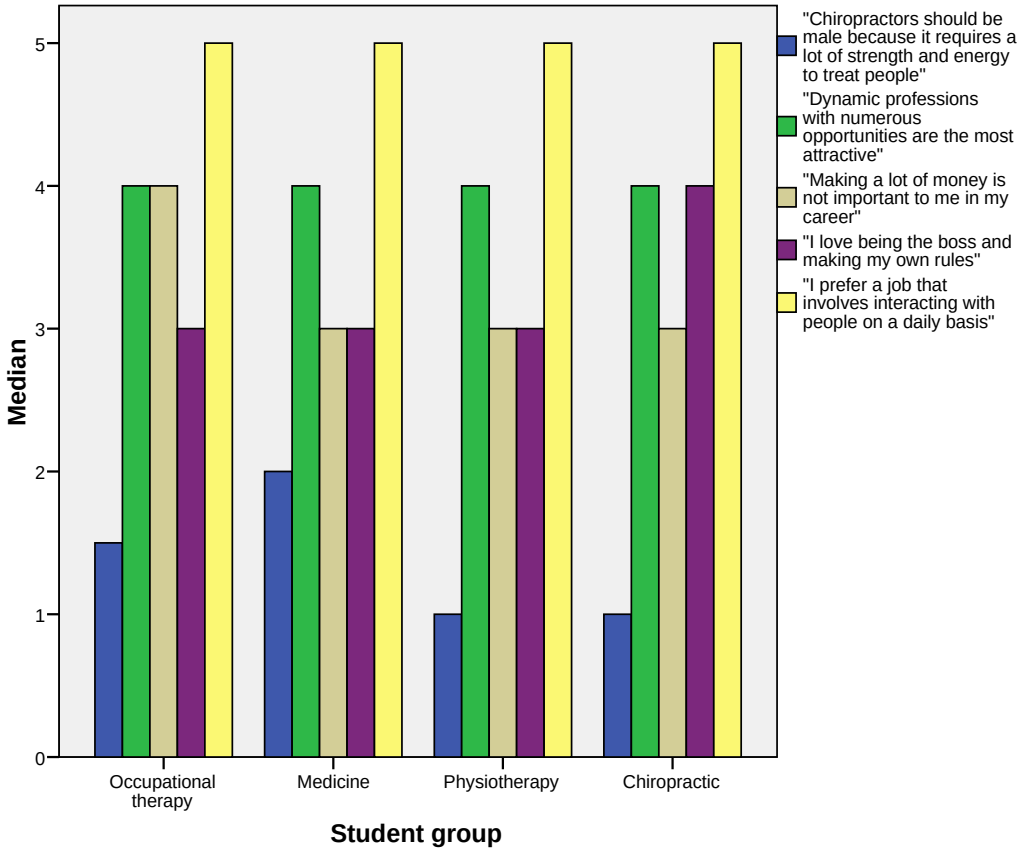
Table 10 depicts that in terms of work-related factors, a good atmosphere was the most important factor (75.4%), followed by the ability to run their own office (64.5%) and the working conditions (55.1%). Of least importance was the presence of blood (7.2%).

It is evident from Table 10 that of all the work related factors for career choice, only the ability to run own office was significantly different between the student groups (p=0.009).

Chiropractors were more likely to answer ‘yes’ to this question than the other student groups. Work atmosphere was borderline non-significant (p=0.051) and indicated that chiropractors were again more likely to choose this reason than the other groups.

4.3.14) Responses to Likert scale questions 15, 17, 19, 20 and 21

Figure 43: Median responses to questions 15, 17 and 19-21 by student group



It is evident from Figure 43 that physiotherapy and chiropractic students disagreed to a greater extent with regards to chiropractors preferably being male. Chiropractic students were highly influenced by the idea of being the boss and making their own rules. All the professions were influenced by the possibility of working with people on a daily basis.

Table 11: Median responses to questions 15, 17 and 19-21

	Student group				
	Occupational therapy	Medicine	Physiotherapy	Chiropractic	Total
	Median	Median	Median	Median	Median
"Chiropractors should be male because it requires a lot of strength and energy to treat people" [1]	2	2	1	1	1
"Dynamic professions with numerous opportunities are the most attractive" [2]	4	4	4	4	4
"Making a lot of money is not important to me in my career" [3]	4	3	3	3	3
"I love being the boss and making my own rules" [4]	3	3	3	4	3
"I prefer a job that involves interacting with people on a daily basis" [5]	5	5	5	5	5

1 p=0.024
2 p=0.294
3 p=0.501
4 p=0.014
5 p=0.132

Table 12: Attitudes of participants regarding given statements

	strongly disagree		disagree		undecided		agree		strongly agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
“Chiropractors should be male because it requires a lot of strength and energy to treat people”	83	60.1%	28	20.3%	22	15.9%	4	2.9%	1	.7%
“Dynamic professions with numerous opportunities are the most attractive”	9	6.5%	14	10.1%	24	17.4%	56	40.6%	35	25.4%
“Making a lot of money is not important to me in my career”	21	15.2%	35	25.4%	21	15.2%	41	29.7%	20	14.5%
“I love being the boss and making my own rules”	17	12.3%	28	20.3%	32	23.2%	37	26.8%	24	17.4%
“I prefer a job that involves interacting with people on a daily basis”	2	1.4%	2	1.4%	9	6.5%	35	25.4%	90	65.2%

It is evident from Table 12 that the majority of the respondents did not agree with the statement that chiropractors should be male. 40.6% of respondents agreed that money was an important factor affecting career choice while 44.2% disagreed. Interacting with people was definitely a strong factor in this group of students.

Likert scale type questions were compared between the four students groups as ordinal variables in Table 11. Table 11 depicts that there was a significant difference in response between the student groups for the statement “Chiropractors should be male because it requires a lot of strength and energy to treat people” (p=0.024). Although the median response in all groups indicated disagreement with the statement, the chiropractors and physiotherapists disagreed to a greater extent. The other statement that showed significant differences in response was “I love being the boss and making my own rules” (p=0.014), where the chiropractic students agreed to a greater extent than the other student groups.

4.3.15) “Doctor title”

Figure 44: Reponses to whether the “doctor” title was important in career choice.

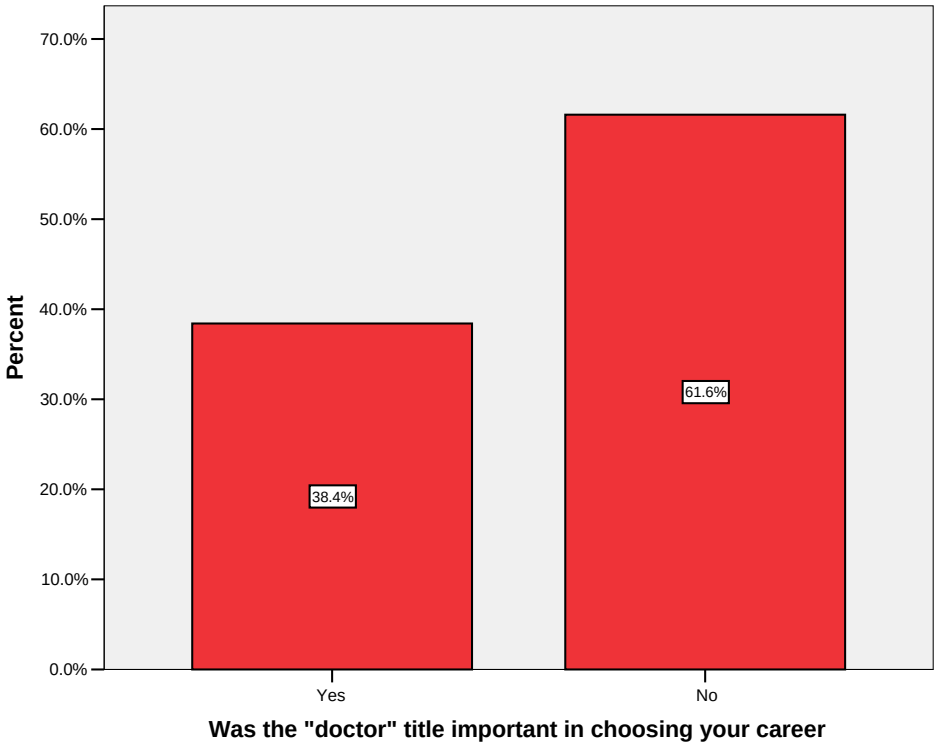
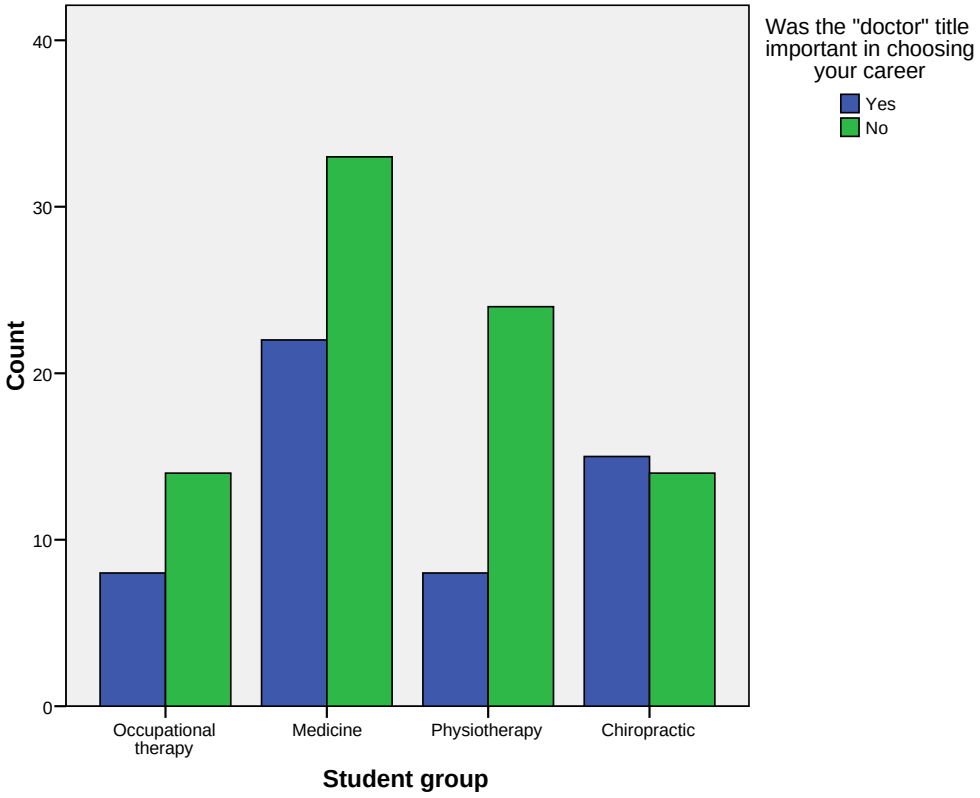


Figure 44 reflects that 61.6% of respondents were not influenced by the “doctor” title.

Figure 45: Frequency of responses to Question 16 involving the importance of the "doctor" title by student group



It is evident from Figure 45 that the majority of chiropractic students were influenced by the "doctor" title while a significantly large portion of the physiotherapy student population were not.

4.3.16 Health practitioners in the student's significant other circle

4.3.16.1) Parent

Figure 46: Frequency of responses to Question 18 by student group

Health practitioners in the student's significant other circle (Parent)

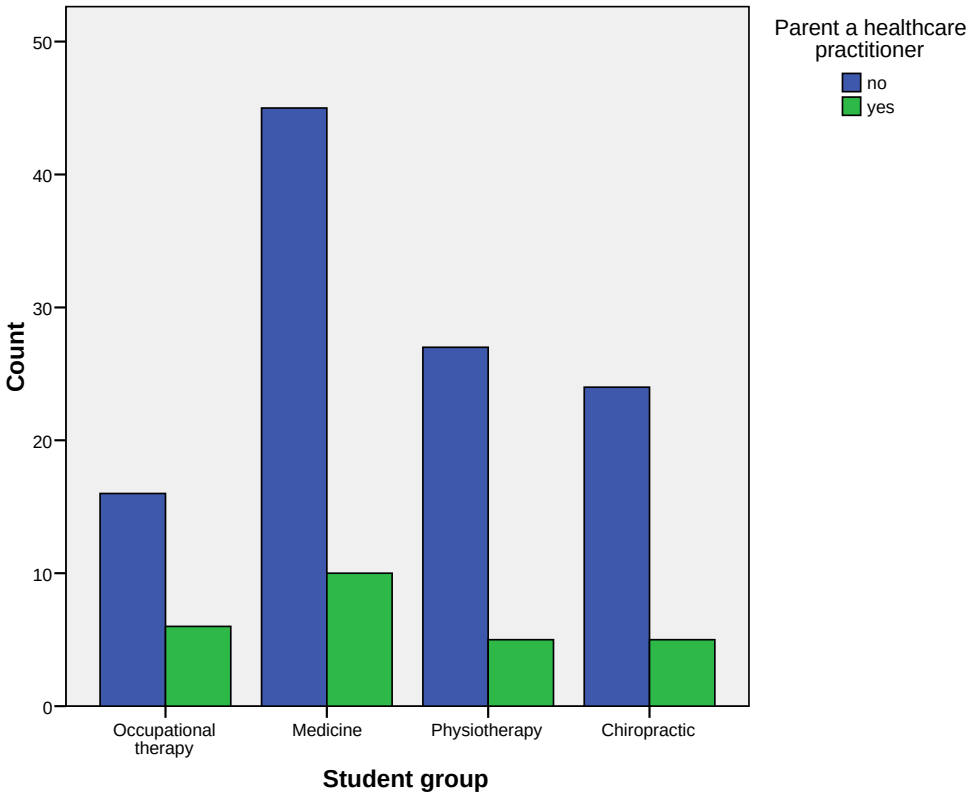
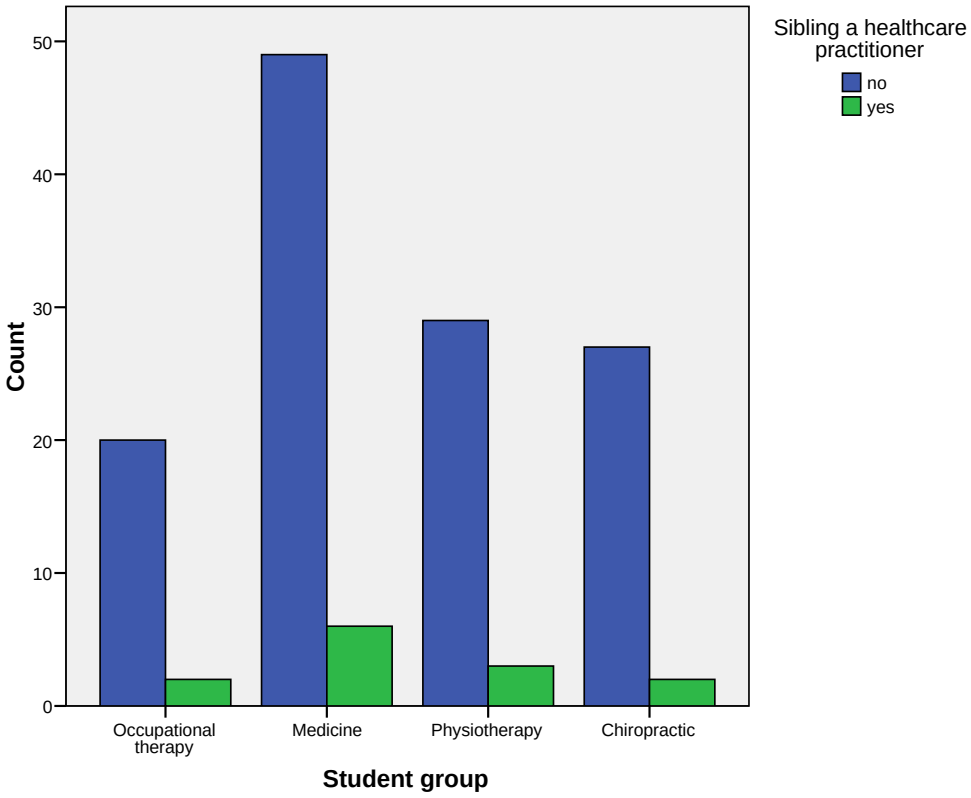


Figure 46 reflects that a significant portion of occupational therapy students were influenced by a parent being a healthcare practitioner in that field, while the majority of the physiotherapy student population were not.

4.3.16.2) Sibling

Figure 47: Frequency of responses to Question 18 by student group

Health practitioners in the student's significant other circle (Sibling)



It is evident from Figure 47 that medical students were more likely to be influenced by a sibling being a healthcare practitioner while the majority of chiropractic students were not.

4.3.16.3) Guardian

Figure 48: Frequency of responses to Question 18 by student group

Health practitioners in the student's significant other circle (Guardian)

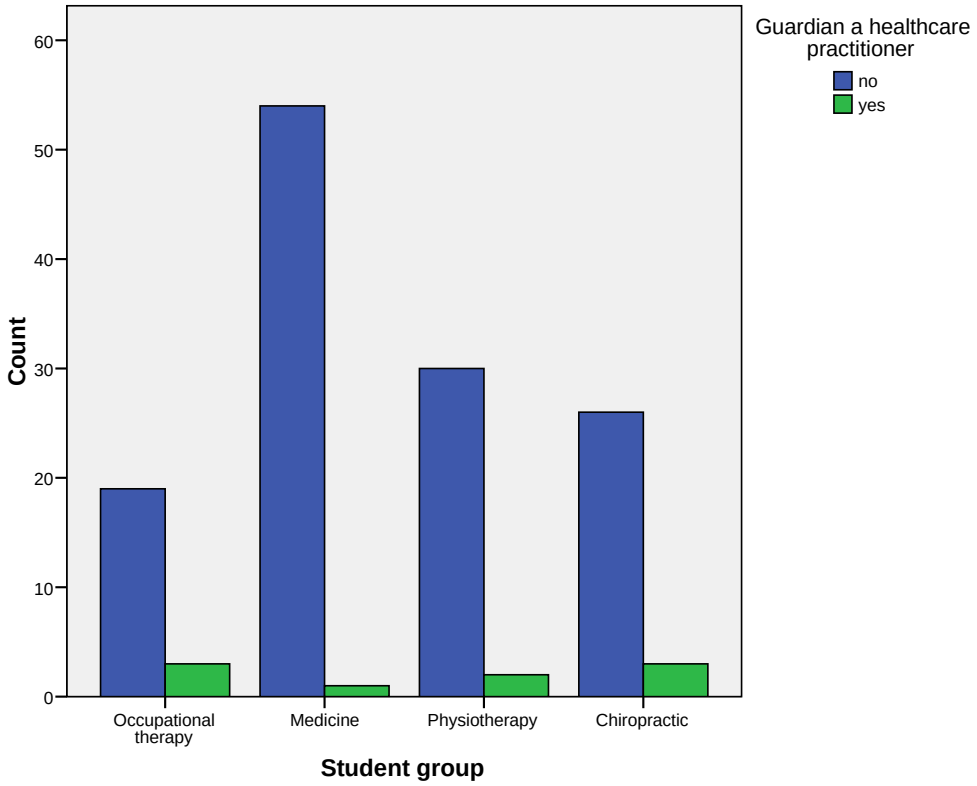
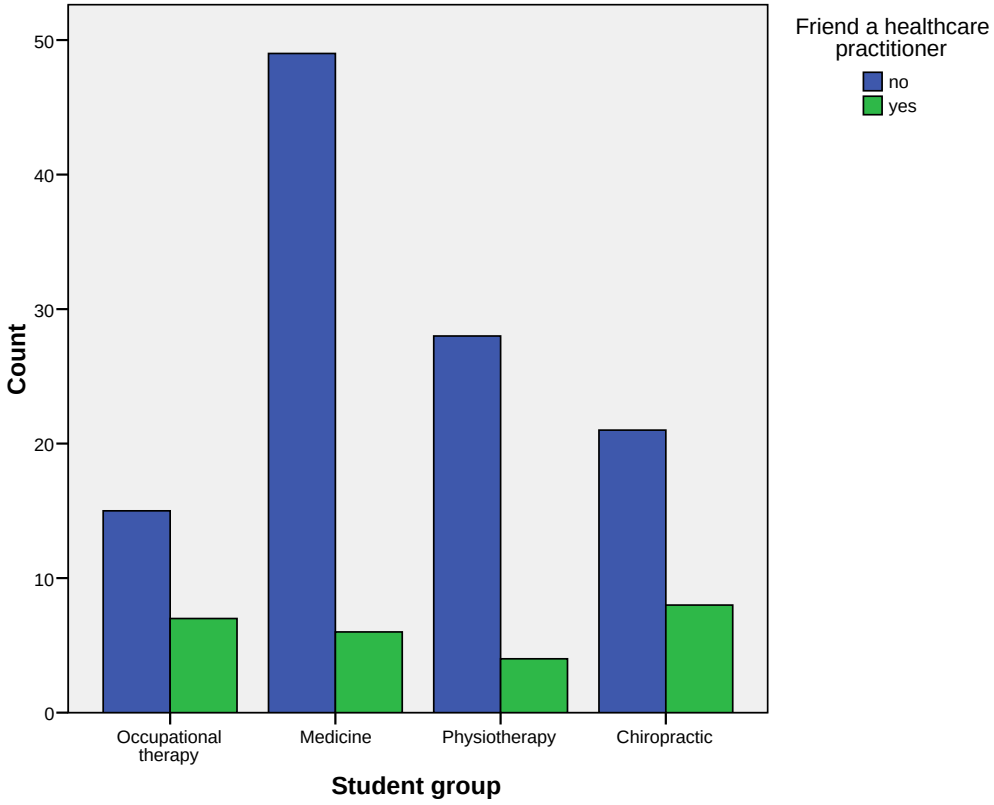


Figure 48 reflects that occupational therapy students were more likely to be influenced by guardians being healthcare practitioners while a vast majority of medical students were not.

4.3.16.4) Friend

Figure 49: Frequency of responses to Question 18 by student group

Health practitioners in the student's significant other circle (Friend)



It is evident from Figure 49 that occupational therapy students were mere likely to be influenced by a friend being a healthcare practitioner while majority of medical students were not.

4.3.16.5) Other important person you respect

Figure 50: Frequency of responses to Question 18 by student group

Health practitioners in the student's significant other circle

(Other important person you respect)

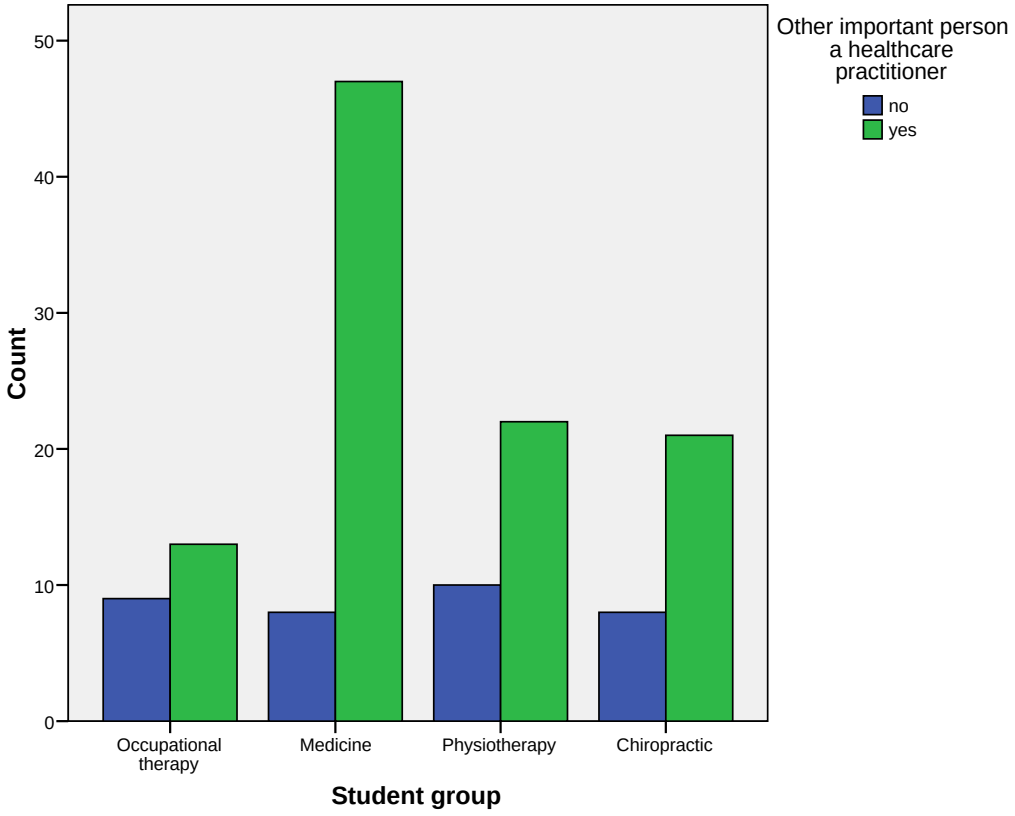


Figure 50 reflects that the majority of medical students were influenced by some other important person being a healthcare practitioner while occupational therapy students were more likely not to be.

Table 13: Responses to questions 16 and 18 by student group

		Student group									
		Occupational therapy		Medicine		Physiotherapy		Chiropractic		Total	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Was the "doctor" title important in choosing your career [1]	Yes	8	36.4%	22	40.0%	8	25.0%	15	51.7%	53	38.4%
	No	14	63.6%	33	60.0%	24	75.0%	14	48.3%	85	61.6%
	Not sure	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%
Parent a healthcare practitioner [2]	no	16	72.7%	45	81.8%	27	84.4%	24	82.8%	112	81.2%
	yes	6	27.3%	10	18.2%	5	15.6%	5	17.2%	26	18.8%
Sibling a healthcare practitioner [3]	no	20	90.9%	49	89.1%	29	90.6%	27	93.1%	125	90.6%
	yes	2	9.1%	6	10.9%	3	9.4%	2	6.9%	13	9.4%
Guardian a healthcare practitioner [4]	no	19	86.4%	54	98.2%	30	93.8%	26	89.7%	129	93.5%
	yes	3	13.6%	1	1.8%	2	6.3%	3	10.3%	9	6.5%
Friend a healthcare practitioner [5]	no	15	68.2%	49	89.1%	28	87.5%	21	72.4%	113	81.9%
	yes	7	31.8%	6	10.9%	4	12.5%	8	27.6%	25	18.1%
Other important person a healthcare practitioner [6]	no	9	40.9%	8	14.5%	10	31.3%	8	27.6%	35	25.4%
	yes	13	59.1%	47	85.5%	22	68.8%	21	72.4%	103	74.6%

1 p=0.195
2 p=0.728
3 p=0.948
4 p=0.210
5 p=0.067
6 p=0.076

Figure 44 reflects that only 38.4% of respondents felt that the “doctor” title was important in choosing their career of which majority is from the medical students.

It is evident from Table 13 that family members being health care practitioners did not seem to influence career choice into a health care field. However, other important people who the respondents respected being health care practitioners had a large influence on their career choice (74.6%).

Figure 44 also depicts that the ‘doctor’ title did not influence career choice significantly differently in the four student groups (p=0.195), however a slight trend can be seen

towards the medical students and chiropractic students responding “yes” to a greater extent than the other two student groups.

Table 13 also reflects that having a friend or family member in a health-care field did not influence career choice differentially between the four student groups.

CHAPTER 5

DISCUSSION

5.1 DEMOGRAPHICS

5.1.1 Age

The overall mean age of the research participants was 19.28 years (SD 2.25 years). The physiotherapy students were slightly younger than the other groups, while the medical students were slightly older. However, the ages of the four groups were not significantly different.

This result is similar to that found by the researchers Jones and Larke (2005) who conducted a study using undergraduate students from the college of agriculture and life sciences at Texas University. The results of their study revealed that the age of the respondents ranged from 22 to 52 with a mean age of 28 years. A study conducted by Ososki *et al*. (2006) aimed to evaluate factors influencing and contributing to the career choice of teaching by undergraduate students at Humboldt State University. The mean age was 24 years old ranging from 18 to 48 years old. This is comparable to the current study where medical students were found to be older.

Possible explanations for the results obtained from the medical students in this study could be related to students studying other courses as well as completing bridging courses before enrolling for medicine. It has also been found that some individuals also take a gap year to think about final career choice. Yet other students with poor matric results and who do not meet the requirements for entrance into medical school, complete a Bachelor of Science degree before applying to medical school.

5.1.2 Gender

The total sample was 60% female. However, by student group the proportions varied significantly (p=0.003). Occupational therapy and physiotherapy had the highest number of female students with 82% and 77% respectively. Medicine and chiropractic had the lowest number of female students with 47% and 48% respectively.

This result is similar to that found by other researchers like Harris *et al.* (2005) who conducted a study investigating factors affecting medical residents career choice at the childrens hospital of Philadelphia U.S.A. Their sample comprised of 238 students, 59% being female while 41% being male. These results are comparable to the results of the current study in that occupational therapy and physiotherapy students were 82% and 77% female respectively.

Possible explanations for the results obtained from this study might possibly be because students still regard occupational therapy and physiotherapy as predominantly female professions. The lower numbers of female students studying medicine and chiropractic may be linked to general attitudes where these professions are regarded as predominantly male professions. Alternatively, females may have obtained superior results as compared to males thereby securing a seat in a certain profession and vice versa.

5.1.3 Ethnicity

Ethnicity was also significantly different by student group ($p<0.001$). Both medical and occupational therapy students were mostly Indigenous African, while chiropractors were mostly White students and physiotherapists were mostly Indian students.

The findings of this study is similar to that found by Ososki *et al.* (2006) who reported that the majority of the participants were White (70%). This statistical figure is similar to the chiropractic student population, which was predominantly White. Willcockson and Phelps (2004), administered a survey to determine where students obtain career information from and who or what influences their career choice. It was reported that the majority of the sample was students of colour. This is comparable to the current study where the medicine, physiotherapy and occupational therapy student populations were predominantly students of colour.

Chiropractic has a significantly large White student population. A possible reason for this may be due to a larger number of White student applicants. The White student population applying for chiropractic, possibly perform better during the application interview and psychometric testing as compared to students of colour. Medicine, physiotherapy and occupational therapy may possibly be more popular with the non-White population due to these health professionals practicing in all communities including rural areas. There is also a significantly larger number of medical doctors, physiotherapists and occupational therapist as compared to chiropractors. This may result in a greater awareness of these health professions.

5.2 FACTORS AFFECTING CAREER CHOICE

5.2.1 Type of school attended by student groups

There was no significant difference between the student groups in terms of the type of schools attended (p=0.526). The most common school type in all student groups were the government schools. The proportion who attended private schools was highest amongst occupational therapy students (22,7%).

This result contrasts to that found by other researchers like Young *et al.* (1997) reporting that there appeared to be a lower proportion of students being accepted into university from government schools in urban and rural schools in Western Australia.

Possible explanations for the results obtained in this study may be the high cost of private schools in South Africa resulting in the majority of students attending South African government schools. Some private schools may be inaccessible due to remoteness and lack of transport for many rural dwellers.

5.2.2 The Cost of courses being considered, bursaries and the lack of bursaries

The majority of respondents reported that neither the cost of the course (70.3%) being studied nor the availability (62%) or lack of bursaries (71%) was a consideration when choosing their career. There was however a significant difference in responses to the availability and lack of bursaries by student groups ($p<0.001$ and $p=0.016$ respectively). Fifty three percent of medical students were influenced by the availability of bursaries. Twenty nine percent said their choice was influenced by the lack of bursaries, as compared to the other student groups.

The findings of this study contrast to the results found by Sukovieff (1989), who conducted a study with 184 graduates from Regina School in Saskatchewan. Participants

were interviewed approximately 2 years after graduating from high school. The researcher reported that the lack of money for tuition and the high cost of the courses moderately influenced the graduates career decisions. The current study however reveals that the cost of the course was insignificant. De Almeida *et al.* (1998) conducted a study investigating the influence of different factors on a student's choice of a higher education course in physical science or engineering. The study revealed that a large group of students were encouraged by the possibility of sponsorship for higher education. This contrasts with the current study where the availability of bursaries was reported to be insignificant by majority of the student population.

A possible reason for this could due to high family income, the availability of student loans as well as the availability of bursaries. More students of colour chose medicine as a career choice and these were students largely concerned with the availability or the lack of bursaries. This may be attributed to their previously disadvantaged backgrounds.

5.2.3 Mechanisms to obtain information

The majority of participants (76.1%) obtained information about medicine as a career from their school. Sixty five percent of participants received information about physiotherapy, 44.9% obtained information about occupational therapy and only 40% obtained information about chiropractic at school. The chiropractic student group were more likely to have obtained information on chiropractic at their schools but the difference was not statistically significant (p=0.102). For information about physiotherapy, a significant difference was observed between the student groups. The chiropractic students reported the highest percentage of students having obtained information on physiotherapy at school and the medical students reported the lowest.

Young *et al.* (1997) conducted a study and the results revealed that the major hurdles to the participation in higher education were the lack of information about courses and careers. These results can be compared to the results of the current study where only 40% of students acquired information on chiropractic at school.

Possible reasons for the findings may be due to the fact that guidance counsellors and teachers are not as exposed to knowledge about chiropractic. Chiropractic is not as old as the practice of medicine and even more recently introduced in South Africa. A review of the register of chiropractors show that there is a small number of qualified chiropractors and chiropractic clinics in South Africa. This would result in a relatively small number of chiropractors per town or possibly no chiropractors in some areas. This could result in the decreased awareness of chiropractic in the communities and at schools. There is a vast number of medical doctors in KwaZulu Natal and this could possibly raise levels of awareness of medicine in communities and schools as is reflected in the 70% of students obtaining information on medicine at schools. The chiropractic students were well informed about physiotherapy as a profession possibly because of the greater awareness of the profession provided by the presence of physiotherapists in all hospitals or the large number of physiotherapists in the private sector. The lack of information reflected in the low levels of awareness of physiotherapy by the medical students may possibly stem from the lack of Internet facilities as well as the lack of informed guidance counsellors and teachers at schools.

5.2.4 Sources of information on careers

The majority of respondents obtained information from professionals visiting schools (56.5%), while family and guidance counsellors were also important sources of information (52.2% and 50.7% respectively). The source of information was not different between the student groups, except in the case of visiting professionals, where chiropractic students were more likely to answer “yes” to this option than the other student groups. Chiropractic students were more likely to use the Internet to find out about careers than the other student groups.

This result contrasts to that revealed by the findings of the Willcockson and Phelps (2004) study, where it was found that family ranked as the most important influence on a students career choice. Past experience with a visiting professional was the second most important factor influencing career choice. The results of the Willcockson and Phelps

(2004) study contrasted with the results of the current study where visiting professionals had a major effect on student's career choice followed by family and the guidance counsellors.

Van As (2005) conducted a study to investigate the school guidance counsellors knowledge and perception about the chiropractic profession in South Africa. The results revealed that there is a lack of awareness among school guidance counsellors about the chiropractic profession. Their lack of knowledge could be the reason that the current results revealed that they were only the third largest influence on a student's career choice. In recent times, schools are becoming more interactive and invite professionals to address students about their professions. This would explain the major influence of visiting professionals on the student's career choice. Chiropractic students used the Internet on a larger scale than any of the other student groups possibly due to the ready availability of Internet access at their schools or their homes.

5.2.5 Gender

Gender was definitely not a strong influence on career choice (92% reported that gender did not influence their career choice) (p=0.401). However physiotherapists showed that gender did influence their career choice as reflected in figure 20 of chapter 4.
The findings of this study contrast to those found by Harris *et al.* (2005) where medical resident doctors revealed that gender was important to participants in the pursuit of their careers.

Possible reasons for the results obtained are probably due to evolving attitudes toward professions that were considered to be predominantly female professions in the past. Physiotherapy was generally regarded as a predominantly female profession and this is supported by the finding that 77,4% of physiotherapy students are female. This could explain why a large number of physiotherapy students would be influenced by gender in making a career choice.

5.2.6 Past experience with a professional from the career field chosen

Past experience with a professional from the chosen career field did have a relatively strong influence (46.4%). There was a significant difference between the four groups with respect to the influence of a past experience with a professional (p=0.001). Physiotherapists and chiropractors were more likely than the other two groups to be influenced by a professional from the career field chosen.

This result is similar to that found by Ososki *et al.* (2006) who conducted a survey to investigate the factors affecting science undergraduates choice of teaching as a career. The authors reported that a past experience with a teacher had a significant influence on their choice of teaching as a career.

Possible reasons for this finding could be related to the possible increase in professionals visiting schools and participation in school career days. Chiropractors and physiotherapists are inclined to be influenced by a professional from the profession because part of the entry requirement is observing a qualified chiropractor or physiotherapist. Chiropractic and physiotherapy involve primarily manual therapies and observing these therapies could motivate the student to choose these careers.

5.2.7 Personal factors

Participants were asked to rank given factors (on a scale from 1-11) according to their level of importance in choosing their career. The lower the ranking, the more important was the factor in determining career choice. The least important factors were prestige, variety, lifestyle and enjoyment of working with their hands. The altruistic factor of helping others ranked second lowest with a median score of 4 on a scale of 1 to 11, meaning it was the second most important factor, while working with people was the most important factor. Significant differences between the student groups were observed for the ranking of various personal factors in their career choices. These were the ability to define personal goals, the joy of working with hands, motivation to help others, and prestige.

The higher the median rank for a particular student group, the less important that factor was in determining their career choice. For instance the ability to define personal goals was important for medical students (4) but it was not very important for occupational therapy students (7). The joy of working with their hands was more important for chiropractic (6) and physiotherapy students (6). The motivation to help others was more important to occupational therapy students (2). Prestige was most important for chiropractic students (2).

The results of this study is comparable to that found by Ososki *et al.* (2006) who conducted a study which revealed that the most influential factor was that the participants enjoyed working with children. Baxter *et al.* (1996) conducted a study with the objective of examining factors affecting career choice by medical students. A questionnaire was distributed to 245 fourth year students at the University of Toronto Canada. Contact with patients emerged as an extremely important factor. The results of the Ososki *et al.* (2006) and Baxter *et al.* (1996) studies are comparable to the current study where working with people was the most important personal factor influencing career choice.
Young *et al.* (1997) conducted a study and the results revealed that the altruistic need to help others was central to influencing most students' career choices. The results of the Young study are similar to the current study where helping other people was the second most important factor.

In a survey carried out by De Almeida *et al.* (1998) researchers investigated the influence of different factors on a student's decision to choose a higher education course in one of the physical sciences or engineering. The results revealed that the joy of working with ones hands was a significant motivating factor. The results of the De Almeida *et al.* (1998) study are similar to the current study where the joy of working with hands ranked significantly important to the chiropractic and physiotherapy students.

Ososki *et al.* (2006) conducted a study and prestige was reported to be a significant motivating factor. This finding is similar to the current study where chiropractic students in particular regarded prestige of a career as a significant motivating factor.

Helping and caring for people were two personal factors that ranked significantly high in the current study. Possible explanations for the results obtained might possibly be motivated by the altruistic ideals of individuals and the need for more healthcare practitioners. Medical students possibly aim at going into the private sector eventually and therefore are accustomed to defining their personal goals. Chiropractors and physiotherapists primarily use their hands for treatment and this is possibly the reason for the high number of participants being influenced by the joy of working with hands. Occupational therapists deal with a high number of patients that suffer with loss of function. These students probably possess altruistic ideals due to the nature of their work and the condition of their patients. Chiropractic students may be influenced by the prestige on account of the fact that a qualified chiropractor receives the title “doctor” on completion of the chiropractic course. The high influence of prestige may be due to the chiropractors need for recognition in the medical fraternity.

5.2.8 Socio-economic factors

Working in a health-care environment (77.5%), job opportunities (71%), societal need (66%) and high variety (60%) were important in affecting career choice. Domestic circumstances however, were not important (44.2%). None of these socio-economic factors were significantly different between the student groups in determining their career choices.

The findings of this study contrasts to the results found by Brock and Cammish (1997) who conducted a study involving 6 countries (Bangladesh, Cameroon, India, Jamaica, Sierra Leone and Vanuatu). Students from schools in these countries were interviewed to ascertain perceptions on gender and education and factors affecting female participation in education. The researchers reported that socio-economic factors like domestic circumstances were found to be most influential in education participation. These results were in contrast to the results of the current study where domestic circumstances were reported to be insignificant in affecting career choice.

A study by Ososki *et al.* (2006) revealed that job opportunities and societal need were highly motivating factors in career choice. These factors were also revealed to be significant in the current study.

Possible reasons for these results could be due to the fact that in recent times, students tend to research careers extensively and investigate the demand and need for prospective professions. This might explain the emphasis on job opportunities and societal need. Domestic circumstances were found to be unimportant possibly due to positive financial situation at home and good financial support. Alternatively participants may not have understood the term “domestic circumstances” and hence answered in the negative.

5.2.9 Socializers (Parents, siblings, significant others, peers), television and printed media

Parents were a major factor influencing career choice (68.1%), as were significant other people (42%). However, siblings, peers and television did not have a significant influence. Only television had a differential influence on the student groups ($p<0.001$). The medical students (20%) were influenced by television to a greater extent than the other professions.

The findings of this study is similar to that found by Bryant *et al.* (2006) who conducted a study with the purpose of investigating parents influence on career development in childhood and adolescence. The authors reported that parents were a major source of knowledge and beliefs about occupations and highly influential in matters of career choice. This is similar to the results of the current study in that parents were found to have a major influence on a student’s career choice. A study conducted by Willcockson and Phelps (2004) reported that students obtained career information from the Internet, teachers, family and friends. The highest number of responses reported for sources of information was the Internet, books and television. This is comparable to the current study

where medical students were found to use television as a source of information more frequently than other student groups.

Possible explanations for the results obtained in this study may be due to the majority of students being dependent on their parents financially and living at home with their parents. This could explain the major influence parents have on the research participants. Siblings and peers had very little influence possibly because of their lack of knowledge or lack of experience in careers. The significant influence of television on medical students may be due to medical dramas or the large amount of medical documentaries on television.

5.2.10 Awareness of professions

Participants were instructed to rank their level of understanding of medicine, chiropractic, physiotherapy and occupational therapy before studying at tertiary level. Medicine ranked the highest, followed by physiotherapy, occupational therapy and lastly chiropractic with the lowest level of understanding. There were significant differences between the four student groups in terms of how much they knew about their professions before they started studying ($p<0.001$ for all professions). Each group ranked their level of understanding of their own profession as the highest. This suggests that level of knowledge about a subject influences career choice.

This result is similar to that found by Jones and Larke (2005) who conducted a study and the results revealed that the lack of awareness and the lack of information about careers was still a large motivating factor in terms of career choice.

Possible reasons for the results obtained may be linked to the guidance counsellors and teachers inadequate knowledge about the chiropractic profession. There could possibly be limited information in books, magazines and on television about chiropractic as compared to medicine, physiotherapy and occupational therapy. The results of the

current study reveal that level of knowledge of a subject, influences one's choice of career. This may show that students research their future careers well before committing to a career. It may alternatively reveal that students only choose careers that they know about and may not research other unfamiliar professions.

5.2.11 Work-related factors

A good working atmosphere was the most important work-related factor (75.4%), followed by the ability to run their own office (64.5%) and working conditions (55.1%). Of least importance was the presence of blood (7.2%). "The ability to run your own office" was significantly different between the student groups (p=0009) and chiropractic students were significantly influenced by this factor. Work atmosphere was significant (p=0.051). Chiropractic students were more likely to be influenced by work atmosphere than the other groups.

The findings of this study are similar to that found by Melgar and Frohna (2007) who set out to investigate medical students career plans at different stages of their decision making. The results supported the fact that a good working atmosphere was important and this influenced women peadiatricians to choose peadiatrics as a speciality. Studies by Rubin and Biekeman (1999) and Wilkinson (1996) revealed that the ability to run your own office and good working conditions were respectively important.

Possible explanations for the results obtained may be linked to individuals in recent times possibly aiming to go into the private sector and run their own businesses. This may be the reason why factors like the ability to run your own office and working conditions were important to the participants in the current study. Once qualified, chiropractors usually have to enter the private sector. This may explain their desire to run private practices.

5.2.12 Attitudes of participants regarding given statements

The majority did not agree with the statement that chiropractors should be male (80.4%). Forty one percent of the respondents agreed with the point that financial reward is important to their careers while 44.2% disagreed. Interacting with people was definitely a strong factor in the total sample (90.6%). These Likert scale type questions were compared amongst the four students groups. There was a significant difference in responses between the student groups for the statement “Chiropractors should be male because it requires a lot of strength and energy to treat people” (p=0.024). Although the median response in all groups indicated disagreement with the statement, the chiropractors and physiotherapists disagreed to a greater extent. The other statement that showed significant differences in response was “I love being the boss and making my own rules” (p=0.014), where the chiropractic students agreed to a greater extent than the other student groups.

This result is similar to that found b Micallef and Gatt (2004) who found that attitudes are changing and there are continuing trends of female participation in science and engineering. This supports the general disagreement with the statement that chiropractors should be male. The study conducted by Fleming *et al.* (2005) investigated the influences of career choice on first year students of engineering at Howard University, Colorado School of Mines, Stamford University and the University of Washington U.S.A. Their results revealed that financial reward was a key motivational factor in career choice. This contrasts with the current study in that 44.2% of respondents did not regard money as important. A study by Rubin and Biekeman (1999) revealed that chiropractors were motivated to work independently and make all the rules. Their results support the results of the current study where majority of the chiropractic students were influenced by the idea of working independently and making the rules.

A possible reason for the results may be related to the sixty percent of the respondents being female. The large number of females could possibly explain the reason 80.4% of respondents disagreed with the statement that chiropractors should be male. Students may be motivated by altruistic ideals and this may explain why 44.2% of respondent’s

career choices were not being influenced by finances while 90.6% of respondents prefer interacting with people. Majority of physiotherapy students are female (77.4%) and this may be the reason for the large number of those students being in disagreement with the statement that chiropractors should be male. The reason chiropractic students prefer working independently and making the rules could possibly be related to the fact that they have to go into the private sector once qualified.

5.2.13 “Doctor” title

Fifty nine percent of the total sample comprised of medical and chiropractic students. Only 38.4% of the total number of respondents felt that the “Doctor” title was important in choosing their career. This would indicate that 23% of the medical and chiropractic student populations were actually influenced by the “Doctor” title. The ‘Doctor’ title did not influence career choice significantly differently in the four student groups ($p=0.195$), however a slight trend could be seen towards the medical students and chiropractic students responding “yes” than the other two groups.

The findings of this study are similar to that found by Cutler *et al.* (2006) who conducted a study to investigate medical students perceptions of the field of psychiatry and to identify the impact of these perceptions on their career choices. The results revealed that prestige was an important factor affecting career choice. These results can be compared to the current study where the chiropractic and medical students regard prestige as important as compared to the physiotherapy and occupational therapy students.

A small amount of respondents were influenced by the “Doctor” title (38.4%). Possible reasons for the results could be due to the fact that physiotherapists and occupational therapists do not earn the title on completion of their degrees. They would therefore not be interested in the status that it holds. Chiropractic and medical students would probably be more influenced by the “Doctor” title considering the fact that they acquire the title on completion of their studies.

5.2.14 Health practitioners in the students' significant other circle (eg. Parent, sibling, guardian, friend and other important person you respect)

Other important people, whom the respondents respected, had a large influence on their career choice (74.6%). Family members and friends that were health care practitioners did not seem to influence career choice in a health care field and this was consistent across all student groups.

This result contrasts to that found by Jones and Larke, (2005), who conducted a study that involved administering questionnaires to all Hispanic and African American graduates who received undergraduate degrees from the college of agriculture and life sciences at Texas A&M University. The authors reported that fathers whose occupation was agriculture, strongly influenced the likelihood that the child would pursue an agriculture related career. These results differ from the current study where family members who were health professionals did not have a major influence on a student's career choice.

Possible explanations for the results obtained in this study may be family members in a particular field persuading students not to pursue careers in their field because they are aware of the disadvantages of their professions and encourage them to pursue other careers. This may explain the insignificant influence of family members on the respondent's career choice. The high influence of other health practitioners may result from the presence of prominent healthcare practitioners in the community. Their career advice may influence a student's career choice.

CHAPTER 6

CONCLUSIONS AND RECCOMENDATIONS

6.1 CONCLUSIONS

From the findings of this study the following conclusions were drawn:

6.1.1 Demographics

- The overall mean age was 19.28 years (SD 2.25 years). The ages of the four groups were not significantly different.

- Sixty percent of the respondents in the sample were female. However, by student group the proportions varied significantly. Occupational therapy and physiotherapy were 82% and 77% female respectively and therefore held the largest number of females.

- With regards to ethnicity, this was also significantly different by student group. In both medicine and occupational therapy students, the largest group was Indigenous African students, while chiropractors had the largest group of White students and physiotherapy had the largest group of Indian students.

6.1.2 Factors affecting career choice

There was no difference between the student groups in terms of the type of school they attended. The most common school type in all students groups was government school (78.3%) and the highest proportion attending private schools was the occupational therapy students (22.7%).

Majority of the students (70.4%) believed that cost was not an important factor when choosing their career. Neither were the availability or lack of bursaries. The medical students were more concerned with availability (62.3%) and lack of bursaries (71.0%) than the other student groups.

The majority of participants (76.1%) obtained information about medicine as a career from their school. However, for the other careers the response was not as positive. Only 40% of the respondents obtained information about chiropractic at school. For information about physiotherapy, a significant difference was observed between the student groups, with the chiropractic students reporting the highest percentage of “yes” responses (82.8%) and the medical students reporting the lowest (50.9%). This indicates that there was a definite lack of information for some students.

Most students received information from visiting professionals (56.5%), while 52.2% from family and 50.7% received information from guidance counsellors. The source of information was not different between the student groups, except in the case of visiting professionals where chiropractic students were more likely to answer “yes” to this option than the other student groups. Chiropractic students were more likely to use the Internet to find out about careers than the other student groups.

Gender was definitely not a strong influence on career choice (92%). However the results from the physiotherapists were most likely to let gender influence their career choice.

Past experience with a professional from their chosen career field did have a relatively strong influence on career choice and chiropractors as well as physiotherapists were more likely to be influenced by professionals from their fields.

With regards to personal factors, working with people was the most important factor to all students groups. The altruistic factor of helping others was the second most important factor. Least important factors overall were prestige, variety, lifestyle and enjoyment of working with hands. In comparing the responses of the different student groups, the ability to define personal goals was more important for medical students but not as important for occupational therapy students. The joy of working with their hands was more important for chiropractic and physiotherapy students. The motivation to help others was more important to occupational therapy students. Prestige was found to be more important for chiropractic students.

With regards to socioeconomic factors, working in a health care environment (89.7%) and societal need (72.4%) were most important to the chiropractic students in influencing career choice. Job opportunities (81.3%) and high variety (71.9%) were most important to physiotherapy students. Domestic circumstances were found to be unimportant.

Parents (68.1%) were the strongest factor influencing career choice, followed by significant other people (42%). However, siblings, peers and TV did not have as great an influence. Television had a differential influence on the different student groups as the

medical students (36.4%) showed a higher percentage of influence of television than the other professions.

- Before studying at tertiary level, most participants ranked their level of understanding and awareness of medicine as the highest, followed by physiotherapy, occupational therapy and chiropractic. There were significant differences between the four student groups in terms of how much they knew about the professions before they started studying ($p<0.001$ for all professions). Awareness of a career is therefore a significant factor influencing career choice.

- A good working atmosphere (75.4%) was the most important work related factor, followed by the ability to run one's own office (64.5%). Working conditions counted for (55.1%). Of least importance was the dislike of the presence of blood (7.2%). Of the work related factors for career choice, only the ability to run one's own office was significantly different amongst the student groups as chiropractic students (89.7%) were more likely to be influenced by this factor.

- Family members that were health care practitioners did not seem to influence career choice into the health care field. However, "other important people who the respondents respected and are health care practitioners", had a great influence on their career choices. Having a friend or family member in the healthcare field did not influence career choice.

6.2 RECOMMENDATIONS

The following recommendations are made for future studies with regard to the methodology:

1) Include all registered first year students irrespective of their age to increase the sample size. Appropriate measures should be taken so that a research participant who is under 18 years of age is allowed to take the questionnaire home to acquire permission from their parents or legal guardian and then posted back to the researcher.

2) Take appropriate measures in ensuring maximum attendance during the time allocated by the respective departments for administering questionnaires. The questionnaire could be administered after a test to ensure maximum sample size.

3) The use of class registers was unnecessary and redundant. The response rate can be easily determined by getting the maximum number of students in that class from the respective department and subtracting the number of research participants present from that class.

4) Class lecturers were not present during this study. It would be advisable to have a class lecturer present, as an authoritative figure to prevent disruptive behaviour.

The following recommendations are made for future studies:

A) Future studies should explore the factors affecting career choice of other health professions such as homeopathy, radiography and clinical technology at the Durban University of Technology along with chiropractic.

B) The chiropractic students of the University of Johannesburg should be included.

C) Investigate personal factors such as personality type and lifestyle preference.

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APPENDIX 1

QUESTIONNAIRE

(**Please tick the appropriate box/boxes**)

1) Age

_____ Years

2) Gender

Male ☐ Female ☐

3) Ethnicity (For statistical purposes only)

Black ☐ White ☐ Coloured ☐ Indian ☐ other ☐

4) I am a student of

Occupational Therapy	Medicine	Physiotherapy	Chiropractic
☐	☐	☐	☐

5) Were the following factors vital in choosing your profession?

	YES	NO	NOT SURE
Cost of course	☐	☐	☐
Bursaries/scholarships	☐	☐	☐
Lack of bursaries/scholarships	☐	☐	☐

6) What type of school did you attend?

☐ Government

☐ Private

☐ Other(please specify) _____

7A) Where there mechanisms for you to obtain information about the following professions at your school?

	YES	NO	NOT SURE
Human resources	☐	☐	☐
Actuarial science	☐	☐	☐
Chiropractic	☐	☐	☐
Medicine	☐	☐	☐
Drama	☐	☐	☐
Occupational therapy	☐	☐	☐
Physiotherapy	☐	☐	☐

7B) Where did you receive this information from?

(Can tick more than one)

☐	Guidance councillors	☐	Seminars
☐	Teachers	☐	Internet
☐	Visiting Professionals	☐	Family and friends
☐	Other	☐	Career days

8) Did your gender influence you in choosing your profession?

YES ☐ NO ☐

9A) Did a past experience with a professional from your profession influence your choice of career?

YES ☐ NO ☐

9B) If you answered “yes” to the previous question please elaborate below.

_____
_____
_____

10) Rank the following personal factors according to your level of importance. Please rank them from the highest level of importance to the lowest. (The highest being 1 and the lowest being 11)

- ☐ Ability to define personal goals
- ☐ Challenge
- ☐ Commitment
- ☐ Enthusiasm
- ☐ Joy of working with people
- ☐ Joy of working with your hands
- ☐ Lifestyle preference
- ☐ Motivation to help others
- ☐ Personality type
- ☐ Prestige
- ☐ Variety in a profession

11) Did any of the following factors affect your choice into your current profession ?

YES	NO	NOT SURE	
☐	☐	☐	Job opportunities
☐	☐	☐	Societal need
☐	☐	☐	Working in a health care environment
☐	☐	☐	Domestic circumstances (eg income)
☐	☐	☐	High variety and broad spectrum of jobs

12) Were you influenced by any of the following factors in making your choice of career? <u>(Can tick more than one)</u>

- ☐ Parents
- ☐ Siblings

- Significant others (teacher, uncle, boyfriend)
- Peers
- Television
- Printed media (example magazines)

13) Rank your level of understanding (before you started studying) in terms of the following 4 career choices from the highest level of understanding to the lowest (Highest being 1 and lowest being 4)

- Chiropractic
- Medicine
- Occupational therapy
- Physiotherapy

14) Were any of the following work related factors important in making your career choice ?

YES	NO	NOT SURE	
			Expected income
			Working hours
			Working conditions
			The ability to design your own work schedule
			The ability to run your own office
			Good work atmosphere
			I don't like blood

15) Indicate your level of agreement with the following statement:
" Chiropractors should be male because it requires a lot of strength and energy to treat people" (Please tick one choice only)

Strongly Disagree	Disagree	Undecided	Agree	StronglyAgree

16) Was the “doctor” title important in you choosing your career?

YES ☐ NO ☐

17) Indicate your level of agreement with the following statement:
“ Dynamic professions with numerous opportunities are the most attractive professions” (Please tick one choice only)

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
☐	☐	☐	☐	☐

18) Indicate whether any of the following individuals are/were a health care practitioner. (can tick more than one)

☐ Parent
☐ Sibling
☐ Guardian
☐ Close friend
☐ Other important person you respect

19) Indicate your level of agreement with the following statement:
“ Making a lot of money is not important to me in terms of a career ”

Strongly Disagree	Disagree	Undecided	Agree	StronglyAgree
☐	☐	☐	☐	☐

20) Indicate your level of agreement with the following statement:
“ I love being the boss and making my own rules”

Strongly Disagree	Disagree	Undecided	Agree	StronglyAgree
☐	☐	☐	☐	☐

21) Indicate your level of agreement with the following statement:
" I prefer a job that involves interacting with people on a daily basis "

Strongly Disagree	Disagree	Undecided	Agree	StronglyAgree
☐	☐	☐	☐	☐

Thank you for your time and effort

APPENDIX 2

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:

An Investigation Of The Factors Affecting The Career Choice Of Selected Health-Care Students (Physiotherapy, Chiropractic, Medicine And Occupational Therapy) In KwaZulu Natal.
.

Aims/objectives:

A) To investigate the factors affecting career choice of health care students (physiotherapy, medical, chiropractic and occupational therapy) in KwaZulu Natal who have been selected for first year.

B) To determine the demographic profile of the chiropractic, occupational therapy, medical and physiotherapy student groups.

C) To compare factors affecting career choice between the various groups from an inter-group perspective.

Background

It has been stated in the literature that many factors exist that could possibly affect career choice but no extensive research has been undertaken in this field. But what exactly are the factors involved when committing at least 3 to 7 years of ones life to these professions. No study has been done in South Africa to assess the factors affecting career choice by mainstream health care and chiropractic students. The perceptions of students are extremely valuable in identifying the various factors involved.

Thus the reason for holding a focus group is to stimulate an individuals thinking and encourage the developments of ideas about the topic.
Focus groups tend to encourage individuals other than the participants of that particular research to support the research process by increasing research relevance.

In order to understand the outcomes required for the focus group it is important to understand the objectives set out for this study:

Therefore the research would require you as a member of the focus group to assist in identifying many pertinent factors as possible as a result of your participation or association with the programme. Your participation in this study is much appreciated and you are assured that your comment and contribution 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 me.
Sanvir.H.Maharaj (0836870886 / 0319025596 D.U.T)

APPENDIX 3

INFORMED CONSENT FORM

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

DATE:01/09/06

TITLE OF RESEARCH PROJECT: An Investigation Of The Factors Affecting The Career Choice Of Selected Health-Care Students (Physiotherapy, Chiropractic, Medicine And Occupational Therapy) In KwaZulu Natal.

NAME OF SUPERVISOR: **Dr A Docrat(0829272361)**

NAME OF RESEARCH STUDENT: **Sanvir H. Maharaj(0836870886) / 031 204 2205**

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

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 4

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 5

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

Member represents	Member's Name	Signature	Contact Details

APPENDIX 6

LETTER OF REQUEST

Dear Head Of Department

I am a sixth year chiropractic student at D.U.T. Currently I am undertaking a research project and humbly request your assistance.

Title of Research is : An Investigation Of The Factors Affecting The Career Choice Of Selected Health-Care Students (Physiotherapy, Chiropractic, Medicine And Occupational Therapy) In KwaZulu Natal.

Aims/purpose of study :

A) To investigate the factors affecting career choice of health care students (physiotherapy, medical, chiropractic and occupational therapy) in KwaZulu Natal who have been selected for first year.
D) To determine the demographic profile of the chiropractic, occupational therapy, medical and physiotherapy student groups.
E) To compare factors affecting career choice between the various groups from an inter-group perspective.

Rationale for study :

1. To date, no research has been conducted to assess factors affecting students career choice into chiropractic and mainstream healthcare.
2. It is important to the chiropractic profession to know why students would choose mainstream health care professions over chiropractic so that the chiropractic profession could identify and address these factors positively in order to grow the profession favourably.
3. The majority of South Africa's population is indigenous African. A study is needed to determine which factors affected their choice of career in order to attract more Africans into the profession which is at present lacking the demographic profile of South Africa.

This research will be done by means of a pre-validated questionnaire that will be administered to the chiropractic, medical, physiotherapy and occupational therapy first year classes. I need authorisation to administer the questionnaires to the respective first year classes. I will briefly discuss the research thereafter questionnaires will be handed out along with a consent form and information letter. The questionnaire will take approximately 15 minutes to complete where after the questionnaires and respective documents will be collected. The entire process should take approximately 20 minutes.
Your assistance would be highly appreciated and vital to this research.

Thanking you sincerely
Sanvir H. Maharaj (0836870886,031-9025596)

Dr A. Docrat
Research Supervisor (031-2042589)

APPENDIX 7

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:

An Investigation Of The Factors Affecting The Career Choice Of Selected Health-Care Students (Physiotherapy, Chiropractic, Medicine And Occupational Therapy) In KwaZulu Natal.

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

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,

Sanvir H. Maharaj
Research student

A Docrat
Supervisor

APPENDIX 8

INFORMED CONSENT FORM

(TO BE COMPLETED BY THE PARTICIPANTS OF THE RESEARCH)

DATE:

TITLE OF RESEARCH PROJECT: An Investigation Of The Factors Affecting The Career Choice Of Selected Health-Care Students (Physiotherapy, Chiropractic, Medicine And Occupational Therapy) In KwaZulu Natal.

NAME OF SUPERVISOR: **Dr A Docrat(0829272361)**

NAME OF RESEARCH STUDENT: **Sanvir H. Maharaj(0836870886) / 031 204 2205**

Please circle the appropriate answer	**YES /NO**	
8. Have you read the research information sheet?	Yes	No
9. Have you had an opportunity to ask questions regarding this study?	Yes	No
10. Have you received satisfactory answers to your questions?	Yes	No
11. Have you had an opportunity to discuss this study?	Yes	No
12. Have you received enough information about this study?	Yes	No
13. Do you understand the implications of your involvement in this study?	Yes	No
14. 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

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:_____