Complementary Therapies and General Practitioners: A Survey Investigating the Referral Patterns of General Practitioners In Regional Victoria

H Williams, Bsc (Clinical Science), B Nicholls, D.O., M.A.

Victoria University
School of Health Sciences (Osteopathy)
City Flinders Campus
Masters Degree (Osteopathy)

Research Report

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H Williams, B Nicholls

School of Health Sciences, Victoria University, VIC, Australia

Abstract

A survey of regional Victoria's general practitioners was undertaken to determine their referral patterns and attitudes towards Chiropractors, Osteopaths and Physiotherapists. The objective was to determine whether there is a need for greater numbers of manual therapists in regional Victoria and whether the supposed shortfall of regional therapists plays a role in the knowledge and referral patterns of GPs. The study was carried out via a postal survey, conducted between April 2003 and May 2003. A random selection was made of 1000 male and female regional Victorian GPs listed in Yellow Pages Online. The response rate was 10.3% (n=103). The main outcome measures sought of the GP's were; knowledge of professions, source of learning, perceived benefits of manual therapy, previous interaction and outcomes with manual therapists, education of and referral rates to complementary practitioners. 90% of GPs actively support the referral of patients to Manual therapists, with the majority

(88.3%) opting to refer patients to Physiotherapists. Factors determining referral were based largely upon knowledge and relationships with individuals within that profession. These results were largely consistent with those of previous studies, and suggest that there is no significant difference in referral patterns between regional and urban GP's.

Key Words: chiropractic, osteopathy, physiotherapy, referral patterns, manual therapy, regional, general practitioner, complementary medicine, manual medicine.

INTRODUCTION

Manual therapy is one stream of medicine that is being adopted more frequently by the general public for the treatment of musculo-skeletal complaints.[1,2,3] The recent surge in media coverage and public awareness has led to an overall increase in the growth and popularity of complementary medicine (CM).[4] The development of manual therapy has been emphasised by the fact that Universities and private institutions across Australia are offering greater numbers of Higher Education (HECS approved) manual therapy courses and places than ever before. In addition to being at the forefront of sports medicine, manual medicine is also a current leader in musculo-skeletal research. Despite this, manual therapy continues in its struggle to gain acceptance by the more traditional streams of medicine. Whilst there are quantifiable amounts of evidence to suggest there is a place for manual therapy in the medical field, there is a continual ongoing need for greater development in the education of the general public and medical profession.

Numerous studies have investigated the referral patterns of general practitioners (GPs) towards manual therapists. These studies conducted have investigated referral rates to manual therapists, the types of conditions GPs refer for as well as factors influencing referral[1,2,5,6] Most studies have determined that referrals are fundamentally based upon

knowledge and acceptance of the professions.[1,5,7] It is the perceived lack of scientific evidence supporting these professions that persuades GPs to question their validity and reliability[5,6,7]. Despite this, the growth of manual therapy is so great that visits by individuals to manual therapy practitioners are far greater or close to those of primary care physicians in certain sections of society.[3] Generally in the past only a small number of medical professionals enlisted the help of manual therapists, however this is now changing. It is now quite common for GPs to refer to different therapists, in particular Physiotherapists for certain musculo-skeletal problems. This could be attributed to GPs having a greater inter-practitioner relationship with Physiotherapists together with greater knowledge, and therefore perceive there to be more scientific evidence to support their treatment protocols.[5] Although manual therapy is generally well received by the majority of the public,[1,2] this relationship with GPs is not shared as commonly by Chiropractors and Osteopaths. It is also unclear how this is reflected in regional areas where practitioner availability and knowledge regarding these professions may be significantly less than in urban areas.

Whilst it could be suggested that metropolitan areas are generally well supplied by a variety of manual therapies, this is not so in regional areas. Regional areas struggle not only to recruit manual therapists but generally the more established and well known

orthodox medical professionals also. It could be said that because GP's are more isolated in regional Victoria then they are less likely to be exposed to manual therapy, however it could also be argued that in small communities where manual therapy is present then there is a higher chance of a working relationship between the two professions. Of the manual therapists practicing in Victoria, two percent (2%) of Osteopaths, ten percent (10%) of Physiotherapists and thirteen percent (13%) of Chiropractors are located regionally, clearly indicating that the majority of manual therapists prefer to work in urban areas[8]. Data clearly illustrates Physiotherapists and Chiropractors outnumber Osteopaths and therefore it is reasonable to assume they would incur greater referral. Previously research has revealed that the referral patterns of GP's are based largely on knowledge of the profession and previous encounters with individuals within that the profession. It could be said that with the increasing numbers of Osteopathy graduates and the possibility of saturation in some city areas that graduates may increasingly need to consider practicing in regional areas. As a consequence it is important to determine the views of regional GPs regarding manual therapies and determine whether this proposal is beneficial. In addition it will also enable manual therapists as a whole to gain a better understanding of the needs and reasons behind a GP's referral patterns in regional areas.

MATERIALS AND METHOD

Participants

The target population for this study was GPs practicing in regional Victoria. The sample was drawn from the Yellow Pages Online database[8]. A random sample of 1000 GPs was selected to investigate the various attitudes towards the following manual therapies: chiropractic, osteopathy and physiotherapy.

Design

A 7-page survey was developed using existing literature from Carnell & Nicholls[9], Marsic, Kiatos & Nicholls[10] and Todd, Kiatos & Nicholls[11] and trialled with 2 local GP's. The questionnaire involved obtaining identifiers such as the GP's name, gender, date of birth, qualifications, year of qualifications and practice location(s). The respondents were asked 34 questions regarding their attitudes to, and thoughts about the three complementary therapies; Chiropractic, Osteopathy and Physiotherapy (A copy of the questionnaire is available from the researchers on request).

Participants were asked to explain their knowledge and understanding of Chiropractic, Osteopathy and Physiotherapy. They were questioned as to whether they knew of or had been treated by any manual therapists. This was followed by questions relating to whether they referred to these therapists and who they preferred to refer to. They were

then questioned as to whether they believed there has been a rise in the number of these professions in the local area and whether they would consider future patient referral.

To conclude the survey participants were asked to state whether they believed that manual therapy has a place in the treatment of acute and chronic musculo-skeletal conditions and whether they thought further research would be beneficial.

Materials

One thousand (1000) questionnaires, with attached information forms and postage-paid envelopes, were distributed, with a 10.3% (n=103) return rate. Data was analysed using the SPSS and Excel software packages.

Procedure

The study received ethics approval from Victoria University Faculty of Human Development Research Committee. Each questionnaire was mailed together with the pre-franked envelope and information leaflet explaining the purpose of the study. All surveys were alpha-numerically coded to maintain confidentiality of participants. Results were collated and analysed using Excel software package. All results were represented using descriptive statistics and calculating means.

RESULTS

A total of one hundred and three (103) medical practitioners responded to the questionnaire. Forty five (45) questionnaires were returned in total, twenty eight (28) returned as undeliverable (with GPs having either retired or changed addresses), eleven (11) indicated they were not general practitioners and six (6) indicated they did not wish to participate due to a lack of time to do so. The response rate of the eligible sample was 10.6%

Demographic characteristics

The number of male participants was 72 (69.9%), compared to females 30 (29.1%) and 1 unknown (.97%). Age distribution ranged 30 - 82 years (mean age 48.84 years). Year of qualifications ranged from 1943 – 1997 (mean year of qualifications 1978).

Knowledge of complementary therapies

Table 1

Sixty one percent (61%) (n=101) of the GPs regarded their knowledge of Physiotherapy as extensive. Extensive knowledge of a profession was described as having a high understanding of the profession, including the types of conditions treated, techniques used and principles behind the manual therapy. Sixty one percent (61%) (n=101) of GPs claimed to have an average knowledge of Chiropractic, meaning they have some

understanding of the conditions treated and techniques used by the profession. Fifty nine percent (59%) (n=101) of GPs stated they only had limited knowledge of Osteopathy, which for this study was defined as an understanding that the profession exists.

Table 2

Table 3

Figure 1

Eighty three percent (83%) (n=102) of the GPs said they had been given information during their undergraduate medical training regarding Physiotherapy, whereas (81%) (n=101) and 91.3% (n=92) of GPs stated they were given no information regarding Chiropractic, Osteopathy respectively during their undergraduate training. Hospital placement, 57.5% (n=103) and medical school, 54.4% (n=103) were the primary sources of learning about Physiotherapy. The primary source of learning of Chiropractic and Osteopathy was found to be from patients, 57% (n=103) and 44.7% (n=103) respectively (table 2)

Table 4

Table 5

A majority of the GPs, 97% (n=101) understood Physiotherapists to be government recognized practitioners in all states and territories of Australia compared to 44.5% (n=101) for Chiropractic and 13.8% (n=101) for Osteopathy. Forty six percent (46%) (n=101) and 68.3% (n=101) of GPs likewise were unsure of the position held by Chiropractors and Osteopaths in Australia's states and territories.

When questioned as to what conditions each modality can treat, the conditions suggested for Physiotherapy far outnumbered those of Chiropractic and Osteopathy. The conditions most often thought to be treated by Physiotherapists were lower back pain 91% (n=103), sports injuries 88% (n=103), neck pain 75.7% (n=103), peripheral pain 73.7% (n=103) and thoracic pain 71.8% (n=103). The conditions which Chiropractic and Osteopathy were thought to treat were much more specific. GPs believed Chiropractic primarily addressed lower back pain 71.8% (n=103), neck pain 58% (n=103) and spinal complaints 57% (n=103) compared to Osteopathy which was thought to treat lower back pain 46.6% (n=103), spinal complaints 37.8% (n=103) and neck pain 35% (n=103). Table 4 illustrates that GPs believe that Physiotherapists treat a wider variety of conditions than Chiropractors and Osteopaths.

Figure 2

Most GPs knew that the professions Chiropractic (89%, n=102) and Physiotherapy (100%, n=92) existed within their local area, whereas only 44.5% (n=101) knew of Osteopaths.

Opinions of the complementary therapies

Figure 3

Of those rural GPs that responded, 75.7% (n=99) believed it would have been of benefit if more information were provided regarding the principles and practice of Chiropractic during their medical course. Sixty five percent (65)% (n=99) and 92% (n=103) also agreed for Osteopathy and Physiotherapy respectively.

Figure 4

Figure 5

Most GPs (78%, n=102) believed that a greater understanding of the principles and practice of manual therapy would increase the likelihood of recognition and acceptance (figure 3), compared to 6% of GPs (n=102) who said it would make no difference and 16% of GPs (n=102) who were unsure.

Referrals for complementary therapies

Figure 6

In addition 71% of GPs (n=102) agreed that a greater understanding of the principles and practice of manual therapy increased the likelihood of patient referral, compared to 8% (n=102) who thought a greater understanding would have no impact and 21% (n=102) who were unsure.

Figure 7

Figure 8

The majority of GPs (79%, n=102) believed that increased personal contact with the different professions on a regular basis would influence the likelihood of patient referral (figure 7). Ninety three percent (93%) (n=102) stated that patient feedback regarding manual medicine is also likely to impact upon future patient referral (figure 8)

Figure 9

Whilst GPs demonstrated an increased willingness to refer patients if there were greater inter-practitioner contact and positive feedback, only 19% (n=102) said they would be more likely to refer patients to Osteopaths if there were more of them in the area (figure 9).

Figure 10

Figure 11

The most popular responses as to what influences a GPs referral patterns included reputation (87%), specificity of treatment (84.5%) and previous history with manual therapist (80.5%) (n=90) (figure 10). When referring patients the method by which the majority of GPs prefer is letter (92.2%), with the next closest preferred methods being referral by mouth (35%) (n=103) (figure 11).

Figure 12

Ninety percent (90%) (n=102) of respondents indicated that they actively support the referral of patients to manual therapies in regards to certain medical problems and conditions.

Figure 13

Figure 14

Among the GPs who refer to manual therapists, Physiotherapists are far more utilised than Chiropractors and Osteopaths. In regards to musculo-skeletal complaints GPs choose to refer to Physiotherapists 88.3% of the time (n=97) (figure 12), compared to Chiropractic which was their second choice at 53.3% (n=98) and thirdly Osteopathy at 39.8% (n=98). When questioned as to which profession they would refer to in the case of

a patient with Lower back pain (LBP) in order of priority, 77.6% (n=103) of GPs would refer to a Physiotherapist, 8.8% (n=103) to a Chiropractor and 3% (n=103) to an Osteopath. A total of 10.1% (n=103) of GPs considered referring patients to all three modalities (figure 13). GPs were then asked to indicate how they would treat a patient with non-sinister LBP. 45.6% (n=103) of GPs indicated they would just prescribe an anti-inflammatory and 40.7% (n=103) indicated they would refer. A total of 15.5% (n=103) of GPs stated they would prescribe all three categories (rest, anti-inflammatory and referral) (figure 14).

Complementary therapy and research

Figure 15

Figure 16

Figure 17

Seventy three percent (73%) of GPs (n=101) either agreed or strongly agreed that there is scientific evidence to suggest that manual therapies are effective in the treatment of acute musculo-skeletal conditions (Figure 15). Seventy percent (70%) (n=100) agreed that there is scientific evidence to suggest that manual therapy is effective in the treatment of chronic musculo-skeletal conditions (Figure 16). Likewise, 77% (n=100) of GPs believe that scientific research into manual therapies is worthwhile (Figure 17)

DISCUSSION

The response rate (10.3%) perhaps suggests a general lack of interest by regional Victorian GPs in regards to manual medicine. It has been suggested that generally a response rate above 50% is adequate for analyzing and reporting.[12] The response rate is an issue that must be addressed in every survey research project. Although there is no statistical basis on what represents an appropriate response, a lack of response bias is far more important than a high response rate. However, the overall response rate is one guide to the representaviness of the sample respondents[12] and therefore it could be postulated that in this case those who did respond are more likely to have particularly strong positive or negative views.

Whereas previous studies have been similar in nature and looked at the referral patterns of GPs, they were much more generalized in their selection criteria. Whilst this study involved attaining information similar to those that have been conducted in the past, it is the population source and use of information that differs. The primary aim was to identify whether there is a difference in knowledge and awareness of manual therapy between regional and urban GPs, as well as determining if it would be of benefit for more manual therapists to practice regionally.

General Practitioner Knowledge of Chiropractic, Osteopathy and Physiotherapy

It is apparent that GPs have a greater knowledge of Physiotherapists in comparison to Chiropractors and Osteopaths. Our results correlated directly with those of Preston-

Thomas (1993) who found 98% of GPs had excellent-moderate knowledge of Physiotherapy and only 40% and 31% had the same knowledge for Chiropractic and Osteopathy respectively. Our findings demonstrated that 97% of regional GPs had Extensive-Average knowledge of Physiotherapy, compared to 71% for Chiropractic and 31% for Osteopathy. Reasons as to why there is such a distinct difference in knowledge of professions are likely to be multi-factorial. One suggestion as to why GPs in regional Victoria have a greater knowledge and understanding of Physiotherapy and Chiropractic than Osteopathy could be due to the difference in the total number of these practitioners practicing within that profession and within regional areas compared to Osteopathy. However, this can only be suggested though because these GPs may infact have gained this information during their undergraduate training.

Some of the more obvious reasons could be due a greater teaching during medical school and hospital placement (areas that are often closely related with Physiotherapy). Previous studies have reported this finding and concur with our study's results. 83.3% of GPs were given information regarding Physiotherapy during their undergraduate studies, compared to 91.3% of GPs who were given no information pertaining as to what Chiropractic and Osteopathy are. Hospital placement was the second greatest educating tool for GPs, with 57.5% indicating this. It was found that GPs learned most about Chiropractic and Osteopathy through patients (57% and 44.7% respectively). These results agree with findings by Carnell (1998) who stated 88% of GPs did not receive any formal training regarding manual therapies. Our results are in agreement with Preston-Thomas (1993) and Szmelskyj and Matthews (1996) who found that patients were

influential on GP knowledge of Chiropractic, Osteopathy and Physiotherapy. Although most medical students are often a few years away from general practice, this is ideally where Osteopathy should be introduced. Education should no stop here and interaction between Osteopaths and GPs in the community as well as continuing ongoing awareness via Continual professional development (CPD) program etc, rather than through patients (many whom which may well be ill-informed). Ultimately, it will be the media and public opinion which are likely to be the critical factor in determining the demand for these professions.

Seventy six percent (76%) of GPs believed that it would have been of benefit if more information was provided to them regarding the principles and practice of Chiropractic, with 65.6% and 92.3% agreeing in relation to Osteopathy and Physiotherapy. GPs believe that Physiotherapists offer the ability to treat a greater variety of conditions compared to Chiropractic and Osteopathy. GPs suggested that Physiotherapists were able to deal primarily with LBP, sports injuries, neck pain, peripheral pain and thoracic pain compared to Chiropractic and Osteopathy, which were only capable of dealing with LBP, spinal complaints and neck pain. These results clearly agree with those found by Carnell and Nicholls (1998).

General Practitioner Opinions of Chiropractic, Osteopathy and Physiotherapy

Whilst there are many reasons as to what influences oneself in forming an opinion on manual therapists, it could be argued that the level of understanding and knowledge of each profession to some extent would influence each GPs opinion. The general

consensus among GPs (78%) is that a greater understanding of the principles and practice of manual therapy would increase the likelihood of recognition and acceptance.

General Practitioners and Referral Patterns

It appears that many regional GPs are prepared to make a referral in the hope that something curative or palliative might be achieved or for psychological benefit. Eastwood (2000) found the most common reason for referral was failure of conventional medicine. Second was at the request of the patient, presumably because of patient dissatisfaction with the conventional treatment. Review of previous studies shows that Victorian doctors have similar levels of interest in training in, and of referral of patients for, complementary therapies as their colleagues in other Western countries, with the exceptions of Holland and Germany.[2] Results from this study show that 87% of GPs will refer to a particular manual therapist based on their reputation among peers, followed closely by the methods in which the practitioner treats (84.4%) and previous history with practitioner (80.5%). Marshall (1990) found that 68.7% of doctors refer patients for alternative therapies. Only 33% felt that referral needed to be to a medically qualified practitioner. This coincides with our study, where 90% of GPs actively refer patients to manual medicine in regards to musculo-skeletal conditions. Results show that GPs in the regional areas are more likely to refer patients than urban GPs, with reasons behind this again being multifactorial.

In previous research investigators have looked at the referral patterns of GPs towards different CM professions. In one study, Eastwood (2000) suggested that 1 in 5 Victorian

GPs either use or refer to CM in their practice. However, a review of other studies demonstrates mixed findings regarding the referral patterns of GPs towards the individual professions. Jamison (1995) found that 71% of Chiropractors had received referrals from medical practitioners during the month preceding the survey. When referring to a specific chiropractor, knowing the practitioner personally was a consideration in nine out of ten cases, therefore re-iterating the point that further functional integration of manual medicine into conventional health care is most likely to be achieved through practitioner communication. In concordance with our findings Leroy (1992) and Sanderson (1995) found GP's prefer to refer to Physiotherapists. A previous newspaper poll of 415 GPs stated that 31% refer to Chiropractors and 14% refer to Osteopaths[13]. 88.3% of regional Victorian GPs surveyed stated they would refer to Physiotherapists firstly in relation to a patient with musculo-skeletal complaints. When questioned as to which profession they would refer to in the case of a patient with LBP in order of priority, 77.6% (n=103) of GPs would refer to a Physiotherapist, whilst 8.8% (n=103) to a Chiropractor and 3% (n=103) to an Osteopath. A total of 10.1% (n=103) of GPs considered referring patients to all three professions (figure 13). Again, these results reiterate the findings by Carnell and Nicholls (1998) who conducted a Victoria wide study that found Physiotherapists were the main source of referral for LBP when compared to Chiropractic and Osteopathy.

In accordance with other studies there appears to be a link between knowledge of profession, inter-practitioner relationship and referral patterns. Knowledge is essentially the key element to a better understanding and relationship between GPs and manual therapists. In addition it has been suggested that improved feedback (letter, phone call)

and greater contact with one another will lead to a greater working relationship (one in which they share a common goal).

General Practitioners thoughts on Research in Complementary Therapies

In agreement with Eastwood (2000), we found that the majority of GPs questioned advocated more scientific research into CM[14]. Seventy three percent (73%) of GPs (n=101) either agreed or strongly agreed that there is scientific evidence to suggest that manual therapies are effective in the treatment of acute musculo-skeletal conditions (Figure 15). 70% (n=100) also stated that there is scientific evidence to suggest that manual therapy is effective in the treatment of chronic musculo-skeletal conditions (Figure 16). Likewise, 77% of GPs believe that scientific research into manual therapies is worthwhile (Figure 17)

Limitations of the study

There is the potential for an element of bias because GPs were sourced from Yellow Pages Online (therefore those not listed were not included in the study). Obtaining a list of all GPs in private practice was difficult because of the Privacy Acts. Therefore a larger sample size and second mail out could eliminate these problems. A second mail was not completed because this would have lead to an inability to achieve the set deadlines.

Implications of the study

The low response rate (10.3%) raises the possibility of bias as well as suggesting a possible lack of interest in manual medicine among regional Victorian GPs. Whilst results clearly demonstrate that Physiotherapists are the primary choice of referral for musculo-skeletal disorders, our findings suggest there is no reason why Osteopaths should not consider moving regionally to practice. However as a whole Osteopaths must be committed to developing an ongoing process that involves both increasing contact and education of GP's in order to do so. Of those GPs who responded, most have shown a willingness to accept manual medicine and further establish the relationship between manual medicine and orthodox medicine. Results have demonstrated a need to further educate those regional GPs about Osteopathy in order to develop of our profession.

CONCLUSION

Results indicate that whilst there is a willingness by regional Victorian GPs to actively refer patients to manual therapists regarding musculo-skeletal conditions, there is a noticeable difference in their attitudes towards the differing professions. Currently, Physiotherapists are viewed as the primary musculo-skeletal practitioners to whom GPs refer. There are a number of reasons as to why this occurs and understanding these may lead to an overall improved relationship between other Manual therapies and Orthodox medicine.

Knowledge of profession is the major influencing factor behind opinions. GPs have a greater understanding and knowledge of the principles and practice of Physiotherapy than that of Chiropractic and Osteopathy, and therefore this may contribute to their greater referral rates. The possible integration of education about these professions into medical school is one method of addressing this issue. Likewise other procedures must be adopted in conjunction with this to increase awareness and educate those GPs already in the workforce. Possible suggestions include increased seminars and personal contact. The assumption would be that due to isolation regional GPs may have less knowledge of manual therapy than their colleagues in urban areas. However, results show that whilst GPs are lacking in their knowledge of Osteopathy, there is agreement that a greater understanding of the principles and practice would result in greater referral. Increased knowledge is likely to come about by greater exposure and communication between the professions.

It is evident that the key to improving inter-professional relationships is multi-factorial. Personal contact is important, but so too is the need to push for greater CPD. As important as these changes are, if this information is not being conveyed to GPs then Osteopathy as a profession will struggle to grow and gain acceptance. This is an area that needs addressing and opens up an opportunity for further investigation.

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APPENDIX A

** Information to participants

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study investigating the attitudes and referral patterns of regional General practitioners towards manual therapists. This study will involve a short questionnaire (approximately ten minutes completion time) which will investigate knowledge of, attitudes and referral patterns to the three mainstream manual therapies: Chiropractic, Osteopathy and Physiotherapy.

The outcome of this survey will identify regional GP's current knowledge of the manual therapies. The data from this research will be published. However, confidentiality will be preserved via the adoption of an alphanumeric coding system. Data will be de – identified and all responses will be alphanumerically coded when received.

In addition to this information leaflet, you will find attached a survey questionnaire, which should be filled out in pen and returned in the envelope provided. Completion of this survey implies consent to participation in the project. Individual participants will in **NO** way be identified by the researchers. Participation in this study is voluntary.

Procedures:

A survey of the opinions and perceptions of regional Victorian General Practitioners towards complementary manual therapies is to be undertaken. Each candidate has been mailed a package consisting of an information leaflet and survey regarding the research project. The information leaflet outlines the objectives of the study and clearly outlines that return of the questionnaires implies consent to participation. The questionnaire entails thirty four questions regarding manual therapies and its role within orthodox medicine. All participants are asked to please return questionnaires (via reply paid postage envelope) by May 10th, 2003.

Any queries about your participation in this project may be directed to the researchers (Dr Brian Nicholls (Principal Investigator), D.O, M.A. Brian.Nicholls@vu.edu.au or Heath Williams (Student Investigator), BSc (clinical sciences) Heathwilliams21@yahoo.com.au. If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MC, Melbourne, 8001 (telephone no: 03-9688 4710).

APPENDIX B

** Registered Medical Board Regional Victorian General Practitioner's Questionnaire

Registered Medical Board Regional Victorian General Practitioner's Survey

Note: By completing and returning this survey you are implying consent to your participation in the project and subsequently publication of the collated results

Name: _____

Gender: _____

D.O.B: _____

Qualifications: _____

Year of Qualifications: _____

Practice Location(s): _____

For question 1, please use the scale (below) to record your response:

A =	Extensive knowledge: High understanding of the profession, including the types of conditions treated, techniques used and principles behind the manual therapy.
B =	Average knowledge: Some understanding of the conditions treated and techniques used by the profession.
C =	Limited knowledge: Understand that the profession exists.
D =	No knowledge: No understanding or recognition of the professions existence.

1. With regard to the above table, how would you rate your knowledge of each of the following professions?

Please tick ☑ the appropriate box:

	A	**B**	**C**	**D**
Chiropractic				
Osteopathy				
Physiotherapy				

2. If you selected A, B or C to any part of question 1, please tick ☑ the appropriate box from which you learned most about the manual therapies (Chiropractic, Osteopathy and Physiotherapy). You may tick ☑ more than one box.

	Chiropractic	**Osteopathy**	**Physiotherapy**
Undergraduate study			
Postgraduate study			
Articles published in medical journals.			
Pamphlets issued by those professions			
Family/Friends			
Patients			
Seminars/Conferences			
Print or Broadcast media			
Internet			
Hospital placement			
Other (please tick and specify below)			

3. Please tick ☑the most common conditions that you believe would benefit from each of the following manual therapies. You may tick ☑ more than one box for each of the categories listed.

	Chiropractic	**Osteopathy**	**Physiotherapy**
Low Back Pain (LBP)			
Lower limb pain			
Thoracic pain			
Neck pain			
Upper arm pain			
Sports injuries			
Constipation			
Migraine			
Spinal complaints			
P.M.T			
Arthritis			
Headaches			
Peripheral joint pain			
Visceral pain			
Asthma			

Please tick ☑ the most appropriate response to each of the following statements.

4. Chiropractors are Government recognized practitioners in all states and territories of Australia.

   Yes ☐ No ☐ Unsure ☐

5. Osteopaths are Government recognized practitioners in all states and territories of Australia.

   Yes ☐ No ☐ Unsure ☐

6. Physiotherapists are Government recognized practitioners in all states and territories of Australia.

   Yes ☐ No ☐ Unsure ☐

7. In the last 10 years the number of Chiropractors, Osteopaths and Physiotherapists has increased.

   Yes ☐ No ☐ Unsure ☐

8. Have you ever been treated by a Chiropractor?

   Yes ☐ No ☐

   If your answer was yes, was your treatment favourable?

   Yes ☐ No ☐

9. Have you ever been treated by an Osteopath?

   Yes ☐ No ☐

   If your answer was yes, was your treatment favourable?

   Yes ☐ No ☐

10. Have you ever been treated by a Physiotherapist?

    Yes ☐ No ☐

    If your answer was yes, was your treatment favourable?

    Yes ☐ No ☐

11. During your undergraduate studies information was provided to you regarding the principles and practice of Chiropractic.

Yes ☐ No ☐ Unsure ☐

12. During your undergraduate studies information was provided regarding the principles and practice of Osteopathy.

Yes ☐ No ☐ Unsure ☐

13. During your undergraduate studies information was provided regarding the principles and practice of Physiotherapy.

Yes ☐ No ☐ Unsure ☐

14. Do you believe it would be beneficial if medical courses were provided with more information regarding the basic principles and practice of Chiropractic.

Yes ☐ No ☐ Unsure ☐

15. Do you believe it would be beneficial if medical courses were provided with more information regarding the basic principles and practice of Osteopathy.

Yes ☐ No ☐ Unsure ☐

16. Do you believe it would be beneficial if medical courses were provided with more information regarding the basic principles and practice of Physiotherapy.

Yes ☐ No ☐ Unsure ☐

17. A greater understanding of the principles and practice of manual therapies would increase the likelihood of recognition and acceptance.

Yes ☐ No ☐ Unsure ☐

18. A greater understanding of the principles and practice of manual therapies would increase the likelihood of patient referral.

Yes ☐ No ☐ Unsure ☐

19. Do you believe that personal contact with manual therapists on a regular basis would influence the likelihood of patient referral.

Yes ☐ No ☐

20. Patient feedback is likely to impact upon future patient referral to manual therapists.

Yes ☐ No ☐

21. Do you actively support the referral of patients to manual therapies in regards to certain medical problems and conditions.

Yes ☐ No ☐

22. Do you currently know of any Chiropractors within your local area?

Yes ☐ No ☐

If your answer was yes, do you currently refer to the local Chiropractor(s)?

Yes ☐ No ☐

23. Do you currently know of any Osteopaths within your local area?

Yes ☐ No ☐

If your answer was yes, do you currently refer to the local Osteopath(s)?

Yes ☐ No ☐

24. Do you currently know of any Physiotherapists within your local area?

Yes ☐ No ☐

If your answer was yes, do you currently refer to the local Physiotherapist(s)?

Yes ☐ No ☐

25. Would you be more likely to refer to patients to Chiropractors if there were more of them in the area?

Yes ☐ No ☐

26. Would you be more likely to refer patients to Osteopaths if there were more of them in the area?

Yes ☐ No ☐

27. Would you be more likely to refer patients to Physiotherapists if there were more of them in the area?

Yes ☐ No ☐

28. Do you currently refer to Manual therapists? (Chiropractors, Osteopaths, Physiotherapists) and if so please state your order of preference and approximate referral rates per week.

Order of preference	Manual Therapist	Approximate weekly referral rates
1		
2		
3		

29. When referring patients for other forms of treatment (manual therapy) what factors affect your referral? Please tick ☑ the appropriate box.

Location	
Cost	
Reputation	
Previous interaction with practitioner.	
Previous history of positive outcome.	
Chronicity of the patient	
Feel that orthodox medicine will not be the most beneficial	
Unable to make a difference	
Patient refuses drug therapy	
Specificity of treatment e.g. You feel a certain technique will be beneficial to the patient.	

30. When referring patients to manual therapists for other forms of treatment, by which means do you go about doing this? Please tick ☑ the appropriate box.

Phone call	
Letter	
Referral without any form of contact with manual therapist	
Fax	
Email	
Others (please specify)	

For questions 31 - 33, please use the following scale to record your response with a tick ☑ in the box provided.

1 =	Strongly Disagree
2 =	Disagree
3 =	No Opinion/Unsure
4 =	Agree
5 =	Strongly Agree

31. There is scientific evidence to suggest that manual therapies are effective in the treatment of acute musculo – skeletal conditions.

    1.☐ 2.☐ 3.☐ 4.☐ 5.☐

32. There is scientific evidence to suggest that manual therapies are effective in the treatment of chronic musculo – skeletal conditions.

    1.☐ 2.☐ 3.☐ 4.☐ 5.☐

33. Scientific research into manual therapies is worthwhile.

    1.☐ 2.☐ 3.☐ 4.☐ 5.☐

34. CASE SCENARIO

Manual therapy offers more than musculo - skeletal relief, however the domain of manual therapy is purely within musculo - skeletal problems. If a patient presents to your clinic with back pain that has been found to have no sinister cause. Would you:

Please tick ☑ the appropriate box

Prescribe rest ☐
Prescribe an anti – inflammatory ☐
Refer ☐

If you considered referring your patient, which of the following professions would you refer to and what are your reasons for selecting that particular therapy?

Please tick ☑ the appropriate box

Chiropractor ☐ Osteopath ☐ Physiotherapist ☐

END OF THE SURVEY!

APPENDIX C

** Statistical results

Table 1 Rural GP's perceived knowledge of manual therapies (%) (n=101)

	Extensive Knowledge	Average Knowledge	Limited Knowledge	No knowledge
Chiro	7.77	61.17	26.21	2.91
Osteo	4.85	25.24	59.22	6.80
Physio	61.17	33.01	1.94	0.00

Table 2 Did your undergraduate studies provide information regarding the principles and practice of CM (%)

	Yes	No	Unsure
Chiropractic (n=101)	13.90	81.10	5
Osteopathy (n=92)	6.50	91.30	2.20
Physiotherapy (n=102)	83.30	14.70	2

Table 3 Place of learning of professions (%) (n=103)

	Chiropractic	Osteopathy	Physiotherapy
Undergraduate study	3.80	1	54.40
Postgraduate study	21.40	8.70	43.70
Articles published in journals	25.20	7.70	42.70
Pamphlets issued by those professionals	19.40	17.40	36
Family/Friends	24.20	16.50	32
Patients	57.20	44.70	41
Seminars/Conferences	5.80	5.80	28.10
Hospital placement	1	1	57.50

Table 4 Manual therapy professions are Government recognised practitioners in all states and territories of Australia

	Yes(%)	No(%)	Unsure(%)
Chiropractic (n= 101)	44.50	8.90	46.50
Osteopathy(n=101)	13.80	17.80	68.30
Physiotherapy(n=101)	97		3

Table 5 Conditions most commonly thought to be treated by Manual Therapies (%) (n=103)

	Chiropractic	Osteopathy	Physiotherapy
Lower back pain	79	46	91
Lower limb pain	30	28	59
Thoracic pain	48.5	34	72
Neck pain	58	35	75
Upper limb pain	29	28	52.5
Sports injuries	19	13	88
Migraine	30	22	32
Spinal complaints	57	38	70
Arthritis	10	17.5	58
Headaches	39	29	46.5
Asthma	4	4	29

Figure 1 Percentage response of information provided regarding manual medicine during undergraduate studies.

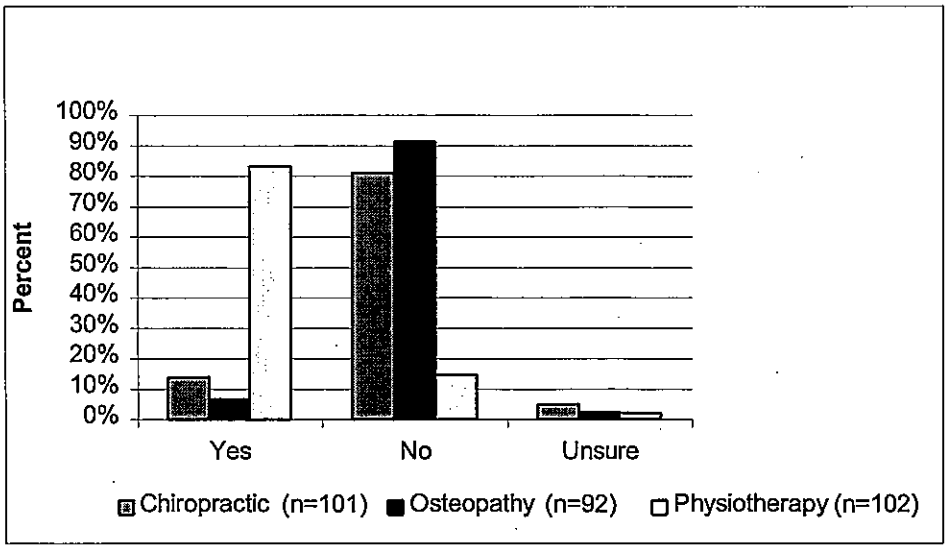


Figure 2 Percentage response of rural GP contact with manual medicine within local area

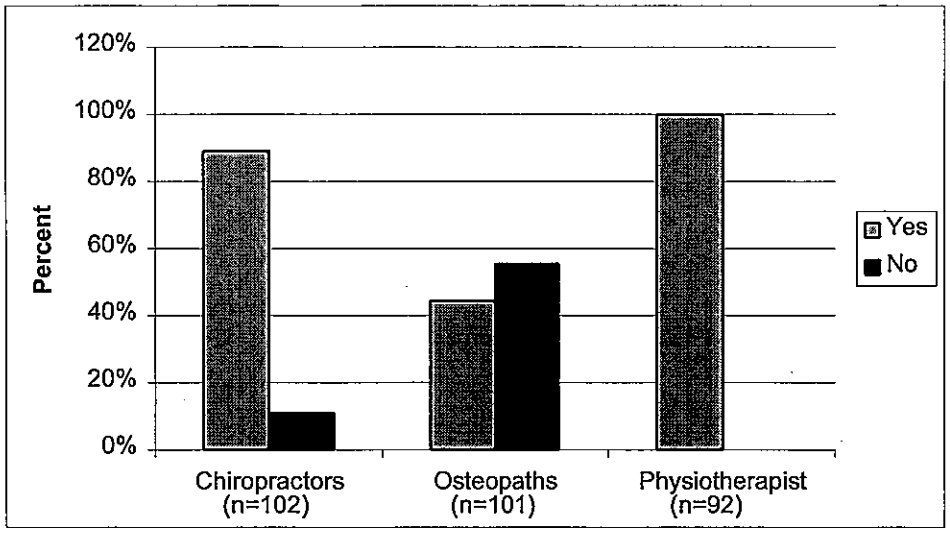


Figure 3 Percentage response of rural GPs who believe it would have been of benefit if they were provided with more information regarding manual medicine during their undergraduate studies.

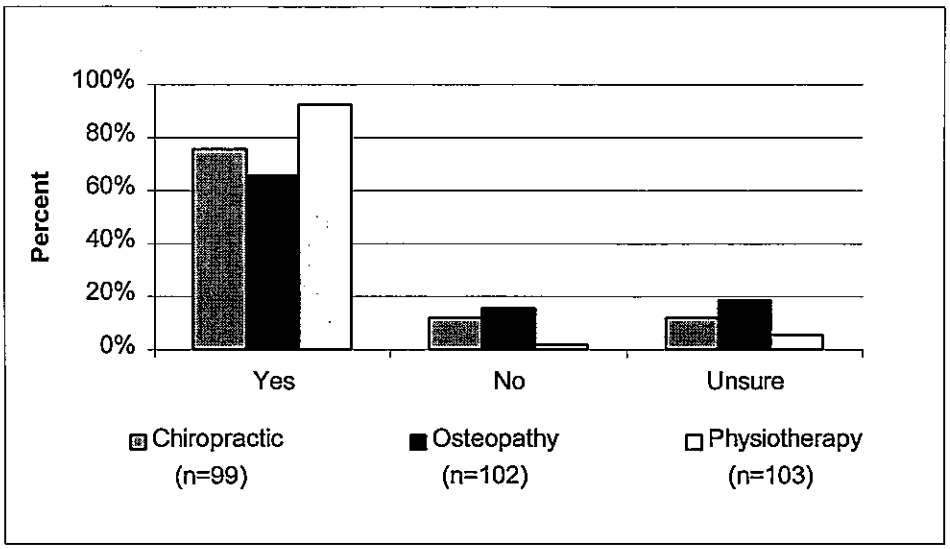


Figure 4 Percentage response of rural GPs who believe it would have been of benefit if they were provided with more information regarding the principles and practice of Osteopathy during their undergraduate studies (n=102)

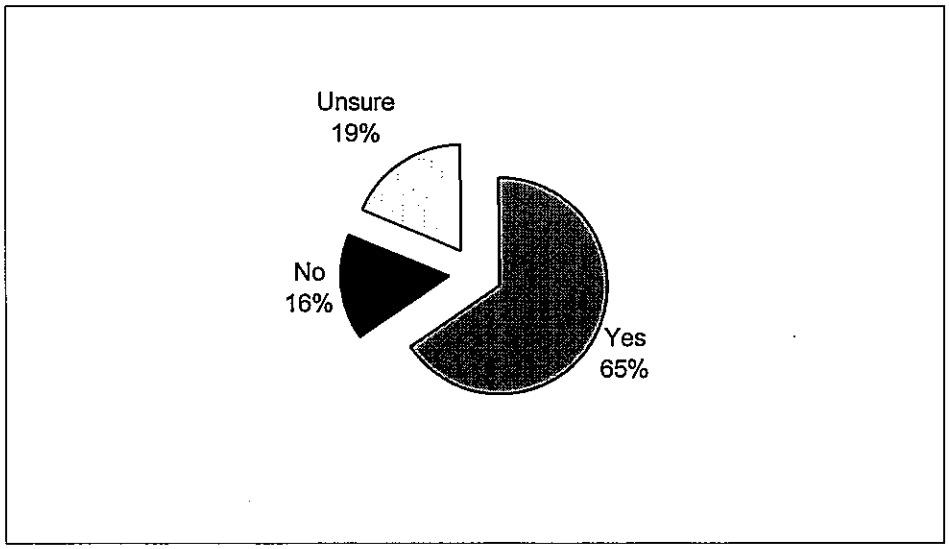


Figure 5 Percentage response of rural GPs who believe a greater understanding of the principles and practice of manual therapies would increase the likelihood of recognition and acceptance (n=102)

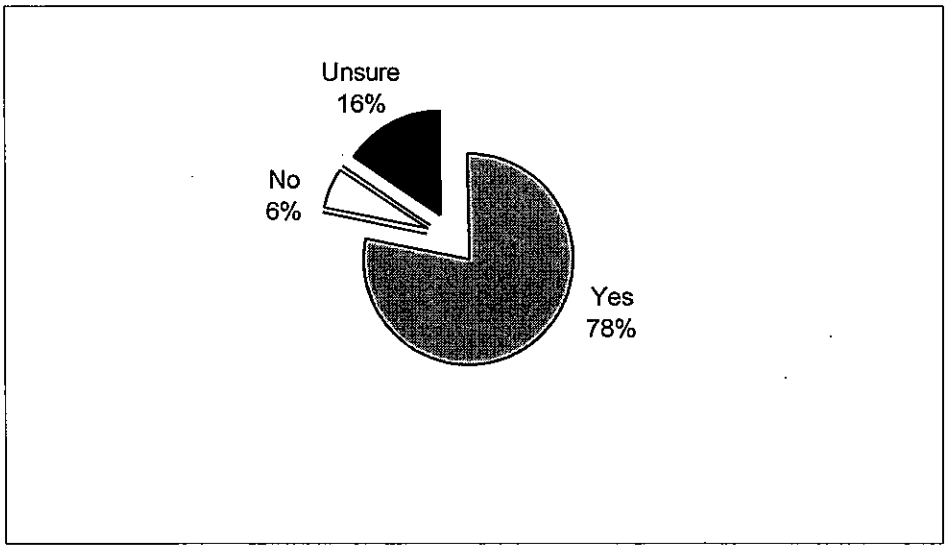
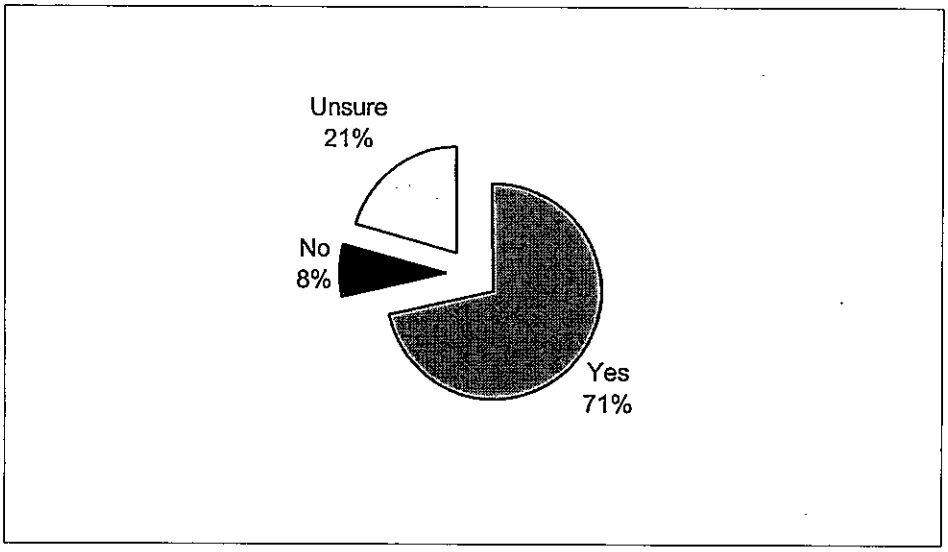


Figure 6 Percentage response of rural GPs who believe a greater understanding of the principles and practice of manual therapies would increase the likelihood of patient referral (n=102)



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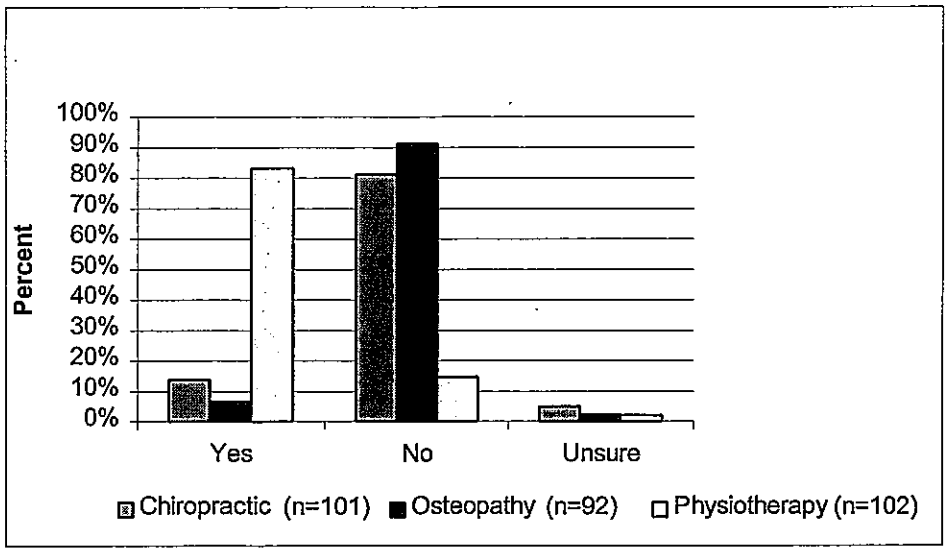

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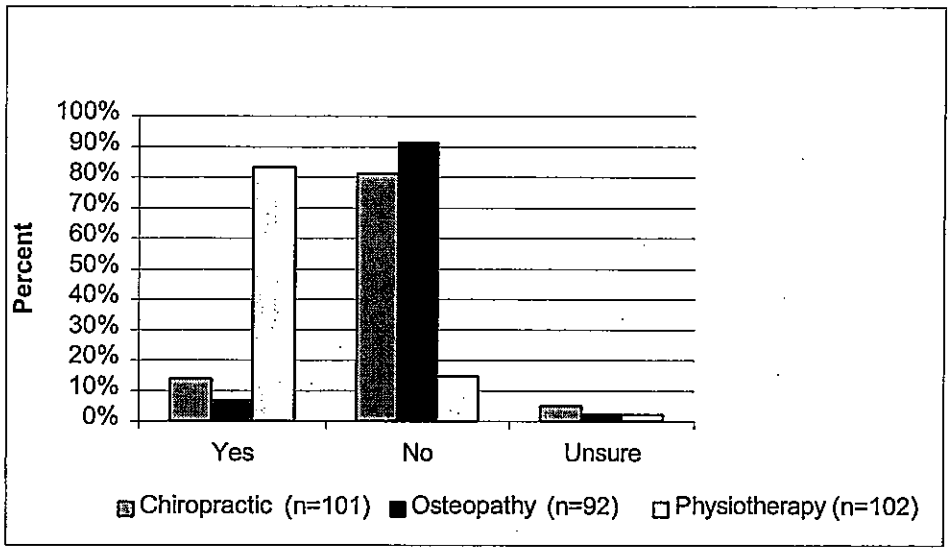
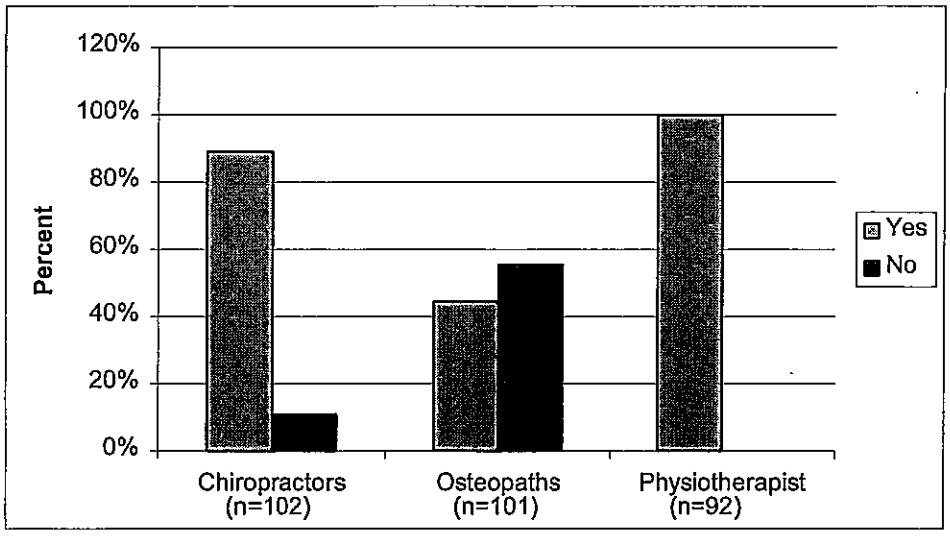


Figure 2 Percentage response of rural GP contact with manual medicine within local area



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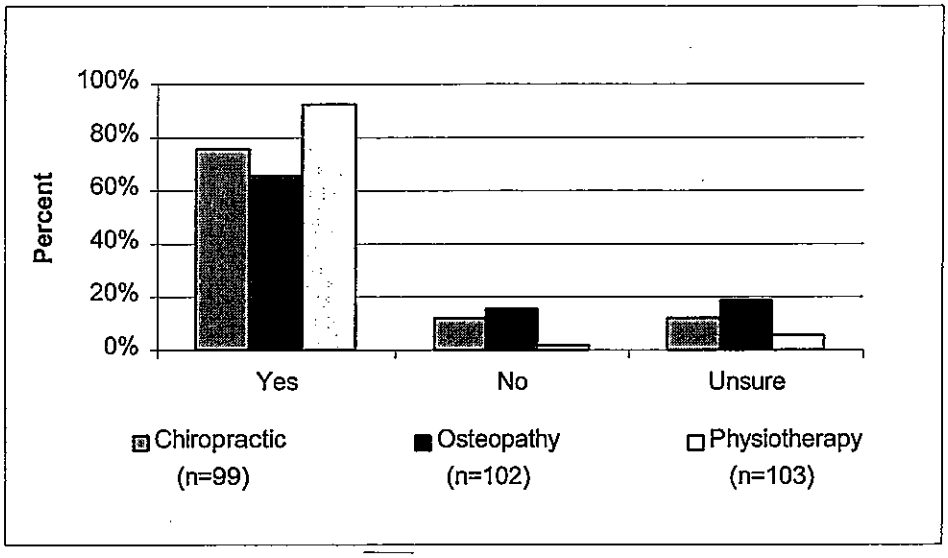


Figure 4 Percentage response of rural GPs who believe it would have been of benefit if they were provided with more information regarding the principles and practice of Osteopathy during their undergraduate studies (n=102)

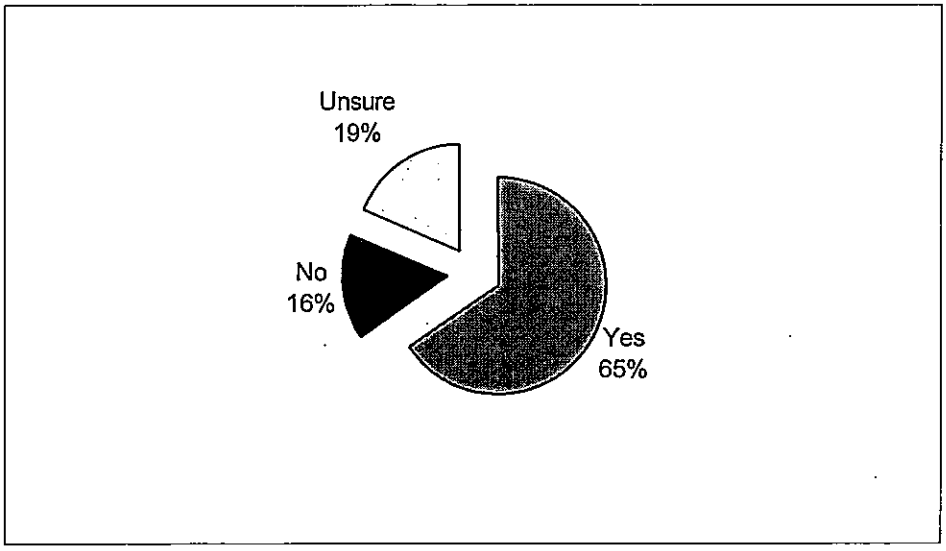


Figure 5 Percentage response of rural GPs who believe a greater understanding of the principles and practice of manual therapies would increase the likelihood of recognition and acceptance (n=102)

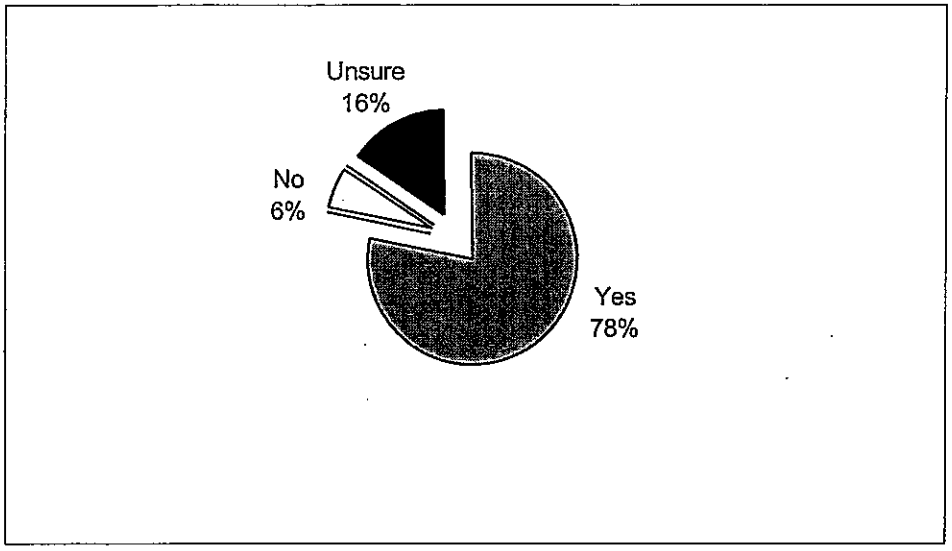


Figure 6 Percentage response of rural GPs who believe a greater understanding of the principles and practice of manual therapies would increase the likelihood of patient referral (n=102)

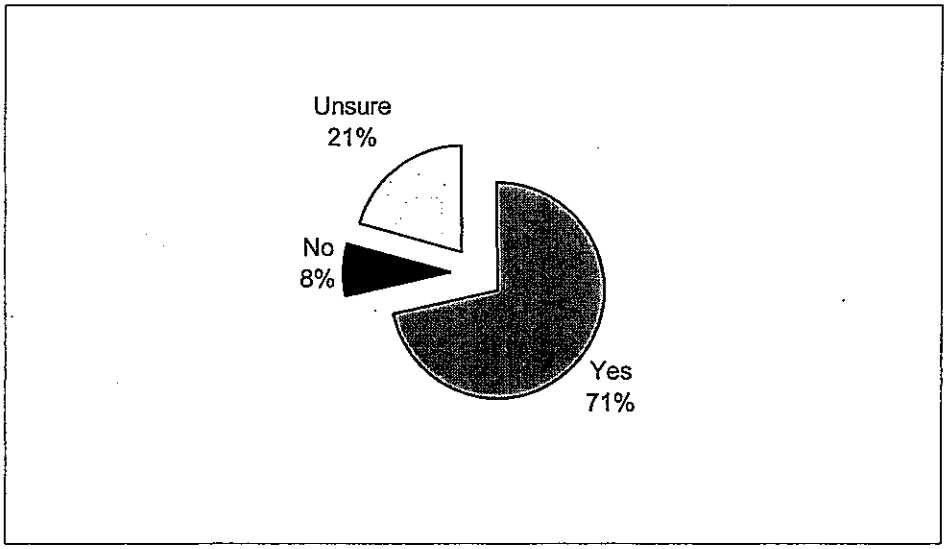


Figure 7 Percentage response of rural GP who believe that personal contact with manual therapists on a regular basis would influence the likelihood of patient referral (n=102)

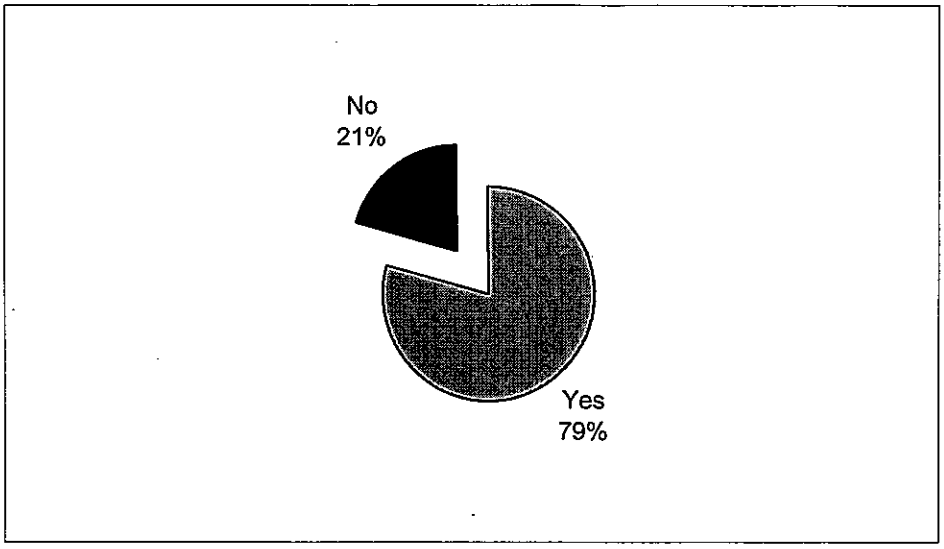


Figure 8 Percentage response of rural GPs who believe patient feedback is likely to impact upon future patient referral to manual therapists (n=102)

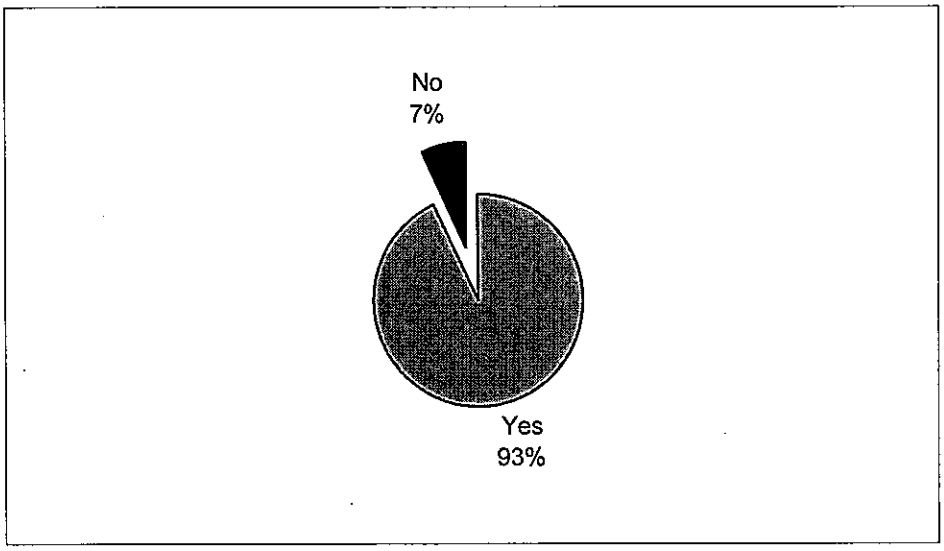


Figure 9 Percentage response of rural GPs who believe they would be more likely to refer patients to Osteopaths if there were more of them in the area (n=102)

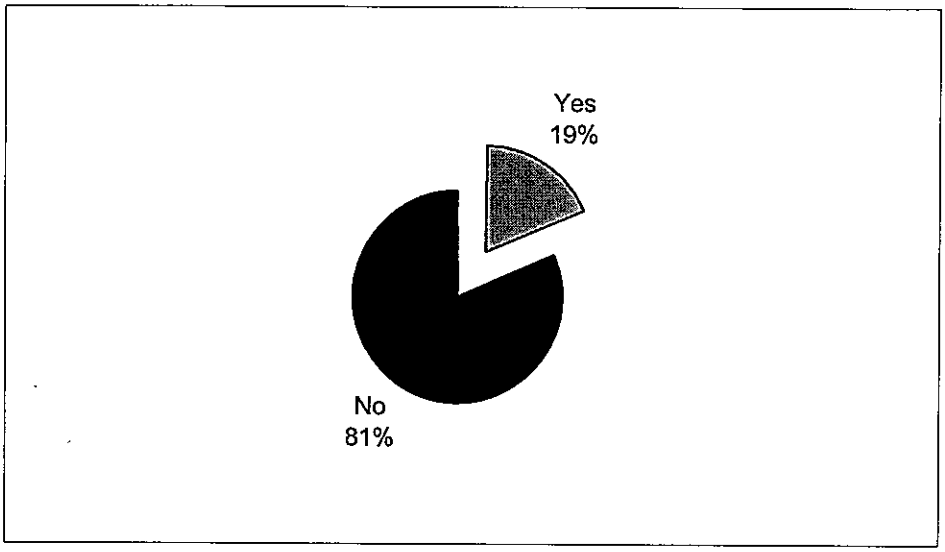


Figure 10 Percentage response of rural GPs preferred methods of referral(n=103)

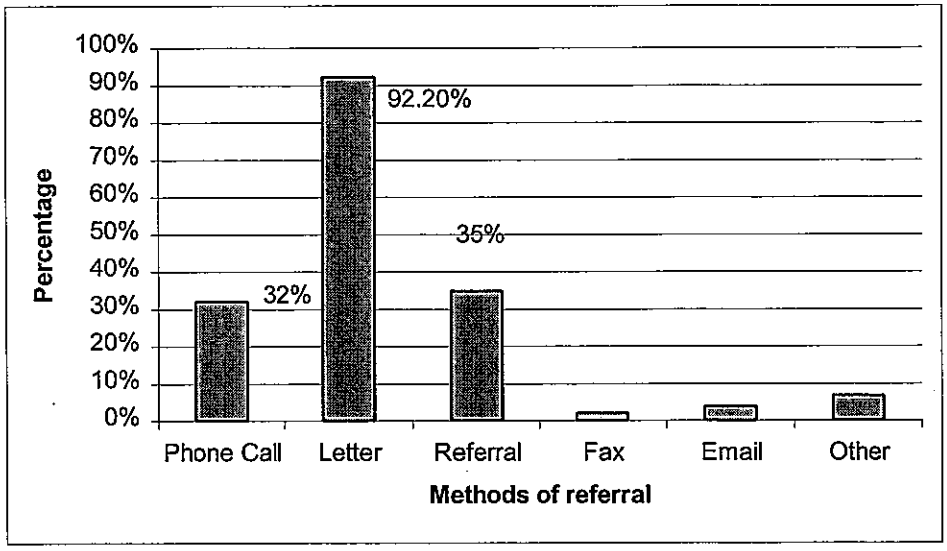


Figure 11 Percentage response of the major factors influencing a rural GPs referral to manual therapists (n=90)

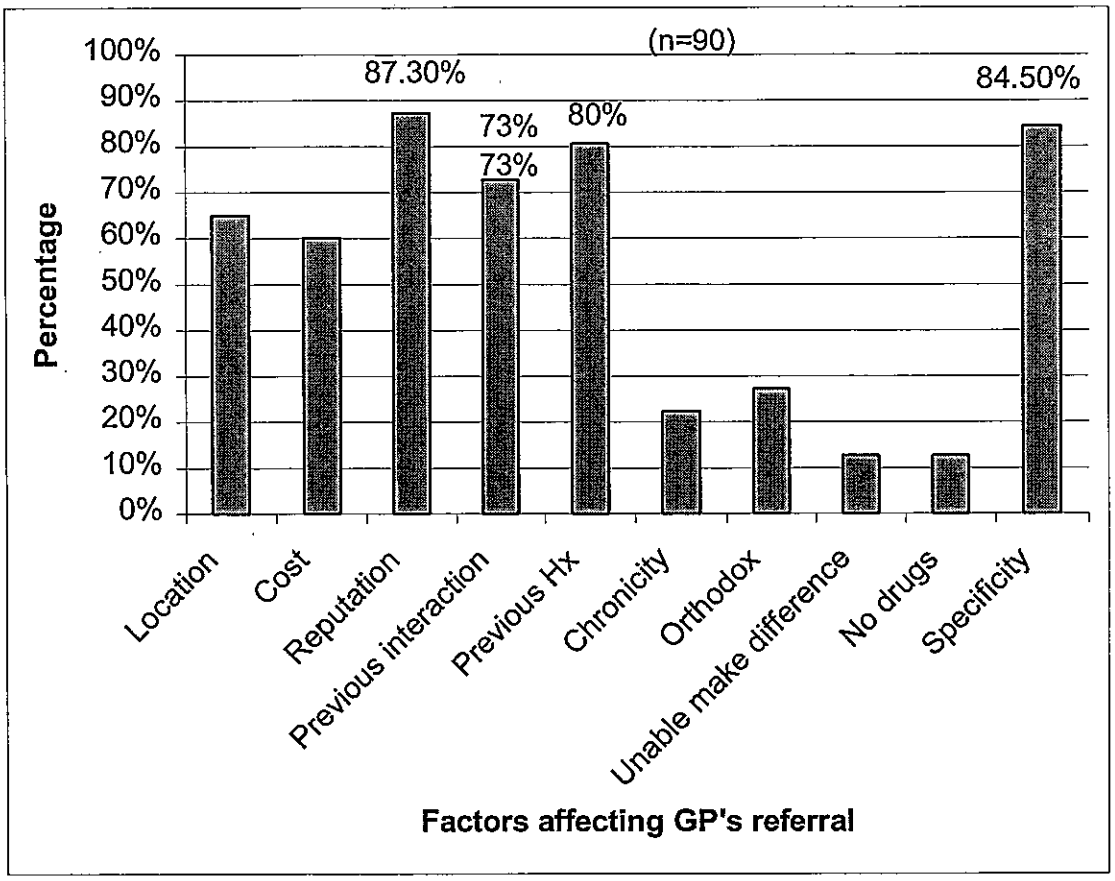


Figure 12 Percentage response of rural GPs preference of referral to manual therapists (n=103)

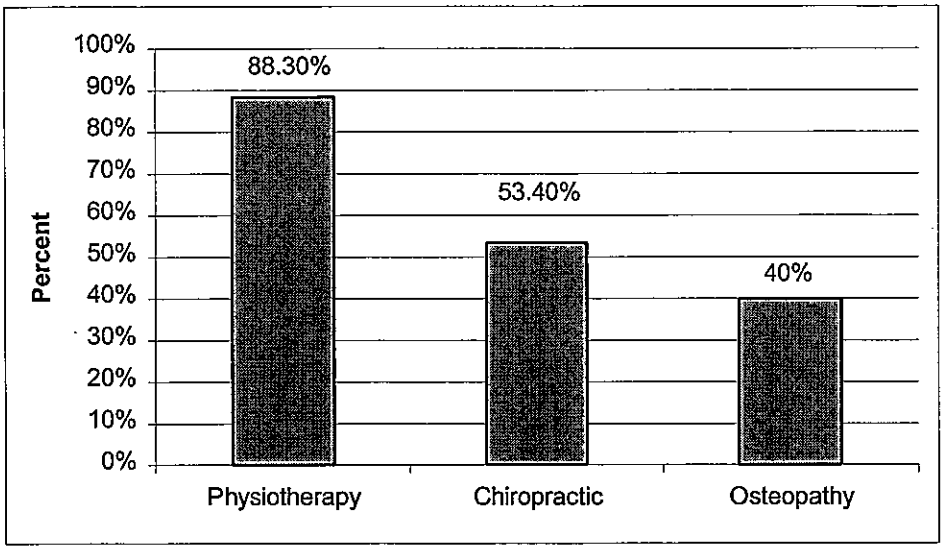


Figure 13 Percentage response of rural GPs choice of referral with a patient with LBP (n=103)

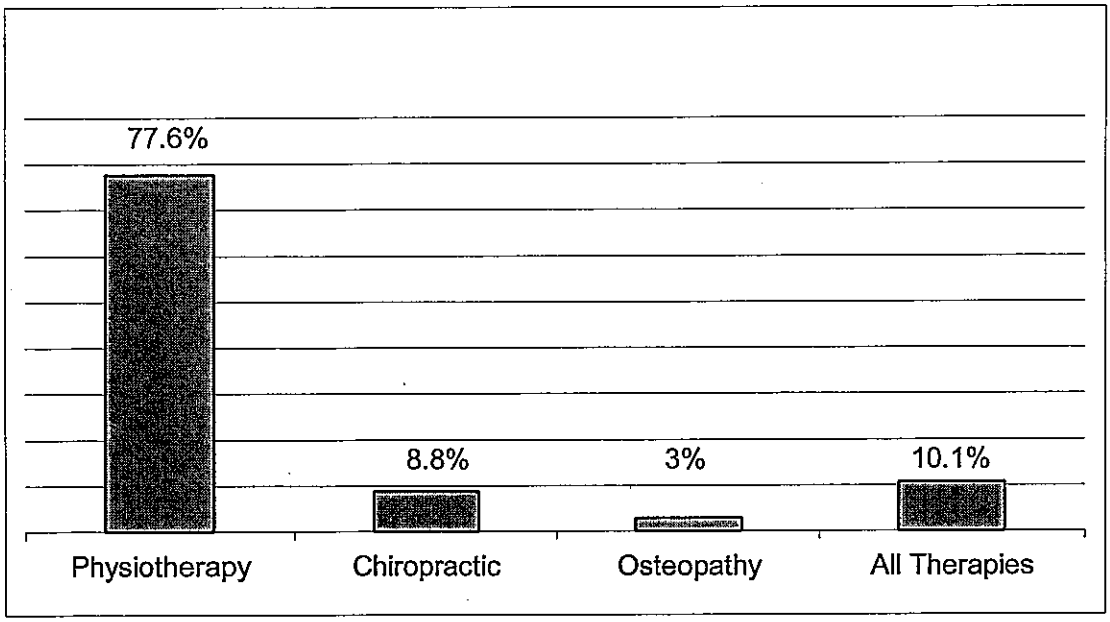


Figure 13 Percentage response of rural GPs choice of referral with a patient with LBP (n=103)

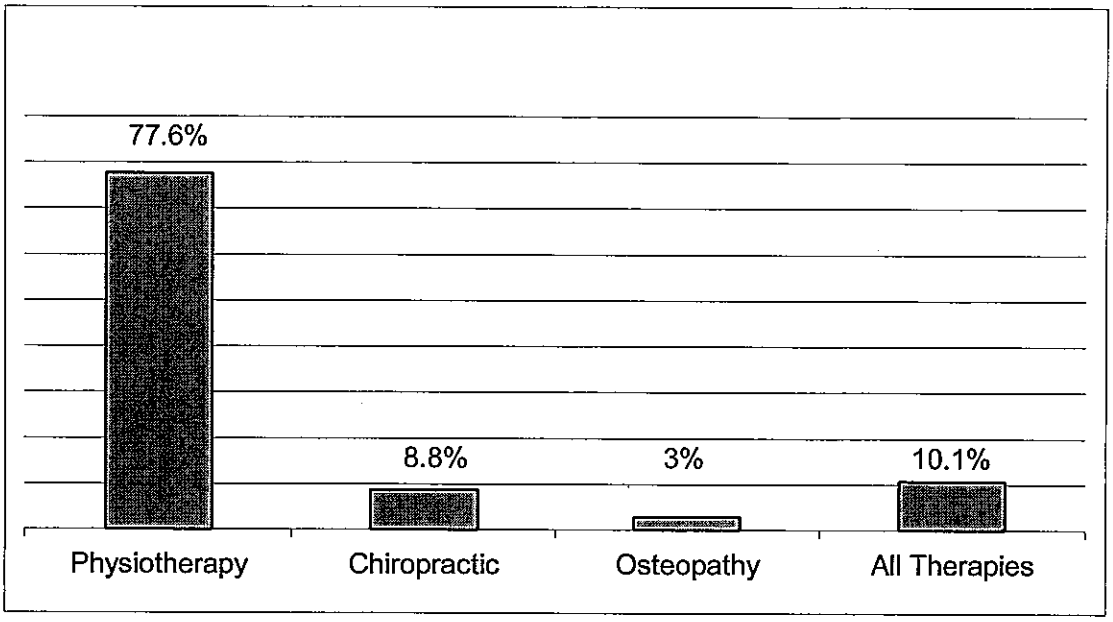


Figure 14 Percentage response of rural GPs preferred treatment for non sinister LBP (n=103)

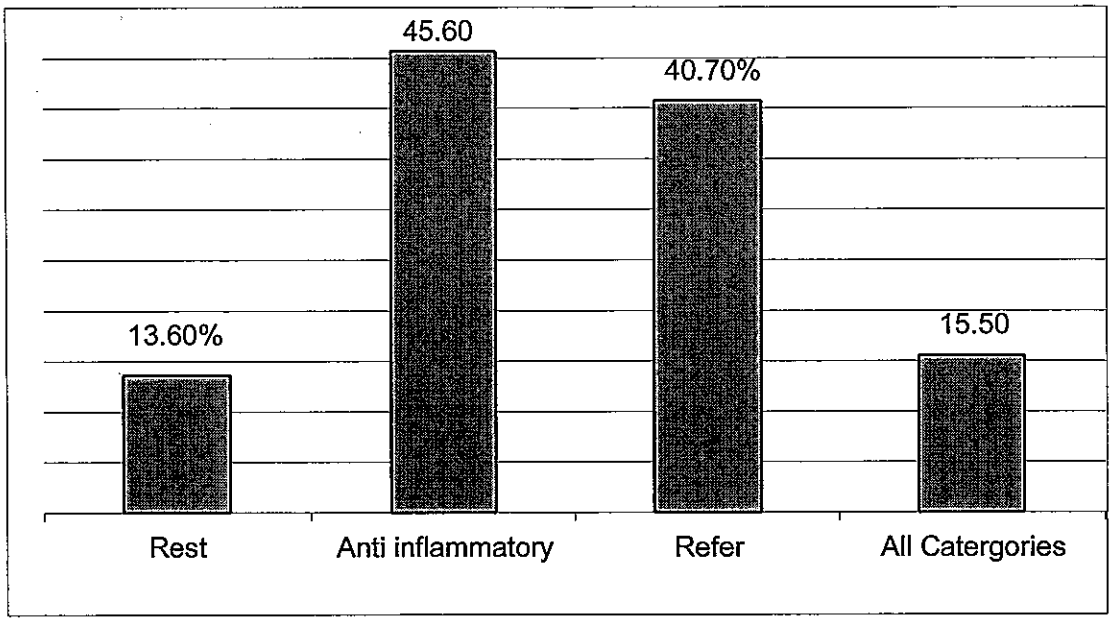


Figure 15 Percentage response of rural GPs belief that there is scientific evidence to suggest that manual therapies are effective in the treatment of acute musculo-skeletal conditions (n=101)

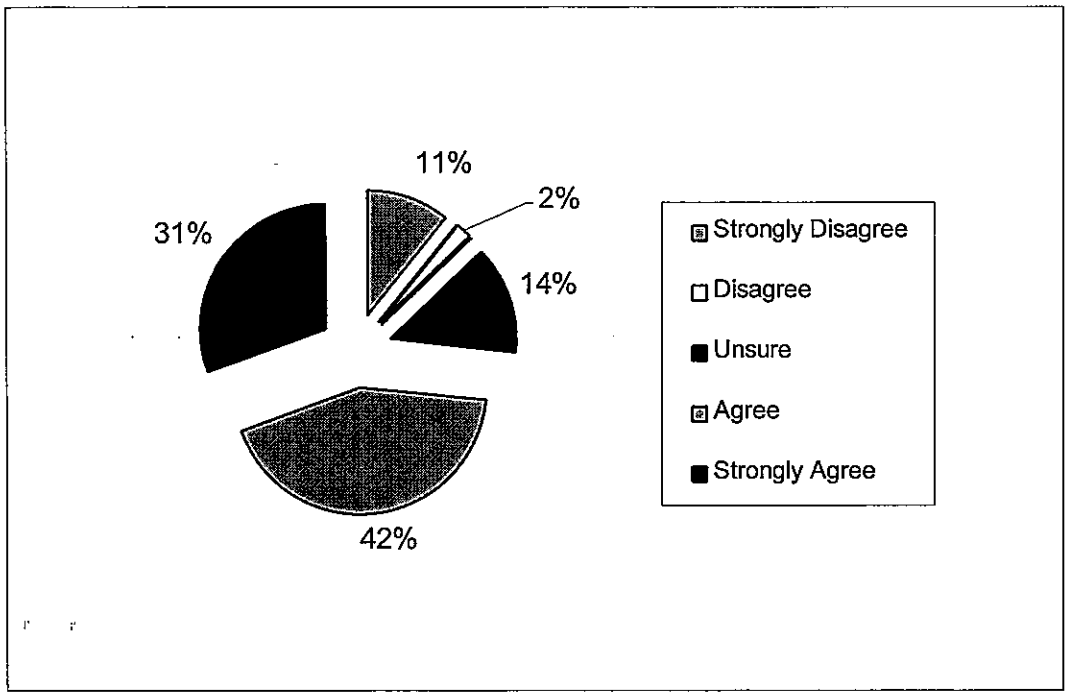


Figure 16 Percentage response of rural GPs belief that there is scientific evidence to suggest that manual therapies are effective in the treatment of chronic musculo-skeletal conditions (n=100)

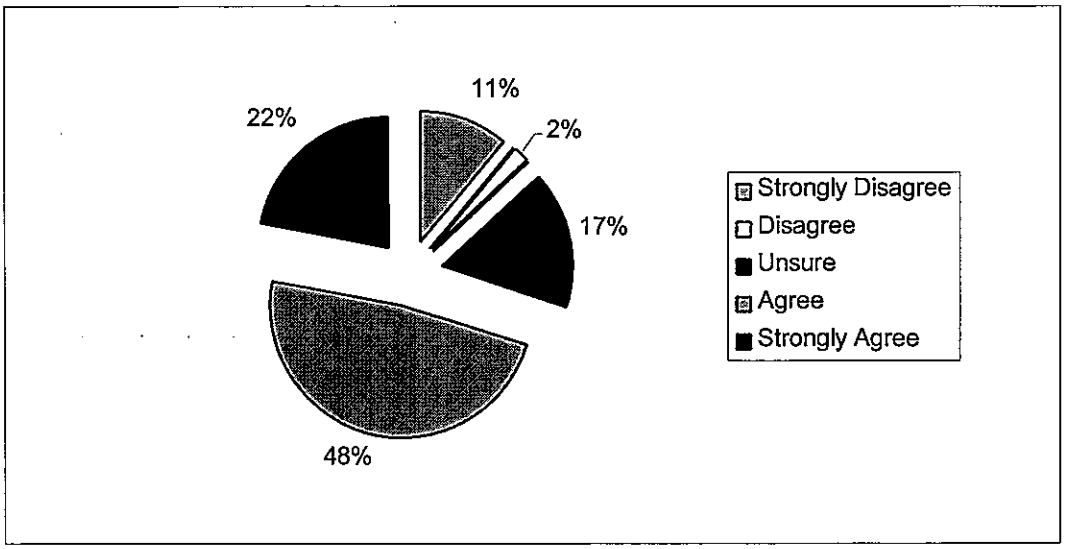
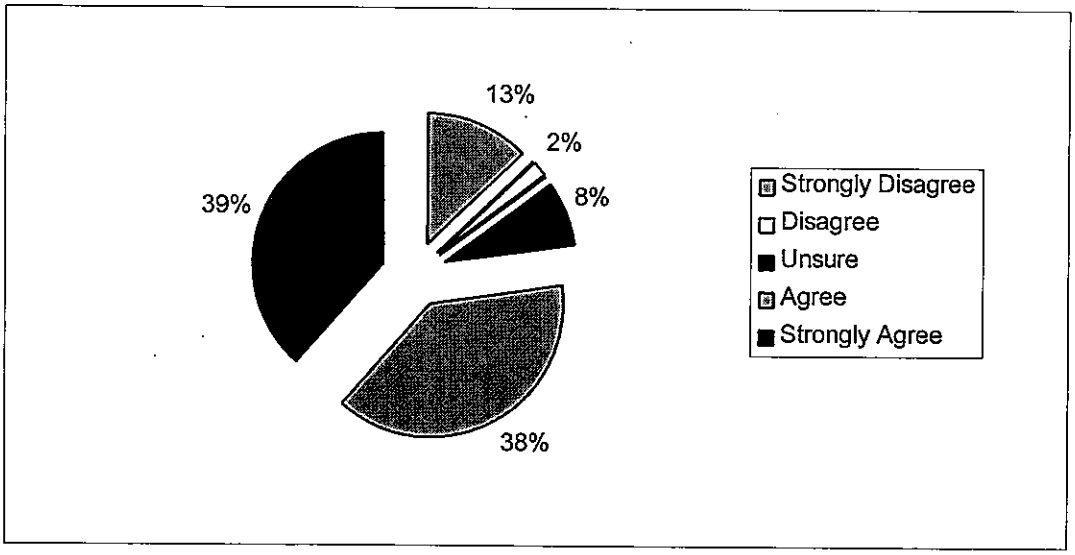


Figure 17 Percentage response of rural GPs belief that scientific research into manual therapies is worthwhile (n=101)



APPENDIX D

** Excel statistical data

Question 1.

Manual Therapy	Extensive Knowledge	Average Knowledge	Limited Knowledge	No Knowledge
Chiropractic	8	63	27	3
Osteopathy	5	26	61	7
Physiotherapy	63	34	2	0

Question 2.

Catergory	Chiro.	Osteo.	Physio.
Undergraduate study	4	1	56
Postgraduate study	22	9	45
Articles published in journals	26	8	44
Pamphlets issued by those professionals	20	18	37
Family/Friends	25	17	33
Patients	59	46	42
Seminars/Conferences	6	6	29
Print or Broadcast media	13	6	11
Internet	2	1	4
Hospital placement	1	1	49
Other	11	8	14
Total	103	103	103

Question 3.

Condition	Chiro.	Osteo.	Physio.
Lower back pain	74	48	94
Lower limb pain	31	29	61
Thoracic pain	50	35	74
Neck pain	60	36	78
Upper limb pain	30	29	54
Sports injuries	20	14	91
Constipation	2	3	3
Migraine	31	23	33
Spinal complaints	59	39	72
P.M.T	6	6	3
Arthritis	11	18	60
Headaches	41	30	48
Peripheral joint pain	11	16	76
Visceral pain	6	8	8
Asthma	4	5	30

Question 4 – 27.

Question	Yes	No	Unsure	Total
4	45	9	47	101
5	14	18	69	101
6	98		3	101
7	75		24	99
8	26	74	0	100
9	7	92	0	99
10	77	24	0	101
11	14	82	5	101
12	6	84	2	92
13	85	15	2	102
14	75	12	12	99
15	67	16	19	102
16	97	2	6	105
17	80	6	16	102
18	73	8	21	102
19	81	21		102
20	95	7		102
21	92	10		102
22	91	11		102
23	45	56		101
24	92			92
25	6	97		103
26	19	83		102
27	29	58		87

Question 28.

Part A. Choice of referral

Choice Referral	Manual Therapy	Number
First	Physiotherapy	91
Second	Physiotherapy	4
Third	Physiotherapy	2
First	Chiropractic	3
Second	Chiropractic	55
Third	Chiropractic	10
First	Osteopathy	3
Second	Osteopathy	8
Third	Osteopathy	41

Part B. Number of referrals.

	Equal/Less 1	1 to 5	5 to 10	10 to 15	Equal/Greater 15
Physiotherapy	12	51	16	7	1
""	1	3			
""	1				
Total	14	54	16	7	1
Chiropractic	1	3			
""	30	11			
""	5				
Total	36	14			
Osteopathy	3				
""	4	3			
""	15	1			
Total	19	4			

Question 29.

Catergory	Total Respondents
Location	67
Cost	62
Reputation	90
Previous interaction	75
Previous Hx	83
Chronicity	23
Orthodox	28
Unable make difference	13
No drugs	13
Specificity	87

Question 30.

Catergory	Number Respondents	Total
Phone Call	33	103
Letter	95	103
Referral	36	103
Fax	2	103
Email	4	103
Other	7	103

Question 31 – 33.

Question	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
31	11	2	14	43	31
32	11	2	17	48	22
33	13	2	8	39	39

Question 34.

Part A. Type of treatment

Catergory	Total
Rest	14
Anti inflammatory	47
Refer	42
All Catergories	16

Part B. Choice of referral

Choice of referral	Total
Physiotherapy	80
Chiropractic	9
Osteopathy	3
All Therapies	11