

STUDY OF REFERRAL SOURCES,
PATIENT RETENTION RATES AND
PATIENT SATISFACTION IN THE
VICTORIA UNIVERSITY
OSTEOPATHIC CLINIC

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ABSTRACT:

Background: Patient satisfaction has been identified as a critical success factor in the sustained long term success of practices in the health care industry. The Victoria University Osteopathy Clinic (VUOC) is a clinic, which provides a competitively priced, high quality service yet suffers currently from low patient numbers.

Objectives: The aim of this study was to investigate patient satisfaction in the VUOC, and to investigate referral systems and retention rates in the clinic.

Method: Forty new patients (who met inclusion criteria), aged 18-70, after their initial consultation were invited to fill out a patient satisfaction survey which rated (likert scale, 1-9) multiple aspects of the clinic, with the option to provide additional comments regarding each service. These patients' files were then examined for referral patterns and retention rate (attendance for the following treatment).

Results: Analysis of the patient satisfaction survey revealed satisfaction with the majority of areas within the clinic. All aspects of the clinic received a score of 5 or greater except parking. The highest areas of satisfaction were cost of the treatment (average score of 8.0) and attitude of the student osteopaths (average score of 8.1), most other areas scored between 7.0 and 7.9. Overall the level of patient satisfaction with the clinic was quite high at 7.6. Study of the referral systems demonstrated that the majority of people entering the clinic were by word-of-mouth; either from student osteopaths (37.5%); or from patients of the VUOC (30%). Retention rates revealed 70% of patients returned after initial treatment for their follow-up consultation (second treatment).

Conclusion: Extrapolation of conclusions from this study is difficult in view of the small sample size. This study indicates that current patients are mostly satisfied with the Victoria University Osteopathic Clinic, and suggests that any deficiencies in patient numbers may be due limitations within the study.

Keywords: Victoria University Osteopathic Clinic, patient satisfaction, retention rates, referral systems.

INTRODUCTION

It is an important issue of the Victoria University Osteopathic Clinic (VUOC) to analyse patient's views and opinions for the success of the clinic. This will provide the clinic with a solid basis upon which to implement changes if required, based on findings from the study. These changes will endeavour to sustain the medium to long-term viability of the clinic as a source of continuing service and education for students and the public.

A strong concern about patient satisfaction has dominated the health care industry for many years, reflecting, perhaps, the introduction of the marketing culture into this service industry¹. As a result of these trends, patient satisfaction has become an important element in the marketing and delivery of health care.

Williams² (1998) stated, "If services were to be evaluated, then an element of the evaluation should include the health consumer's perspective." In most places the result was a satisfaction survey.

Patient Satisfaction has been considered an important issue when it comes to any type of clinic (i.e. Doctors, Dentists, etc.), and it is beneficial to determine how patients feel and think about clinics. A strategic understanding by practitioners of the issues surrounding patient satisfaction can contribute to clinics becoming more successful and flourish.

Patient satisfaction has been perceived as an attitude that is determined by the confirmation of the patient's expectation³. This lends support to the idea that the satisfaction of a patient may play an important role in the success of a clinic³.

Davidow⁴ (1994) showed that without valid measurement systems, it is impossible to know what actions are required to improve customer service. Additionally, it has been found that instead of patient satisfaction merely serving as a useful tool for predicting successful clinical practice, patient satisfaction can be "construed as evidence that the clinical encounter is actively contributing to the patient's health

status”⁵. Physicians have also been able to exert some control over their patient’s attitudes by the actions they take to meet patient’s expectations³.

Patient Satisfaction within a student teaching clinic (especially osteopathic student clinic) has not been widely researched. Therefore it is necessary to view other types of clinics to see what factors influenced patient satisfaction, in order to gain an understanding for this study.

LITERATURE REVIEW
FACTORS INFLUENCING PATIENT SATISFACTION

Parasuraman, Zeithaml and Berry⁶ (1985) stated that there is a conceptual model of service quality in marketing literature that has five main factors of patient satisfaction: reliability, responsiveness, assurance, empathy and tangibles (physical factors). The SERVQUAL survey, used in this research, was developed from those ideas.

Browne and Browne¹ (1997) designed the survey in 1997 and evaluated SERVQUAL as a measurement tool of satisfaction in a dental practice. This survey was quite easily adapted to the setting of the Victoria University Osteopathic Clinic. The SERVQUAL survey “combines both expectation and perception issues into a single measurement”¹.

The SERVQUAL survey has been widely applied and frequently reported in marketing literature. Cronin and Taylor⁷ (1992) have concluded that service quality, as measured by SERVQUAL, is a likely antecedent of customer satisfaction.

Research from Browne and Browne¹ (1997) has indicated that SERVQUAL can identify degrees of satisfaction and can help identify issues in practice that should be improved; it is thus a reliable and useful tool in measuring patient satisfaction in a student clinic. The study concludes that SERVQUAL can “examine which service areas drive satisfaction in your practice by looking at the average satisfaction scores...look at events that lead to these scores”¹.

Jamison⁸ (1996) found that 30% - 49% of participants believed essential factors to be: listening carefully to their description of the problem, answering questions, telling them how to avoid the problem in the future, being comfortable dealing with their problem, discussing any change in treatment with them, and explaining their problem in terms that they can understand. These factors are important attributes for patient-practitioner communication, and suggest that an explanatory style is one of the fundamental concepts which have promise as a predictor of physical health⁸.

Browne and Browne¹ (1997) found that patient satisfaction was most strongly related to having the patient's best interest at heart, having employees who deal with patients in a caring fashion, making patients feel safe in their transaction, and providing services promised. Andrus and Buchheister⁹ (1985) demonstrated that office organisation such as atmosphere of waiting room (neatness, comfort of seating, magazine selection, and music) has a significant influence on patient satisfaction.

RETENTION RATES AND REFERRAL SYSTEMS

Referral systems and patient retention rates within student clinics have not been investigated in scientific literature. Referral systems allude to ways patients first enter the clinic, either by some form of advertising: radio, TV, newspaper (local and state), pamphlets, brochures, or some other mechanism: word of mouth, letter drop, walk in off the street, etc.

Word of mouth referral is an important indicator of patient satisfaction as it may show patient's happiness and satisfaction with the clinic and its practitioners. A large amount of referral from advertising may demonstrate patient dissatisfaction, as large numbers of patients may be coming from new areas all the time.

It has been demonstrated that patients' perceptions often differ from those of the physician, and that physicians may misperceive their patients' evaluations. Therefore, misperceptions can lead to negative word of mouth and thus affect the success of the treatment plan and the financial performance of the practice.^{5,10}

Research into retention rates is limited as there is a lack of literature available. Retention rates refer to how many patients return after initial treatment. Again this would vary from practice to practice, and may be quite different from a student clinic. This may be an indicator of patient satisfaction but may be influenced by a variety of factors.

The **retention rate** can be measured by analysing new patient files to see how many patients returned after initial consultation for their follow-up treatment (their second treatment) as booked by the practitioner directly after the initial consultation, in cases where further treatment was held to be necessary. **Referral sources** can be ascertained by quoting the patient's statement in the original case history form (under referral).

This study aims to provide valuable information that may allow future clinic managers to use it as a base for further development. This will lead to an increase in patient satisfaction in existing patients and allow for greater retention rates in newly acquired patients, thus leading to a more successful clinic.

PARTICIPANTS

Forty (n=40) participants, aged 18-70 years, took part in this study. All were new patients to the Victoria University Osteopathic Clinic (VUOC), and were booked for a follow-up consultation after completion of the initial treatment at VUOC. Participants were able to select whether or not they participated in the study. Students managing the clinic's reception brought this survey to the attention of the new patients. Participants were directed to the information sheet attached to the front of the survey for an explanation of the research behind the study.

The survey was comprised of the following information: a covering letter; a letter outlining confidentiality in the survey; how to go about answering the survey; the background behind the survey; how long the survey would take to complete; where to leave the survey; and 'thanks' from the researchers. A completed and signed consent form, previously approved by the Victoria University Faculty of Human Development Ethics Committee was required to be completed by participants prior to the collection of any research data.

Exclusion criteria: New patients who were backpackers, interstate travellers, or patients who did not require another appointment the following week after initial treatment at the VUOC were excluded. This criterion was used to exclude any bias arising from inclusion of patients who either were not considered by the practitioner to need another treatment, or who would in any case have been unable to attend for a follow-up treatment due to travel plans.

Inclusion criteria: Patients who were booked in for a follow-up treatment, after their initial consultation, based on the student osteopath's initial diagnosis, provided they did not meet any exclusion criteria. Also included were patients who were meant to return after initial consultation for their follow-up treatment (their second treatment) but never attended this scheduled treatment for reasons unknown to the researchers. Patients who were only treated once and never seen again were included in this study.

MATERIALS AND METHODS

This research involved both the administration of a survey and the analysis of patient case files. The survey was to be completed after the initial consultation but upon entering the clinic patients were notified by reception of the research being undertaken. The patient's first look at the survey came after the initial consultation. The study was approved by the Victoria University Faculty of Human Development Ethics Committee.

The survey contained a revised likert scale which framed responses on a nine point scale with "completely dissatisfied" as the low point (1) and "completely satisfied" as the high point (9). Participants were asked to complete a five-page survey. For each of these items participants were asked to provide specific information about actual service events that led them to give that particular score. The written comments served to identify what was right and wrong with the current practice helping to qualify scores provided by patients. The questions covered a variety of areas of reliability, responsiveness, the provision of services promised and instilling confidence. Interviews were not conducted with patients to discuss their answers.

To measure overall patient satisfaction, the participants were asked: "all things considered, how satisfied are you with the treatment you received from this clinic?" The scale ranged from "not satisfied at all" (1) to "extremely satisfied" (9).

In this study the SERVQUAL survey was used instead of other measuring tools because it easily identified degrees of satisfaction and issues in practice that should be improved; it was thus a reliable and useful tool for measuring patient satisfaction in the VUOC¹. Additionally, the survey was easy to understand and not time consuming for the patients.

The data collected from the SERVQUAL survey was analysed using Microsoft EXCEL by the student investigator under the supervision of the principal investigator. In addition descriptive reasons are shown in the table as a separate column, as to why patients opted for a particular score on the 1-9 scale (statements provided by patients were taken from the survey). As a result of this, general strengths and weaknesses of

services provided by the VUOC have been demonstrated. Qualitative answers were analysed to ascertain whether there were common themes arising, which were presented in tabular form.

With regard to referral systems, 40 patient case files were selected. These 40 files were the same new patients as used for the analysis of patient satisfaction survey. The files were analysed using the original case history form, noting the patient's statement under referral. Sources of referral were only taken from the original case history form, which was completed by the practitioner. The researcher selected the files and analysed them. Referral systems were tabulated and calculated as a score for each type of referral system. Then each type was calculated as a percentage. Data is presented in a table to show a comparison of each type of referral.

Data collection on retention rates used the same 40 patient case files (as for referral system and patient satisfaction) and these were analysed to see if patients returned for their scheduled follow-up consultation as booked by the practitioner after the initial consultation. If patients did not show up for their scheduled follow-up treatment (their second treatment) they were consider a 'NO' to returning after initial consultation decreasing the overall retention rate of the clinic. Each file was marked as "yes" or "no", and then calculated as a percentage. The retention rate is not intended to be a full reflection of the practice, only re-booked patients being observed. Data on retention rates were calculated as a percentage of people (out of 40) who did return after initial treatment. This data is shown in table form to demonstrate a clear comparison.

RESULTS

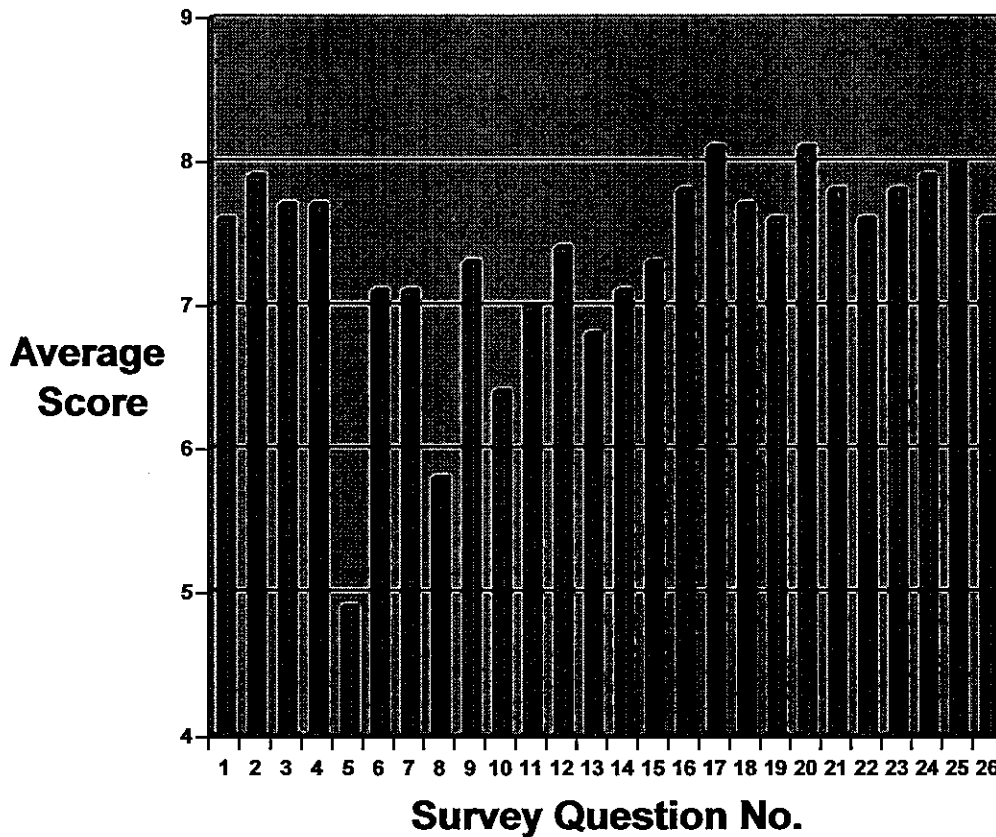
Forty patients that met inclusion criteria responded to the patient satisfaction survey in the VUOC. The majority of the questions were answered by all, except with regard to parking at the clinic (only 23 people responded), magazine selection, attitude of supervising clinician and follow-up care. All participants were still included in the study even though all answers were not completed.

The survey required responses to be answered on a nine point likert scale with “completely dissatisfied” as the low point (1) and “completely satisfied” as the high point (9).” Scores below 5 were regarded as patients being dissatisfied with the service provided by the VUOC and scores above 5 being satisfied with the service.

The percentages for the questions not completed were calculated from the number of people answering the question (eg. parking was calculated out of 23). Table 1 describes the patient’s perceptions of each aspect of the clinical setting as a average score. As demonstrated from Table 1 and Graph 1 most people were very satisfied with the majority of the services provided by the clinic, as well as the treatment and the student osteopath. All aspects of the clinic received a score of 5 or greater except with regard to parking. The highest areas of satisfaction were cost of the treatment (score of 8.0) and attitude of the student osteopath (score of 8.1), most other areas scored between 7.0 and 7.9, showing satisfaction. Overall the level of patient satisfaction with the clinic was quite high at 7.6.

The study found that patients were satisfied with the majority of aspects of the VUOC. This was demonstrated by average scores of 7.0/10 or greater in all categories except 4 with scores ranging from 4.9/10 to 6.8/10. The survey scale (1-9) did not clearly identify the mid point as 5 as stated by Browne and Browne, which was an oversight by the investigators. The mid point was required because scores below 5 were regarded as patients being dissatisfied with the services provided by the VUOC and scores above 5 being satisfied with the service. This was perceived as a limitation of the study as participants were not made aware of the mid range point thus making their decision on clinical services harder to grade.

GRAPH 1: AVERAGE SCORES FROM PATIENT SATISFACTION SURVEY



Very few patients included additional comments in relation to the scores provided for each question in the survey. Table 1 shows additional comments provided by the patients, which allows us to assess areas requiring improvement.

Comments with regards to magazine selection included “boring,” “too many women’s magazines” or patients did not read them at all. In relation to the waiting room, patients felt too many students were present, and it lacked colour. The cost of the treatment was described as being cheap and thus scored highly.

TABLE 1: AVERAGE SCORES FROM PATIENT SATISFACTION SURVEYS INCLUDING PATIENT COMMENTS

SURVEY QUESTION	AVERAGE SCORE	COMMENTS
BOOKING, PARKING AND RECEPTION:		
When you telephoned or visited to make your first appointment, how did you find the reception staff?	7.6	Polite, well mannered. Should have been put on hold rather than listening to the reception staff
Were you able to make the first appointment for the day and time you wanted?	7.9	
When you entered the clinic were you able to speak to the reception staff and access the reception area immediately?	7.7	Too many students around
Overall how satisfied are you with the reception at the clinic?	7.7	
How satisfied are you with the parking for the clinic?	4.9	Took public transport No cheap parking
Is the clinic easy to find?	7.1	University building is hidden away
WAITING ROOM:		
Overall how satisfied are you with the appearance of the waiting room?	7.1	Neat and tidy
Magazine selection?	5.8	Did not read Old, not interesting Lots of women's' magazines
Neatness/Cleanliness of the waiting room?	7.3	Clean and neat
Does the waiting room provide a relaxing atmosphere while waiting?	6.4	Quiet Too many people/students Lights too bright for relaxing
Overall how satisfied are you with the waiting room at the clinic?	7.0	
TREATMENT ROOM:		
Neatness/Cleanliness of the treatment room?	7.4	Bit crowded
Size of the treatment room?	6.8	Bit small
Comfort of the treatment room/tables?	7.1	Head holes are too hard
Overall how satisfied are you with the treatment room at the clinic?	7.3	Could be bigger and more colour
YOUR TREATMENT:		
Waiting time before you saw the Student Osteopath?	7.8	
Attitude of treating Student Osteopath?	8.1	Lack bit of confidence Very willing
Attitude of Supervising Clinician?	7.7	Did not see one Friendly and helpful
Length of treatment	7.6	Too long
Student Osteopath's ability to answer your questions?	8.1	Very helpful
Student Osteopath's willingness to talk about/explain your illness/problem?	7.8	Explained a little more
Follow-up care (exercise programs, ergonomic advice, dietary advice, etc.) by Student Osteopath?	7.6	Very good
Management of your pain by the Student Osteopath?	7.8	
Overall level of satisfaction with the quality of treatment you received by the Student Osteopath?	7.9	
COST:		
Overall level of satisfaction with the cost of the treatment?	8.0	Cheap
OVERALL:		
Overall how satisfied are you with the Osteopathic Medicine Clinic at Victoria University	7.6	

Table 2 demonstrates that the majority of patients entered the clinic via word of mouth, with 37.5% of patients knowing an osteopathic student, and 30% hearing about it from a patient who had been treated at the VUOC. The next highest referral system was through people who work for the university at 25%. The only other referral systems were the Yellow Pages with 5% and passers-by at 2.5%.

TABLE 2: REFERRAL SYSTEMS

TYPE OF REFERAL SYSTEM	% OF REFERAL SYSTEM
Patient knows a student osteopath	37.5 = 15/40
Word of mouth from a friend (patient)	30 = 12/40
Patient works for Victoria University	25 = 10/40
Yellow Pages	5 = 2/40
Passing by	2.5 = 1/40

Retention rates were also calculated as a percentage (same 40 patients used). This demonstrated the number of patients attending for a follow-up treatment after initial consultation, as well as verifying with assumptions to some extent, the level of patient satisfaction. It was calculated that 70% of patients returned for their next treatment, while 30% did not, as seen in Table 3. This level of patient retention is below expected and shows one in three patients were not returning after initial treatment. Reasons were not given as to why 30% of patients did not return for their scheduled follow-up treatment as booked by the practitioner directly after the initial consultation. Patients were not followed-up if they did not return for their second treatment because it did not fit within the parameters of this study.

TABLE 3: RETENTION RATES

DID PATIENTS RETURN FOR FOLLOW-UP TREATMENT	% OF RETENTION RATES
Yes	28/40 = 70
No	12/40 = 30

DISCUSSION

The overall level of satisfaction for the clinic was 7.6 indicating that people were happy with the waiting room, student osteopaths, cost, reception, treatment rooms and treatment. This suggests that the reasons underlying the slower than expected growth of the clinic, as based on anecdotal evidence, were related to factors other than those explored in SERVQUAL. In addition, by not exploring the interaction of the services surveyed, it may be difficult to interpret the patient's overall level of satisfaction, as one particular service may exert more influence on the patient's decision not to return for a follow-up treatment.

The survey should have contained two scales for each question, allowing the patient to weight the importance of each service provided allowing the investigators to identify the magnitude of satisfaction of each service. For example, if a patient found parking to be a very important aspect of the clinic and was completely dissatisfied with it, and yet were completely satisfied with all other services, in the survey used here they were unable to demonstrate the magnitude to which this affected them. This may have been a basis for the patient not returning for second treatment, although the patients overall level of satisfaction with the clinic may be high. Future studies could implement two likert scales for each service in the satisfaction survey to allow patients to weight the importance and to score the level of satisfaction.

In designing the SERVQUAL survey for this study the researchers investigated previous studies by Gopalakrishna and Mummalaneni¹¹ (1993), and Sara¹² (1999) that identified important factors when evaluating patient satisfaction within a dental clinic setting which were; waiting time, followed in order of performance by management of dental pain, cost of care, continuity of care and availability/convenience of dental care.

The factors identified were included in the SERVQUAL survey for this study but slightly altered to the student osteopathic setting. After analysis of results, high levels of satisfaction by patients were found in cost, attitude of student osteopaths, waiting time, and follow-up care of the student osteopath. These areas are very important

when running a clinic, and would appear to underpin the high level of satisfied patients at the VUOC. The services provided by the clinic demonstrated a high level of satisfaction in areas identified as important by previous studies into patient satisfaction in the health care industry. This is supported by Barnes and Mowatt¹³ (1986) who reported that 93% of patients consider willingness to talk about the treatment to be a critical factor in evaluation of care received.

Parasuraman, Zeithaml and Berry⁶ (1985) stated that there is a conceptual model of service quality in marketing literature that has distinct factors when it comes to patient satisfaction, one of those being tangibles (physical factors). These areas score a little lower for VUOC with a poor selection of magazines in waiting room, lack of parking, expensive parking and small treatment rooms raised as issues by the patients. These areas scored around the mid-range demonstrating that patients are still reasonably content with these services.

The development of the survey used, already identified satisfied services based on previous research as stated above, allowing the researchers to observe whether these already proven satisfied services, in other settings (i.e. dentist clinic), were important to patients in the VUOC setting. Future studies could alter the services analysed and questions used in the survey to include particular areas more appropriate to the student clinical setting. Testing of the pilot survey would be required before use.

The number of satisfied patients should in normal circumstances translate into high patient numbers, based on anecdotal evidence, but this is not the case at the VUOC. Therefore other areas need to be examined and researched in order to find those factors needing to be addressed to allow patient numbers to increase; or the sample size should be increased (eg: 200 patients) or a different scoring system could be used (do patient interviews). The additional comments were supposed to show what patients thought of each aspect of the clinic but as very few comments were included very little can be read from the comments made, further supporting why interviewing patients may have been more beneficial. Another way of adding to the survey relevance is by incorporating an additional section which allowed people to express opinions on issues that were not covered by the survey allowing identification of areas that are perceived as problematic in the clinic.

Overall the patient satisfaction survey demonstrated that patients are satisfied with the VUOC, which makes it difficult to explain why patient numbers are low. Nitse and Rushing³ (1996) showed that the satisfaction of a patient may play an important role in successful medical treatment. Further studies could include surveys on patient pain levels and ability to return to activities of daily living after treatment (i.e. treatment outcomes). This would allow us to see if satisfied patients respond better to treatment, and whether this influences the rates of recommendation of the clinic to others. Treatment outcome is the most important variable that was not included in this study, which is why it is essential for future studies to include this when analysing patient satisfaction and retention rates. Furthermore the study could have followed up patients who failed to return to the clinic asking them to outline reasons why this was the case, in survey form or interview style. This would assist in developing a greater understanding into reasons why patients did not return. Further research into patient satisfaction in student osteopathic clinics could include a comparison with professional and established osteopathic clinics allowing us to view areas that student clinics lack compared to professional osteopathic clinics.

Retention rates and referral systems have not been researched to a large extent in the student clinic setting. This study demonstrated, with regards to referral systems, that the majority of patients came to the clinic via word of mouth (67.5% which includes both students and previous patients). Word of mouth referral is an important indicator of patient satisfaction as it may show that patients are happy and satisfied with the clinic and its practitioners. There is very limited research into referral systems thus making it very difficult to compare results from this study to other practices in the health care industry. Anecdotal evidence from the health care industry supports the finding of high levels of referral from word of mouth. Future studies should look into student referrals in a lot more detail.

In addition there was very little referral from advertising (5% from Yellow Pages). This demonstrates that at present the VUOC does very little advertising compared to previous years as supported by anecdotal evidence developed through discussions with the clinical co-ordinator of the VUOC. As a result of this it is expected that fewer patients will enter the clinic via advertising. It is therefore evident that the

advert in the Yellow Pages is not having a successful impact on patient numbers. This issue requires further investigation in future studies. For example, is the advertisement too small, and/or does it contain enough information for patients.

Previous advertising at the clinic has included radio advertisements, an "A"-board outside the university, and pamphlet drops to local businesses. A study comparing patient numbers now, to when there was more advertising, is another aspect which needs to be examined. This would demonstrate the number of patients entering the clinic via advertising compared to word of mouth. Furthermore, it is important to recognise that despite a good word of mouth referral it does not necessarily mean that the patient's family or friends will require treatment (i.e. may be asymptomatic), nor does it mean they would travel vast amount of distances to the city for treatment. Future research could include follow up studies which ask the patients how many people they have told about the services provided and how many actually come into the clinic. This may be done after a 1, 3 or 6 month period. Again, this poses the question of why patient numbers are low when a large number of patients come from word of mouth.

It has been demonstrated that patients' perceptions often differ from those of the physician, and that physicians may misperceive their patient's evaluations. Therefore, misperceptions can lead to negative word of mouth and thus affect the success of the treatment plan and the financial performance of the practice.^{5,10} Future studies can determine if word of mouth truly does demonstrate patient satisfaction. For example, the study may observe the amount of new patients entering the clinic via word of mouth from patients who where satisfied with the clinic (based on satisfaction survey), this study can be done over a period of 3 to 6 months.

As this study did not explore how the VUOC advertises and the lack of literature available into referral systems, assumptions have to be made as to why there was such low referral systems from advertising. In addition, this may be another area for further research. Possible solutions to the low referral system from advertising may be due to lack of advertising at the clinic, (i.e. a very small ad in the Yellow Pages), no signage and no radio or TV adverts. If the clinic had large signage around the

University building area, advertised regularly on radio and increased the size of their ads in the Yellow Pages, this may improve patient numbers.

Clinics can suffer financially when experiencing low retention rates, therefore making it an important part of the clinical setting. Retention rates may be an indicator of patient satisfaction but may vary from practice to practice. The research showed that the majority of patients returned for their follow-up treatment (70%). Although it is the author's belief that this retention rate demonstrates a reasonable level of satisfaction, there is a lack of literature regarding what constitutes an acceptable retention rate, thus making it difficult to interpret this figure with any accuracy. However, this figure still suggests that nearly 1 in 3 patients are not returning to the clinic, which may be a cause for concern. Further research must be done to examine why patient numbers are low, especially after this study, which demonstrates generally very satisfied patients. Future studies could include a larger sample size allowing better comparison between patient satisfaction and retention rates.

Larger sample size will tend to minimize the probability of errors, maximize the accuracy of population estimates, and increase the generalisability of the results¹⁴. It may also be possible to survey non-returning patients as to the reasons why they did not return, though for obvious reasons, patients may be unwilling to participate in this type of survey.

High levels of patient satisfaction and retention rates were demonstrated in this study, and yet patient numbers are low. This may reflect the limitations of the SERVQUAL survey. The survey does not address a number of issues that may also be relevant to satisfaction. Primary among these would be the issue of clinical outcomes. In addition, the survey cannot analyse factors such as the extent to which the low profile of the profession as a whole in Australia may impact upon patient numbers. This is based on the assumption by the investigators that Osteopathy has a low profile in Australia today.

Other possible reasons for low patient numbers are lack of advertising of VUOC, lack of signage around the University (including outside the University doors and on the

building), and in addition, as mentioned earlier, the lack of understanding of osteopathy in the community and the knowledge that the VUOC exists.

Future studies should examine the effects of advertising on the VUOC, exploring signage around the location of the clinic, ads on TV, ads on radio, ads in Yellow Pages, and any other form of advertising. Market research could be set up to find the most effective form of advertising for the clinic. This is because the questions in the survey were not aimed at advertising therefore it is not possible to make any conclusion in relation to this. Lovelock (1991)¹⁵, demonstrated that failure to select a desired position in the marketplace – and to develop a marketing action plan designed to achieve and hold this position – may result in a possible undesirable outcome:

1. The organisation has no position at all in the marketplace because nobody has ever heard of it.

Therefore marketing management, which includes advertising has a substantial effect on a clinic or any other business and it may be assumed that this may have a marked effect on the clinic both financially and increased patient numbers.

As student numbers increase there is a need to further develop the patient base. This will give the clinic a wide variety of patients and may develop a high level of treating skills. For this reason it is important that future research look more closely at the current patient base to analyse referral trends, retention rates and patient satisfaction eventually leading to a more successful clinic for patients, students and Victoria University.

CONCLUSION

Unfortunately a significant conclusion from this study is difficult to formulate in view of the small sample size. Future studies and research are definitely needed in these areas of patient satisfaction, retention rates and referral systems, especially in the student clinic setting. This study did however show trends in the direction of current patients being highly satisfied with the Victoria University Osteopathic Clinic, resulting in high retention rates and high referral rates from word of mouth. The question that should be asked is, with highly satisfied patients, why are patient numbers low?

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**APPENDIX A:
Victoria University of Technology**

Consent Form for Participants Involved in Research

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into patient satisfaction in the student Clinic. The Clinic staff is anxious to ensure that we are providing the best possible osteopathic care for our patients, and we would like to extend to our new patients the opportunity to give their opinions and comments about the Clinic so that we can improve our service.

Please be assured that the form is completely confidential and does not identify you in any way. Individual forms will be seen only by the Clinic Coordinator, and the Student Researcher. As well, your patient history form, taken at the start of your treatment with the Student Osteopath will be analysed for Referral system (how you heard about the clinic). This will allow us to see the most effective form of advertising at Osteopathic Medicine Clinic of Victoria University.

If you meet any of the following criteria you are ineligible to participate in this research project; international backpackers, interstate travellers, patients who do not require another appointment after initial treatment at the Osteopathic Medicine Clinic at Victoria University, patients who do not get booked in again at the Osteopathic Medicine Clinic at Victoria University.

We regard it as important that patients should have a chance to give us their views on the quality of service so that we may improve any deficiencies in our services, so we would be most grateful if you could assist us by completing the survey.

CERTIFICATION BY PARTICIPANT

I,
of

certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the experiment entitled:

Study of referral sources, patient retention rates and patient satisfaction in the Victoria University osteopathic clinic (OMC)

being conducted at Victoria University of Technology by:

Dr. Brian Nicholls
Shane Buntman

I certify that the objectives of the experiment, together with any risks to me associated with the procedures listed hereunder to be carried out in the experiment, have been fully explained to me by:

and that I freely consent to participation involving the use on me of these procedures.

Procedures:

Use of case history form for data regarding referral sources and patient retention rates.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this experiment at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed: }

Witness other than the experimenter: } **Date:**

.....}

Any queries about your participation in this project may be directed to the researcher (Name: Dr. Brian Nicholls ph. 92481150). 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:
OSTEOPATHIC MEDICINE CLINIC PATIENT
SATISFACTION SURVEY.

Information to patients

Dear Patient,

Thank you for attending the Osteopathic Medicine Clinic at Victoria University. As part of a Masters of Health Science study we are asking new patients to the Clinic to participate in a university-sanctioned research project into patient satisfaction in the student Clinic. The Clinic staff is anxious to ensure that we are providing the best possible osteopathic care for our patients, and we would like to extend to our new patients the opportunity to give their opinions and comments about the Clinic so that we can improve our service.

Overleaf you will find a brief questionnaire about your experiences in the Clinic. It should take no more than five minutes to complete, and we ask you to fill it in after your treatment. We ask you to circle the level of satisfaction on the provided answer sheet (at the back of the survey), from 1 being completely dissatisfied to 9 being completely satisfied with services provided. Additional comments on why you chose this score will be of great benefit and much appreciated. These comments can be made in the spaces provided. Completed questionnaires should be placed in the sealed box marked "Patient Survey Forms" at the Clinic reception desk. Completion of the survey will be taken to imply consent to participating in this part of this study.

Please be assured that the form is completely confidential and does not identify you in any way. Individual forms will be seen only by the Clinic Coordinator and the Student Researcher. In addition, your patient history form, taken at the start of your treatment with the Student Osteopath will be analysed for Referral system (how you heard about the clinic). This will allow us to see the most effective form of advertising at Osteopathic Medicine Clinic at Victoria University. You will be asked to sign a separate consent form for release of this information from your history.

If you fall into any of the following categories you are ineligible to participate in this research project; international backpackers, interstate travellers, patients who do not require another appointment after initial treatment at the Osteopathic Medicine Clinic at Victoria University.

We regard it as important that patients should have a chance to give us their views on the quality of service so that we may improve any deficiencies in our services, so we would be most grateful if you could assist us by completing the survey.

Yours truly,
Shane Buntman (Student Researcher)

Any queries about your participation in this project may be directed to the researcher (Name: Dr. Brian Nicholls ph. 92481150). 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). Any support counselling needed, you may contact

OSTEOPATHIC MEDICINE CLINIC PATIENT SATISFACTION SURVEY.

Please complete this survey by circling the number representing the amount of satisfaction you think is most appropriate for each question, on the scale provided below each question. Additional comments can be made in the spaces provided after each question. Completed surveys should be placed in the sealed box marked "Patient survey forms" at the clinic reception desk.

BOOKING, PARKING AND RECEPTION:

1. When you telephoned or visited to make your first appointment, how did you find the reception staff?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

2. Were you able to make the first appointment for the day and time you wanted?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

3. When you entered the clinic were you able to speak to the reception staff and access the reception area immediately?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

4. Overall how satisfied are you with the reception at the clinic?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

5. How satisfied are you with the parking for the clinic?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

6. Is the clinic easy to find?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

WAITING ROOM:

7. Overall how satisfied are you with the appearance of the waiting room?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

8. Magazine selection?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

9. Neatness/Cleanliness of the waiting room?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

10. Does the waiting room provide a relaxing atmosphere while waiting?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

11. Overall how satisfied are you with the waiting room at the clinic?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

TREATMENT ROOM:

12. Neatness/Cleanliness of the treatment room?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

13. Size of the treatment room?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

14. Comfort of the treatment room/tables?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

15. Overall how satisfied are you with the Treatment room at the clinic?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

YOUR TREATMENT:

16. Waiting time before you saw the Student Osteopath?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

17. Attitude of treating Student Osteopath?

Comp. Dissatisfied					Comp. Satisfied			
1	2	3	4	5	6	7	8	9

18. Attitude of Supervising Clinician?

Comp. Dissatisfied					Comp. Satisfied			
1	2	3	4	5	6	7	8	9

19. Length of treatment?

Comp. Dissatisfied					Comp. Satisfied			
1	2	3	4	5	6	7	8	9

20. Student Osteopath's ability to answer your questions?

Comp. Dissatisfied					Comp. Satisfied			
1	2	3	4	5	6	7	8	9

21. Student Osteopath's willingness to talk about/explain your illness/problem?

Comp. Dissatisfied					Comp. Satisfied			
1	2	3	4	5	6	7	8	9

22. Follow-up care (exercise programs, ergonomic advice, dietary advice, etc.) by Student Osteopath?

Comp. Dissatisfied					Comp. Satisfied			
1	2	3	4	5	6	7	8	9

23. Management of your pain by the Student Osteopath?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

24. Overall level of satisfaction with the quality of treatment you received by the Student Osteopath?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

COST:

25. Overall level of satisfaction with the cost of the treatment?

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

OVERALL:

26. Overall how satisfied are you with the Osteopathic Medicine Clinic at Victoria University

Comp. Dissatisfied							Comp. Satisfied	
1	2	3	4	5	6	7	8	9

**APPENDIX C:
RAW DATA FROM PATIENT SATISFACTION SURVEYS**

Survey#/Questions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2	4	3	4	4	4	9	9	8	8	4	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
3	7	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4	7	8	7	8	8	8	7	4	7	5	6	7	6	7	7	8	8	8	8	8	8	8	8	8	8	8
5	7	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
6	7	8	8	7	3	6	5	3	5	3	5	3	4	5	5	4	5	5	5	5	5	5	5	5	5	5
7	8	8	7	8	8	7	7	7	8	7	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8
8	8	8	7	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8
9	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
10	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
11	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
12	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
13	7	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
14	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
15	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
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20	8	7	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
21	7	9	8	9	8	7	9	8	7	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8
22	8	9	8	8	6	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
23	8	9	8	8	9	5	6	1	6	5	7	4	4	5	5	7	9	5	7	7	9	6	7	5	7	4
24	7	8	8	8	8	3	3	5	3	3	4	4	3	3	3	4	4	3	3	3	3	3	3	3	3	3
25	7	8	8	8	8	8	8	7	7	8	7	6	8	6	6	8	7	7	7	7	8	6	6	6	6	6
26	9	9	9	9	1	8	8	9	9	7	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
27	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
28	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
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30	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
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35	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
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37	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
38	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
39	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
40	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
MEAN SCORE	7.6	7.9	7.7	7.7	4.9	7.1	7.1	5.8	7.3	6.4	7.0	7.4	6.8	7.1	7.3	7.8	8.1	7.7	7.6	8.1	7.8	7.6	7.8	7.9	8.0	7.8