A Survey of the Public Perception of Chiropractic After Exposure to Chiropractic Public Place Marketing Events in New Zealand

David G. Russell, BSc (Psych), BSc (Chiro), Cert TT,^a Tanja T. Glucina, BSc (Psych), BSc (Chiro),^b Matthew W. Sherson, BSc (Physiol), BSc (Chiro), Cert TT,^c and Melinda Bredin, BSc (Chiro), Cert TT^d

ABSTRACT

Objective: The purpose of this study was to assess public perception of chiropractic public place marketing events.

Method: A chiropractic public place marketing program was held at 3 events (a community sports event, an exposition, and a university campus market day) over a 5-month period in Auckland, New Zealand, between 2008 and 2009. Participants were interviewed by chiropractic students. Interview questions were standardized and sought to find out participants' perception of chiropractic and whether it was influenced in a positive or negative manner after their exposure to the marketing program.

Results: Three hundred forty-five interviews were completed during 3 events. The minority of participants (15.9%) had a negative view of chiropractic, 29.2% were neutral, and 54.9% had a positive view of chiropractic. Of the responses of those surveyed, 54% did not change their opinion of chiropractic, 44.3% were more positive, and 1.7% were more negative.

Conclusions: This study found that direct or indirect exposure to chiropractic public place marketing events may possibly influence the public perception of chiropractic. Because of the limited sample, these findings cannot be extrapolated to other regions or populations. Further studies are needed to test these findings in other world regions and in more controlled environments. (J Chiropr Humanit 2017;24:9-14)

Key Indexing Terms: *Chiropractic; Marketing; Advertising*

INTRODUCTION

Public place marketing of chiropractic occurs in New Zealand¹ at different venues, such as shopping malls, sporting events, and other public events. Marketing programs may include educational materials, postural assessments, thermography, surface electromyography,

and spinal palpation.¹ These marketing practices are used to introduce the public to chiropractic care and to generate new patients for chiropractic practices.¹⁻³ The New Zealand Chiropractic Board's chiropractic advertising policy includes requirements for such activities: "All advertising must be presented in a manner that is accurate, balanced and not misleading; and use terminology that is understood readily by the audience to whom it is directed; and be from a reputable and verifiable source; meet legislative requirements."¹ This policy also outlines what is expected from public place marketing: "Chiropractic public place marketing is to promote the profession and to increase the awareness of the public regarding the benefits of chiropractic management, and not primarily for the sole purpose of practice building." Further, it stipulates that the "purpose of the 'chiropractic check' is to give the participant an overview of the general state of health of their neuro-musculo-skeletal system within the Scope of Practice."¹

The impact of chiropractic public place marketing events on the public's view of the profession is an area of concern for many chiropractors and chiropractic legislators.⁴ The

^a Private Practice, Auckland, New Zealand.

^b Research Department, New Zealand College of Chiropractic, Auckland, New Zealand.

^c Technique Department, New Zealand College of Chiropractic, Auckland, New Zealand.

^d Clinical Faculty, New Zealand College of Chiropractic, Auckland, New Zealand.

Corresponding author: David G. Russell, BSc (Psych), BSc (Chiro), Cert TT, 52 Springfield Rd, Western Springs, Auckland, New Zealand 1022. Tel.: +64 21 717 487. (e-mail: dgrchiro@gmail.com).

Paper submitted March 11, 2016; in revised form February 1, 2017; accepted February 2, 2017.

1556-3499

© 2017 by National University of Health Sciences.

<http://dx.doi.org/10.1016/j.echu.2017.02.001>

potential for public place marketing to harm the public image of the profession has led to some regulatory bodies issuing guidelines for the proper conduct of this type of marketing.⁵

Only a few studies have investigated the public perception of chiropractic, and different chiropractic marketing strategies and many opinions exist on this topic.⁶⁻¹⁶ One study revealed that few patients were attracted to chiropractic offices through direct to consumer marketing.¹⁵ According to 2 Canadian telephone surveys, respondents thought marketing in a public place would make them less confident in the chiropractic profession.^{11,16} These surveys revealed that the perceived motive of the chiropractor conducting the screening was an important factor in determining how the respondent would judge the chiropractic profession. If the respondents were told that the chiropractor's motive was to generate new patients for his or her business, then they were less likely to become more confident in the profession as a result of the marketing and more likely to become less confident in it.^{11,16}

A study in the United States explored perceptions of 537 people who had neither seen a chiropractor nor received chiropractic services.¹⁶ Surveys were conducted in person at various social settings, including shopping malls, athletic events, and festivals. The survey instrument included 23 statements, 1 of which related to public marketing, and the answers revealed that 88% of respondents disagreed with the statement: "I would be interested to hear more about how chiropractic care can help me if I was approached by a DC in a shopping mall."¹⁶

It has been suggested that marketing practices in the form of screenings may lead to either unnecessary alarm or a false sense of reassurance, depending on the results found.^{17,18} Additionally, some suggest that there is little benefit in public place marketing and that in this practice there is a tendency to overdiagnose in a screening setting.¹⁷⁻²³

There has been limited study of chiropractic public place marketing. Therefore, the aim of the present study was to assess public perception of chiropractic and how exposure to chiropractic public place marketing events influenced public perception of chiropractic in Auckland, New Zealand.

METHOD

Chiropractic public place marketing events were held at 3 public occasions over a 5-month period from 2008 to 2009. These included a community sports event, an exposition, and a university campus market day in Auckland, New Zealand.

Chiropractic interns (chiropractic students who have met the academic requirements to be able to provide chiropractic care to public patients in a supervised environment) conducted the surveys. Interns were from the New Zealand College of Chiropractic (NZCC) (3 males and 3 females), who wore plain clothes. They were not identified as being involved with the NZCC or chiropractic other than to conduct the survey.

The interviewers were instructed on the standardized survey questions, given that the main component of a survey's reliability was its standardized administration.²⁴ The individual items on the survey were offered on a Likert scale. Likert scales typically have a stimulus item (eg, a question as to whether they agree with a statement) that respondents indicate by polar extremes their thoughts on a particular stimulus (eg, positive, neutral, or negative).²⁵

Members of the public 18 years of age or older who attended the venues were eligible to participate in the survey. The interviewers were instructed to ask interviewees for their agreement to participate in the survey. If the participant agreed, the questions were asked in order from a predetermined survey instrument, as discussed below. No incentives were given to respond to the survey. Responses were collected during the day; however, the time of week in which the data were collected varied. All interviews were anonymous, and no identifiable details were recorded.

The responses were categorized into 3 groups. Group 1 comprised those who attended the chiropractic public place marketing event and chose to make an appointment. Group 2 consisted of those who attended the chiropractic public place marketing event but chose not to make an appointment. Group 3 included those who responded to the survey but chose not to participate in the chiropractic public place marketing event. All interviews were completed at the event, either immediately after participation (groups 1 and 2) or as nonparticipant respondents (group 3) passed by the marketing site, and the information collected was separate from any information gathered by the screeners. Each interview took less than 5 minutes to complete and focused on the participant's perception of chiropractic and whether exposure to the marketing session influenced this perception in a positive, neutral, or negative manner.

Sex was identified by the interviewer. Respondents were asked their age by decade range, whether they ever or currently saw a chiropractor, and whether seeing the marketing program that day changed their view of chiropractic (rated as very positive, positive, neutral, negative, or very negative). Participants from group 1 were asked to select from the following options as to why they booked an appointment: (1) to increase their health and well-being; (2) to reduce symptoms; (3) to correct a structural concern; or (4) to satisfy their curiosity. Participants from group 2 were asked how satisfied they were with the marketing program. Respondents were asked whether they planned to make an appointment in the future and if they would make any other health care decisions as a result of the interaction. If the respondent said that he or she intended to make a different health care decision, the individual was asked if that decision would be making an appointment to see a medical doctor, another chiropractor, a physical therapist, an osteopath, a massage therapist, or another health care provider. Participants from group 3

were asked whether they planned to attend the marketing program at a later time. If the respondents did not, they were asked to select from the following reasons: (1) They already had a chiropractor; (2) they had no time; (3) they did not have an interest in chiropractic; (4) they did not like the participating in public; (5) they felt the marketing program looked unprofessional; or (6) they did not want to respond.

The interns performing the marketing presentation were not involved in the survey process and were trained on a standardized presentation. The marketing process included a very brief review of the participant's current health status, age, occupation, chief complaints, their own rating of their current level of health, where they would like their health to be, whether they had previously received chiropractic, and consent to participate in the marketing program. Following this, a brief assessment of their spine was performed, as detailed by the New Zealand Chiropractic Board Advertising Policy.¹ During the presentation, the interns explained the importance spinal health, the role of the nervous system in human function, that spinal dysfunction (eg, chiropractic/vertebral subluxation) may affect nervous system function, and that they were checking to determine if there were signs of dysfunction.²⁶⁻³⁰ The assessments used included visual posture analysis and motion palpation of the cervical and lumbar regions.^{29,31} These procedures typically took 5 to 10 minutes. No chiropractic care and no claims of potential outcomes of care were given.

All participants in this study provided consent. No identifying information about the survey participants was recorded. This study was exempted by the Health and Disability Ethics Committees, New Zealand Ministry of Health.

RESULTS

Three hundred forty-five interviews were completed at 3 different events. Twenty respondents (5.8%) were in group 1, 77 (22.3%) in group 2, and 248 respondents (71.9%) in group 3. Not every person who participated or passed by the marketing site completed a survey, and participation was optional; thus, there is no record of those who saw the booth but did not participate in the survey.

Demographic data collected revealed that females made up 51.6% of respondents. Fifty-four percent of respondents were in the age group of 18 to 29 years, and those ages 40 to 59 years accounted for 25.5%.

Of the 20 respondents in group 1, 12 (60%) were males. Eighteen (90%) were participating at a communal sports event. Of those screened and who made an appointment, 72.3% changed their view of chiropractic toward the positive. The reasons given to book an appointment were to increase their health and well-being (45%), to reduce symptoms (30%), to correct a structural concern (20%), and to satisfy their curiosity (30%). Twenty-five percent of respondents had multiple reasons for booking an appointment.

Of the 77 respondents in group 2, 40 (51%) were males and 64.1% changed their view of chiropractic to the positive, whereas only 2.6% changed to the negative. The majority (66.6%) indicated that they were planning to book a chiropractic appointment at another time, and their main reasons for doing so were curiosity (42.3%), to correct structure (32.7%), to increase health (21.1%), and to decrease symptoms (13.4%). Seven (13.4%) of these respondents had multiple reasons. Of the 32% that did not plan to pursue an appointment, 47% indicated that they will do something else for their health, even if it was not chiropractic care. Of those indicating they would do something, 6% said they would see their medical doctor, 6% another chiropractor, 8% a physical therapist, and 3% an osteopath.

Of the 248 respondents in group 3, 115 (46.4%) were males. Of this group, 25.3% responded that their view of chiropractic changed to the positive after observing the marketing booth and 1.4% changed to the negative after observation. Two hundred twenty-one (89.1%) were 18 to 29 years of age and had not experienced chiropractic care previously, and 58.9% planned not to participate. Overall, the reasons given for not participating were not having the time (33%), not being interested in chiropractic (11.3%), not being interested in being assessed in public (10.4%), and already being under chiropractic care (7.5%). No reason was given for not being screened by 37.7% of respondents in this group, and no respondent reported that he or she felt the marketing looked unprofessional.

The opinion of the total 345 people surveyed revealed that 15.9% had a negative view of chiropractic, 29.2% were neutral, and 54.9% had a positive view of chiropractic prior to exposure to the marketing program (Fig 1). After the survey, 54% of the respondents did not change their perception of chiropractic. A change for the positive was expressed by 44.3% of respondents, with 1.7% changing their perception of chiropractic in a negative way (Fig 2).

DISCUSSION

In this survey of people attending chiropractic public place marketing events at a community sports event, an exposition, and a university campus market day in Auckland, New Zealand, the survey responses about chiropractic were largely positive, with over half of respondents having a positive view and only 15.9% having a negative view. Of those who expressed a definite view of chiropractic, 78% held a positive view, which is similar to a previously conducted survey of 500 randomly selected households in Connecticut.⁹

There is limited evidence that public place marketing in other health care fields has any benefit in promoting health in communities.¹⁷ However, the current study may be similar to immunization mall programs, where this style of

Fig 1. Public perception of chiropractic.

marketing has had positive public acceptance and largely increased uptake in receiving a health care intervention, in this case immunization.³² The immunization study differed from the current study in that the treatment was given at the marketing session.³² Follow-up assessments have been a criticism of screening-type health care initiatives in the past.^{21,22} The findings of the current study may be of interest, as chiropractors and legislators have expressed concern that public place marketing may harm the public's image of the profession; however, this view is not supported by the findings of this study. Rather, public place marketing was seen to enhance the public's perception of chiropractic.

The observations of the current study appear to disagree with previous studies. Two similar Canadian studies and 1 US study suggested that chiropractic public marketing negatively affected the public perception of the chiropractic profession.^{11,14,16} In the Canadian surveys, between 23% and 27% of respondents thought that "performing clinical examination or screening procedures in malls and other public places in order to generate new patient visits" would make them less confident in the chiropractic profession¹¹; however, neither of these studies assessed the effect of a direct encounter with chiropractic marketing on the public's

Fig 2. Overall change in public opinion after exposure to a chiropractic marketing event.

perception. The US study reported 88% of respondents "felt that being approached by a chiropractor in a mall is something they would not be interested in."¹⁴ It is possible that regional or cultural differences may be the reason that these findings are different from those of the current study. As well, differences between the findings of the Canadian and US surveys and those of the present survey may be that the current study surveyed people who were actually exposed to a marketing program compared with the Canadian and US surveys that involved respondents being asked for their opinion about a theoretical interaction with a stated intent to generate new patients.^{11,14,16} The Canadian studies had different populations being interviewed, which may have resulted in the divergent findings between the studies.^{11,16} The US study surveyed members of the public in similar environments with almost opposing results.¹⁴

Limitations

The current study was a pragmatic study, and thus many of the circumstances were not controlled. Although the interviewers did not indicate that they were directly associated with the chiropractic marketing program, the respondents may have felt compelled to answer in a positive manner because the interviewer may have been perceived to be associated with the marketing event. As a result, bias may have contributed to overly positive responses, as respondents may have been less willing to share a negative opinion of chiropractic or the marketing program. In addition, respondents may not have given a negative response because the interview was done face to face in a public setting.

Chiropractic students participated and collected information for this study, thus creating a less controlled environment. Previous studies have highlighted that student screeners may be underqualified to perform the required tasks, may have poor communication skills, or may have limited knowledge of the field.^{17,33}

Overall, the sample size for this study was small. Only 97 respondents (28.1%) participated in the marketing event, which limits the findings. Not all people committed to participation in the survey, as participation was optional. Further studies should include a larger number of respondents who are screened.

Additionally, it is not known how many people declined to participate in the study in any of the 3 groups; these could be people who hold, and may potentially maintain, a negative view of chiropractic. Future studies should include information about those refusing to participate, as this may give a clearer idea of the percentage of the population with an interest in chiropractic care.

Although participants were surveyed from 3 events and areas, the demographic data were limited. Further information, such as occupation, family and marital status, and income may give a better indication of whether this sample

was a true representation of the general population, and therefore, such data should be included in future studies. Additionally, this study only measured responses in Auckland, New Zealand, and therefore is not a representation of other populations. No follow-up review was performed with any of the participants, so the long-term results could not be determined.

The focus of this study was on public perception of chiropractic public place marketing. No measures were made to determine if the activities that occurred in the marketing program were of any health benefit to those attending the marketing session. Therefore, these findings do not suggest whether or not there was any benefit to public health or health prevention.

Caution is necessary in generalizing the results of this study as the number of respondents was limited. Chiropractic marketing programs are conducted in different ways by different practitioners, and all marketing programs used in this study were conducted by chiropractic students in their final year at the NZCC. The methods and scripting used may not reflect those used by chiropractors in other locations.

CONCLUSIONS

The findings of this study suggest that some people who were interviewed at chiropractic public place marketing events in Auckland, New Zealand, had a generally positive perception of chiropractic. It was also found that either participation or exposure to chiropractic public place marketing events may have had a positive influence on some participants' perception of chiropractic. Further studies are needed to test these findings in other world regions and in more controlled environments.

CONTRIBUTORSHIP INFORMATION

Concept development (provided idea for the research): D.G.R.

Design (planned the methods to generate the results): D.G.R.

Supervision (provided oversight, responsible for organization and implementation, writing of the manuscript): D.G.R.

Data collection/processing (responsible for experiments, patient management, organization, or reporting data): D.G.R.

Analysis/interpretation (responsible for statistical analysis, evaluation, and presentation of the results): D.G.R.

Literature search (performed the literature search): D.G.R., T.T.G.

Writing (responsible for writing a substantive part of the manuscript): D.G.R., T.T.G., M.W.S., M.B.

Critical review (revised manuscript for intellectual content, this does not relate to spelling and grammar checking): D.G.R., T.T.G., M.W.S.

Practical Applications

- Direct or indirect exposure to a public marketing program may possibly influence the public perception of chiropractic in a positive manner.
- Further research is needed in controlled environments and other regions of the world to confirm these findings in other populations.

REFERENCES

1. New Zealand Chiropractic Board. Advertising guidelines: NZ Chiropractic Board; 2011. Available at: <http://www.chiropracticboard.org.nz/Portals/12/Advertising%20Guideline.pdf?ver=2015-08-10-110354-053>. Accessed September 1, 2015.
2. Page S. An audit of health products and services marketed on chiropractic websites in Alberta and consideration of these practices in the context of chiropractic codes of conduct and ethics. *J Can Chiropr Assoc*. 2007;51(2):91-98.
3. Cooper R, McKee HJ. Chiropractic in the United States: trends and issues. *Millbank Quart*. 2003;81(1):107-138.
4. White J. Public perception. *NZCA News: N Z Chiropr Assoc*. 2006;18-19.
5. Chiropractors Board of Queensland. Public Place Marketing and Spinal Screening Guidelines. Brisbane, Australia: Chiropractors Board of Queensland; 2008.
6. Ressel B. Popular beliefs and misconceptions in chiropractic. *J Vertebral Subluxation Res*. 2008;2008:1-3.
7. Wilson K, Swincer K, Vemulapad S. Public perception of chiropractic: a survey. *Chiropr J Austr*. 2007;37(4):135-140.
8. Sanchez J. A look in the mirror: a critical and exploratory study of public perceptions of the chiropractic profession in New Jersey. *J Manipulative Physiol Ther*. 1991;14(3):165-176.
9. Wardwell W. The Connecticut survey of public attitudes toward chiropractic. *J Manipulative Physiol Ther*. 1989;12(3):167-173.
10. Cambron J, Cramer GD, Winterstein J. Patient perceptions of chiropractic treatment for primary care disorders. *J Manipulative Physiol Ther*. 2007;30(1):11-16.
11. Ontario Chiropractic Association. Public attitudes toward chiropractic marketing. OCA Information Bulletin. Toronto, Canada: Ontario Chiropractic Association; 2006.
12. Jamison J. Perceptions: a case study of chiropractic patients in Australia. *Chiropr J Austr*. 2000;30(1):2-4.
13. Brown B, Bonello R, Fernandez-Caamano R, Graham PL, Eaton S, Green H. Chiropractic in Australia: a survey of the general public. *Chiropr J Austr*. 2013;43(3):85-91.
14. Forese J, Gooding T. Opinions of chiropractors and the chiropractic profession from the perspective of the public at large: an exploratory survey. *J Philosophy Principles Pract*. 2013;2013:4-7.
15. Brown B, Bonello R, Fernandez-Caamano R, Eaton S, Graham PL, Green H. Consumer characteristics and perceptions of chiropractic and chiropractic services in Australia: results from a cross-sectional survey. *J Manipulative Physiol Ther*. 2014;37(4):219-229.
16. Feather K. The public's view of chiropractic marketing: a message to take to heart. *Dynamic Chiropr*. 2006;24(4).

17. Unite for Sight. Challenges and Failures of Health Fairs and Community Screenings; 2016. Available at: http://www.uniteforsight.org/health-screenings/health-screenings#_ftnref39. Accessed July 9, 2016.
18. Berwick D. Screening in Health Fairs. A Critical review of benefits, risks, and costs. *JAMA*. 1985;254(11):1492-1498.
19. Lefebvre C, Banspach S, Gans K, Carleton R, Lasater T. Enhancing adherence to referral advice given at blood cholesterol screenings: impact on participant follow-up and physician behavior. *Health Edu Res*. 1991;6(4):405-413.
20. Tabaei B, Burke R, Constance A, et al. Community-based screening for diabetes in Michigan. *Diabetes Care*. 2003;26(3):668-670.
21. Getliffe K, Crouch R, Gage H, Lake F, Wilson S. Hypertension awareness, detection and treatment in a university community: results of a worksite screening. *Public Health*. 2000;114(5):361-366.
22. Engelgau M, Narayan K, Herman W. Screening for type 2 diabetes. *Diabetes Care*. 2010;23(10):1563-1580.
23. Ferrini R, Perlman M, Hill L. American College of Preventive Medicine policy statement: screening for skin cancer. *Ame J Prev Med*. 1998;14(1):80-82.
24. Nilsson N, Christensen HW, Hartvigsen J. Lasting changes in passive range of motion after spinal manipulation: a randomized, blind, controlled trial. *J Manipulative Physiol Ther*. 1996;19(3):165-168.
25. Wigley C. Dispelling three myths about Likert Scales in communication trait research. *Comm Res Rep*. 2013;20(4):366-372.
26. World Health Organization Department of Economic and Social Affairs Division. World population ageing; 2013. Available at: <http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2013.pdf>. Accessed July 13, 2015.
27. Association of Chiropractic Colleges. The Association of Chiropractic Colleges position paper # 1, July 1996: ICA review. Association of Chiropractic Colleges; 1996.
28. World Federation of Chiropractic. Definitions of chiropractic; 2015. Available at: https://www.wfc.org/website/index.php?option=com_content&view=article&id=90&Itemid=110. Accessed July 16, 2015.
29. Triano J, Budgell B, Bagnulo A, et al. Review of methods used by chiropractors to determine the site for applying manipulation. *Chiropr Man Ther*. 2013;21(1):36.
30. Haavik H, Holt K, Murphy B. Exploring the neuromodulatory effects of vertebral subluxation and chiropractic care. *Chiropr J Austr*. 2010;40(1):37-44.
31. Walker B, Buchbinder R. Most commonly used methods of detecting spinal subluxation and the preferred term for its description: a survey of chiropractors in Victoria, Australia. *J Manipulative Physiol Ther*. 1997;20(9):583-589.
32. Guzzetta P, Russell CK. Immunization mall programs. *J Community Health Nurs*. 1990;7(3):159-166.
33. Mays V, Ly L, Allen E, Young S. Engaging student health organizations in reducing health disparities in underserved communities through volunteerism. *J Health Care Poor Underserved*. 2009;20(3):914-928.