



# Chiropractors' Perspectives on the Meaning and Assessment of Quality of Life Within Their Practice in New Zealand: An Exploratory Qualitative Study

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## ABSTRACT

**Objective:** The purpose of this study was to gain an understanding on what quality of life (QOL) and its assessment means to chiropractors in everyday practice.

**Methods:** This study captured chiropractors' perspectives on the QOL construct and its assessment using a qualitative descriptive methodology that comprised 2 focus groups, each with 4 participants using semi-structured, open-ended questioning. Participants from Aotearoa, New Zealand, were also asked to evaluate 4 QOL patient-reported outcome measurements from a clinical perspective.

**Results:** Two of the participants were faculty at the New Zealand College of Chiropractic, 5 were in full-time practice, and 1 was practicing part time. Using qualitative content analysis, 3 main themes were identified. These chiropractors perceived that patients have misconceptions about how chiropractic can affect QOL. They lacked clarity in communicating QOL and its related concepts to establish a clinically meaningful patient encounter. Finally, there is uncertainty in how and when to measure QOL, which appears to affect how they discuss and assess QOL in practice.

**Conclusion:** There is a complex combination of factors that makes communication regarding QOL challenging. This exploratory qualitative study helps to understand the challenges faced in how and when to communicate and assess QOL more effectively in chiropractic practice. (*J Manipulative Physiol Ther* 2019;42:480-491)

**Key Indexing Terms:** *Chiropractic; Focus Groups; Patient-Reported Outcome Measures; Quality of Life; Communication*

## INTRODUCTION

The World Health Organization describes the chiropractic profession as a health care profession concerned with the diagnosis, treatment, and prevention of neuromusculoskeletal disorders and the effects of these on general health.<sup>1</sup> The World Federation of Chiropractic

draws on a biopsychosocial philosophy of health asserting that, philosophically, chiropractic emphasizes the mind–body relationship in health and the natural healing powers of the body.<sup>1</sup> Chiropractic has been shown to have a positive impact on health including pain,<sup>2</sup> non-musculoskeletal conditions,<sup>3</sup> and quality of life (QOL)<sup>4</sup> through the use of patient-reported outcome measures (PROMs).

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There is an increasing chiropractic focus on the use of PROMs as a necessary component in both clinical care and research<sup>5,6</sup>; however, a recent systematic review of the literature noted the dominance of PROM utilization for disability rather than for global QOL.<sup>7</sup> This is contrary to the general healthcare market where over the past 30 years, QOL outcome evaluation has become increasingly important.<sup>8</sup> The concept of QOL is broad and multifaceted, with no universally agreed definition.<sup>9-11</sup> For the purposes of this study, QOL was defined as an “individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.”<sup>12</sup> (p1405)

Chiropractic intervention addresses QOL through a wellness approach to patient care.<sup>7,13-15</sup> However, in clinical practice objective measurement of QOL appears to not always be routinely assessed. A recent study of the New Zealand chiropractic profession found that 71% of respondents never assessed QOL through PROMs, compared with 14% who used an assessment between 76% and 100% of the time.<sup>16</sup> A 2010 study from Canada found that most chiropractors do not use PROMs for measurement of baseline and subsequent changes to health status as part of their case management.<sup>17</sup> This study found that the 36-Item Short-Form Health Survey/12 PROM was used occasionally by 8% of respondents whereas none of the 62 respondents indicated that they always or commonly used this PROM. In other disciplines such as physical therapy, PROMs are not routinely implemented in clinical settings.<sup>18</sup>

In chiropractic practice, when PROMs are used there are 2 general types: clinician-administered functional assessments and patient self-reporting instruments.<sup>17</sup> Clinician-administered assessments provide measurement of physical impairment and are traditionally based on biomedical models viewing a patient's pain and disability as symptoms of underlying pathology; however, a recent shift toward a biopsychosocial model establishes a more holistic approach in evaluating more than functional disability alone.<sup>19</sup> In this way, patient self-reporting measures are valuable in assisting patient self-reflection of one's own health status assessment and to help the clinician to determine the patient's perception about their health and clinical progression.<sup>20-22</sup>

Patient-reported outcome measures are questionnaires that collect information as a tool that can improve patient-doctor communication and evaluate intervention effectiveness and clinical outcomes to enhance clinical decision making; they also serve to improve quality of care and inform clinical practice.<sup>23-26</sup> Outcome assessment in chiropractic research supports the efficacy of the therapeutic process by tracking patient symptomology and general function; it also provides multifactorial information on intervention effects and gives a common language for clinicians and researchers.<sup>27,28</sup> Chiropractic research investigating the effects of chiropractic intervention on QOL is an area that continues to be lacking.<sup>27</sup>

With the trends of increasing importance of PROM use as part of evidence-based practice, it is important to understand why there is a lack of uptake of objective QOL measurement by field practitioners. Some research has examined researchers' recommendations on QOL outcome assessment in chiropractic practice,<sup>28,29</sup> yet there are no recorded studies describing practicing chiropractors' perspectives on QOL or on PROMs used to assess QOL in chiropractic practice. Additionally, it may be valuable to ascertain whether practicing chiropractors themselves consider the QOL construct important to communicate

and use with their patients. To address this research gap, this study sought to examine New Zealand chiropractors' perspectives on QOL, from an exploratory qualitative perspective, to facilitate the use of a wider adoption of PROMs and their administration in practice.

## METHODS

A qualitative descriptive methodology was used that is situated within post-positivism and takes a pragmatic approach to research design.<sup>30,31</sup> It employs naturalistic inquiry, with low inference interpretation, presenting facts in everyday language from participants' point of view.<sup>32</sup> The purpose of this methodology is to produce a descriptive summary of a topic, organized to best contain the most relevant data from the population of relevance. Its context-bound approach focuses on narratives to identify, explore, and describe social phenomena, providing information about health-related issues, grounded in environmental and cultural contexts.<sup>33</sup> This methodology is frequently used in health practice disciplines, providing depth to the knowledge of clinical situations.<sup>30,34</sup>

### Researcher Positioning

In qualitative approaches, positioning the researcher is important.<sup>35,36</sup> The primary author of this study, a chiropractor with 18 years of clinical experience, routinely observed that individuals' QOLs appeared to improve during chiropractic care. Anecdotally, it appeared that chiropractors often discuss that chiropractic care produces positive QOL changes, although it might not always be specifically referred to as QOL, which provided the catalyst for this project.

To minimize the impact of the primary author's positionality on the analytic process, steps were taken in accordance with Malterud,<sup>35</sup> whereby multiple reviewers evaluated the transcripts and were consulted on the generation of codes and themes to enhance credibility, rigor, and validity of the study. The focus group interviews were audio-recorded, transcribed verbatim, and reviewed independently by 2 other researchers. After 4 weeks, the transcriptions were sent to all focus group members, allowing participant validation, elaboration, and clarification. All members agreed with the transcripts and no changes were made.

All strategies recommended to enhance rigor in qualitative description as described by Milne and Oberle<sup>37</sup> were used. For the process of *authenticity*, it was ensured that the participants had the freedom to speak their mind freely. Each written transcript was compared to the audio recording for accuracy and completeness. For the processes of *criticality* and *credibility*, accurate transcription was verified by the process of member checking.<sup>38</sup> Relative to *integrity*, an audit trail of study processes and decisions was maintained

**Table 1.** Focus Group Moderator Questions

Discussion	Questions
QOL concept	Do you think chiropractic care has an impact on QOL?  Do you discuss QOL in a chiropractic context with your patients?  How do/could you define QOL to your patients?
World Health Organization definition of QOL	What do you think about this as a definition of QOL?
Knowledge of QOL instruments	What, if any, tools do you know that are available to measure QOL in practice?
Evaluation of each individual stimuli	What do you like about this outcome measure?  What do you not like about this outcome measure?  Do you think this instrument adequately reflects QOL?  How easy would this measure be to integrate into private practice?  Would you feel confident reporting the results of this outcome measure to your patients?

QOL, quality of life.

throughout the study. Triangulation was also observed with the occurrence of regular meetings between the first author (T.T.G.) and the subsequent authors (C.U.K., P.F.), to ensure critical review of coding and notations of coding decisions and to verify the findings.<sup>37,38</sup>

### Sampling, Recruitment, and Participant Demographics

Focus groups are used in health care research to obtain in-depth knowledge concerning perceptions and beliefs around specific topics, which can then serve to inform health care providers and inform practice.<sup>39</sup> Compared to interviews where the focus is on individual narratives, focus group discussions are interested in group discussion centered on a particular issue and seek to be more reflective of everyday conversation between the population of interest.<sup>40</sup> The focus group process is co-constructed and can generate additional information through the interaction between participants.<sup>41</sup> This includes agreements, contestations, and discussion of alternative viewpoints on the spot. The process employs a focused discussion in a small group setting. The method increases the likelihood of achieving data saturation because participants have the opportunity to interact and, thus, create a group consensus or gestalt of the topics under discussion.<sup>38,40,42</sup> In this exploratory study, the focus group participants received the same questions and the ideas expressed were similar across both groups.

In focus group research, the number of participants is less important than the rich investigation of content.<sup>40,43</sup> The suggested sample for a qualitative descriptive study is conveniently and purposefully collected, and often smaller than other qualitative designs with sample size ranging

from as few as 3 to 5 per group.<sup>30</sup> With the small population of New Zealand and its chiropractors, an exploratory study is useful to gather insights, thus it was anticipated that 2 focus groups of 4 participants would be adequate to recruit for this study.

Experienced chiropractors were recruited through purposive and convenience sampling<sup>44</sup> by placing advertisements in the New Zealand College of Chiropractic (NZCC) staff room. There was also an announcement made by the primary researcher at the 2016 New Zealand Chiropractors Association annual general meeting, inviting attendees to consider taking part. Every participant who expressed interest in the project contacted the researcher by phone or email and was sent a participant information sheet outlining the project via email. No incentive was offered in return for taking part, although at the end of the focus group a gift voucher was given to each participant as a token of appreciation.

Inclusion criteria required a minimum of 5 years of practice experience to ensure a reasonable knowledge base in communication and clinical experience to be able to offer an in-depth perspective. Eight participants were recruited for 2 focus groups conducted in 2016 in Auckland, New Zealand. Group allocation was in order of contact; the first 4 people who contacted the researcher and agreed to take part in the study were placed in group 1 and the next 4 in group 2. The average participant age was  $44.25 \pm 8.97$  years; 5 identified as New Zealand-European and 3 identified as New Zealand-Māori, Australian, or American. The average number of years in practice was  $16.38 \pm 5.26$  years. Two of the participants were faculty at the NZCC, 5 were in full-time practice, and one was practicing part time. All participants provided consent to participate. Ethics approval

**Table 2.** Summary of Listed Themes and Categories Derived From Focus Group Data

Theme	Categories
Practice objectives	Symptomatic versus asymptomatic approaches to chiropractic care Chiropractic identity in the marketplace A paradigm shift over time
Communicability	Difficulty in defining QOL Blurring of related concepts Objectifying the subjective Lack of certainty
Clinical integration	Usefulness of outcome measures available Barriers to using outcome measures Checking in: assessing QOL through talk and observation

QOL, quality of life.

for this project was gained from the Auckland University of Technology Ethics Committee 16/136.

### Data Collection

Data were gathered through focus group discussion undertaken in a NZCC staff room. Moderated by the researcher, semistructured and open-ended questions (Table 1) allowed for the exploration of contradictions, ambiguities, agreements, and controversy while remaining aligned with the objective of understanding the chiropractors' perspectives on QOL and its assessment in chiropractic practice. The 2 focus group sessions lasted 85 and 81 minutes, respectively, and were transcribed verbatim.

Four QOL instruments were provided as discussion stimuli: the single-item Global Wellbeing Scale (GWS),<sup>45</sup> the New Zealand version of the World Health Organization Quality of Life Brief,<sup>46</sup> the PROMIS short-form version 1.1 Global Health Questionnaire,<sup>47</sup> and the Self-Rated Health Wellness and Quality of Life questionnaire (SRHWQOL).<sup>48</sup> These stimuli were presented to the focus group participants who were invited to discuss and evaluate their utility and acceptability for chiropractic intervention with a range of open-ended questions. These measures were chosen by the authors because they were freely available and hence easily accessible to a practicing chiropractor. However, these measures were not evaluated in their conceptual, content, construct, or cultural validity, reliability, clinical utility, sensitivity, specificity, or responsiveness because as these issues are beyond the scope of this project.<sup>49</sup>

Data were analyzed using inductive content analysis.<sup>50</sup> This involved a 3-phase process of *preparation*, *organizing*, and *reporting*. The researcher coded and grouped codes from words or phrases used by participants. These codes were then placed into groups or *categories*, which were re-sorted into groups of similar content and meaning or *themes*.<sup>51</sup> The inductive identification of codes and related concepts evolved iteratively and developed through careful reading and rereading of the data, building up concepts for data analysis and reporting.<sup>52,53</sup>

When presenting the following data, FG refers to the focus group, FGM refers to the focus group moderator, and participants were referred to by their participant number (eg, P1, P2). For notation purposes, when participants spoke over each other, *overlapping* is used inside parentheses. An ellipsis is used in an excerpt when unrelated data have been removed. Italicized words signify they were uttered with emphasis. Any clarifications are noted in square brackets.

### RESULTS

Three overall conceptual themes were found to represent the participants' current opinions. These were named *practice objectives*, *communicability*, and *clinical integration*. Subthemes or categories were then derived from each theme (Table 2).

#### Theme 1: Practice Objectives

This theme identified a challenge to practicing chiropractors in communicating chiropractic principles and QOL owing to their perception of a predominant symptomatic model of health.

##### **Symptomatic Versus Asymptomatic Approaches to Chiropractic Care.**

All participants unanimously viewed that chiropractors take a holistic approach, rather than limiting their clinical focus to alleviating specific and isolated symptoms. In the following discussion, the group reflects on inaccurate conceptions the public may have regarding chiropractic:

P8: If we can get away from building symptom-based practices, then we have to start using measures.

FGM: So why do we not want to have symptom-based practices?

P7: 'Cause that's not chiropractic. ... That's not the basis that chiropractic was developed on. Yes, it's a part of it, and having pain can affect your QOL, and not having pain can affect your QOL, and having

your spine checked can affect your pain, so it's certainly part of it, but chiropractic *has so much more to offer*, and I'd like to have people coming into my office for chiropractic, not because they've got a bad back.

(FG2)

A disconnect is identified between chiropractor desires and patient motive for utilization of chiropractic care. P8 suggested using PROMs to demonstrate chiropractic care improving QOL might help shift patient perception. Additionally, participants identified an additional challenge with patients seeking chiropractic owing to a crisis, and hence not considering the potential wider benefits of care, because they are typically focused on their immediate symptomology:

P4: Sometimes the last thing a patient's thinking of when they come in with back pain or neck pain is what's that [*questions pertaining to QOL*] got to do with it, why should I answer that [*QOL PROM*]? So, they are not possibly in the headspace to answer it.

(FG1)

P8: ...When people come in crisis they are not listening to that [*chiropractor talking to client about QOL benefits as a result of chiropractic intervention*] anyway.

(FG2)

**Chiropractic Identity in the Marketplace.** The public had a limited understanding of the principles of chiropractic (eg, that the chiropractic objective is not limited to symptom relief), and to avoid potential confusion relating to this, there is a need for the profession to have congruent marketing among individual chiropractors. The findings indicated it was the chiropractors' responsibility to effectively communicate that chiropractic can improve QOL, despite existing physical limitations:

P7: Well, I mean the public only knows what we tell them, and the reason they now think bad backs, is because it's what people sell. ... I often say to people, you know, about improving their level of function in spite of their structure ... It's like DJD [degenerative joint disease] and arthritis, it's not that it is going to be necessarily changing, is it. But that doesn't mean that they can't have a better QOL *in spite of it*. I see that all the time in practice.

(FG2)

**A Paradigm Shift Over Time.** The participants felt patients did not initially understand that chiropractic care has multiple benefits other than symptom relief. Patient views on chiropractic and QOL were said to transform through their own experience of chiropractic care:

P2: 'Cause everyone, all of us here, you *know* people get better. They are happier. Life is better for them. You see they have better QOL 'cause they just do,

and maybe having a form [PROM] like this is a reason to be able to communicate QOL better, to help *them* actually realize it themselves.

P1: (Overlapping) Absolutely.

P2: ...It's like getting a new pair of glasses. You put on the old pair and you're like "how the f\*\*\* did I see out of these"?

(FG1)

The participants discussed that patients had become used to functioning less than optimally. During the course of chiropractic care, the individual is then able to comprehend how unwell they were.

## Theme 2: Communicability

This overall theme categorized the difficulty in the explicit communication of QOL and its related concepts.

**Difficulty in Defining QOL.** Although all participants were familiar with the term *QOL*, they had difficulty defining it as it was deemed an abstract and multidimensional concept:

P7: Well, I talk about it, but I don't know if I say the words QOL. I talk about their life and the different areas of their life, but I might not specifically say QOL.

FGM: And why not?

P7: Maybe because I haven't got a clear definition of that.

P5: ... I don't think I do, only because when you talk about QOL, it's this *overlying umbrella piece*, so that really isn't the connection point. The word QOL could come up, but it's kind of an overriding space that people want to have in lots of different places of their life.

(FG2)

P4: I'm struggling to get my head round it [WHO QOL definition], so if I'm struggling to get my head round that, then so might another person coming in off the street. So, no, in practice I definitely wouldn't use that as a definition. I would strip that right down to something that is very simple and very basic, and a much smaller sentence than that. There's no way in the world I could explain that to 90% of the people who come in to see me.

FGM: Do you discuss QOL in a chiropractic context with your patients?

P1: Yeah I do, probably not specifically, but we do talk about it. You know I even talk about my *own family* as examples ... our general well-being in terms of an example. So, while I don't say "oh, when you come here chiropractic care will help your QOL," I talk about the things that are in their life that have improved that are external to the spine.

P2: Yeah, same thing.

P4: Not *specifically*, but we skirt around.

P2: You've got to make it in some way *relatable*, otherwise if you just sit there and say: "Hey chiropractic can increase your QOL." It doesn't mean anything to anyone apart from just being random words.

(FG1)

Although participants felt a definition for QOL was necessary, when evaluating the WHO definition, all indicated that it was lengthy, confusing, open to interpretation, and difficult to relate to. The participants expressed that QOL definitions should be simplified. Quality of life was deemed meaningless in initial patient interactions owing to patients' limited understanding. Chiropractors used analogies to help explain QOL and chiropractic concepts to their patients.

**Blurring of Related Concepts.** The WHO definition was considered broader than what the participants had immediately perceived QOL to encompass. Chiropractors considered QOL to be more directly related to health and other similarly related concepts:

P2: It takes into account a lot of things we didn't think about because we are looking at it only from a health and functionality point of view.

(FG1)

P7: Well, that's not really QOL because it sort of overlaps with wellness or health ... Well, they are looking at wellness, which obviously links to QOL. It depends on how specific we want to be about the different things.

(FG2)

A similarity was identified around related definitions of QOL, such as health-related QOL (HRQOL). This blurring of concepts adds an additional challenge in the chiropractor's mind as to how to discuss the QOL concept in clinical encounters.

**Objectifying the Subjective.** Participants emphasised the paradox of objectifying the subjective nature of an individual's QOL. Participants suggested that QOL measurement was problematic. What is meaningful to one individual's QOL may not be able to be assessed consistently:

P1: I have people that come solely because they can't play golf regularly and that is a major part in that their QOL is measured in how many times they can play golf in a week. So, anything that disrupts that ability is something they want to deal with; and perhaps we don't look into those goals as much as probably we should, 'cause that would be a way of the individuals being able to measure what they consider important *to their* QOL.

P4: ... I think because everybody, maybe because everybody how they rate their QOL is quite different, I'd say his or her measure of QOL, whether it's sleeping better or stress. There would be different measures of QOL per individual as opposed to a random generalized QOL.

(FG1)

P6: Everyone is going to be affected differently, how it affects their QOL. Everyone's going to have a different perception of what QOL is, I guess.

(FG2)

The participants suggest they may judge a patient's perception of their QOL to be less than or lacking. The chiropractors may emphasize health and function over other aspects of QOL. This may be contrary to how the patient views their own QOL, as other aspects of QOL may indirectly affect their health concern.

**Lack of Certainty.** The participants expressed a lack of certainty in not only how to define QOL but also how and when to measure it. The following talk describes a lack of motivation or indifference in discussing QOL, with the lack of an adequate PROM also being a contributor:

P1: I think it's just one other thing that brings the attention of our profession and of our patients as well as professions outside, of how effective chiropractic care is in lots of different ways [that chiropractic improves QOL]. I think yeah, it's something that we try to do to a certain degree [assess QOL], but we don't probably have the right questionnaires and things to maybe delve into it as much as potentially we could, we don't ask the right questions ... I don't think we communicate it as well as what we can and that probably is where I think this tool [PROM] would be really good.

P2: A good tool would give me the impetus to do it more, and to be more formalized about my discussions about it.

P1: Yes, and more proactive.

(FG1)

P8: It really becomes part of the context of why they are coming in and when they are coming in. If they are the type of person that comes in whenever another crisis occurs, you'd probably administer it. If they are a regular patient coming in quite frequently, you'd look to see what was happening in their life, and at the appropriate time you'd do another one just to compare baselines. Or if they actually asked.

(FG2)

Typically, there is no definitive time frame for assessment. Rather, evaluation is somewhat case dependent. Additional to a lack of certainty as to when to measure QOL, the added factors of the context, the purpose served, and the stage of care contributed to a lack of PROM administration.

### Theme 3: Clinical Integration

There was ambiguity regarding when and in what ways to measure patient QOL during the course of chiropractic care.

**Usefulness of Outcome Measures Available.** Three of the 8 participants had previously used PROMs; 2 somewhat routinely (1 participant of each focus group), while 1 only at times. It was mentioned that an outcome measure may be useful in particular patient presentations:

P3: So, we have that [PROM] in our office and generally give that to someone with [a complex] condition like MS [multiple sclerosis] or something like that.

(FG1)

P8: I don't use, I don't discuss QOL per se, I use a health and wellness questionnaire that includes QOL as a component, but once again I use it as a measure, not necessarily as a discussion point for my patients.

(FG2)

Participants seemed unsure how to tie the measurement of QOL into a meaningful discussion with the patient. When comparing the 4 QOL PROMs, advantages, disadvantages, and varied views were expressed for each PROM presented.

P5: [GWS] Not enough angles being covered, just too simplistic.

P3: [NZWHOQOL] Well, it's a bit more detailed, umm, it gets you thinking about your overall life, which is nice.

P7: [SRHWQOL] It's so long... I think patients might get a little bit annoyed.

P8: [PROMIS] Yeah, it's a nice simple thing to use if you want something to track something over time.

Overall participants found the GWS easy to use but too simple. Mixed opinions were expressed regarding the NZWHOQOL and SRHWQOL; some considered them to be comprehensive and useful, while others thought they were too long and complicated. The PROMIS instrument had the most overall positive participant feedback, with the main advantage being that it was quick and easy to administer and not too probing.

**Barriers to Using Outcome Measures.** Patient completion time and clinical time burden was unanimously viewed to be a barrier in utilizing PROMs. This is compounded by the need to complete other paperwork during initial consultations:

P3: ...Well, because, for example, those questionnaires [QOL PROMs], my initial consult form is already 4 pages long, I mean they will probably have to spend another 7 to 10 minutes filling out a QOL survey.

P1: Where there is so much sometimes to take on board, just in the learning processes and what it's like to be adjusted [the application of chiropractic intervention] and going through your x-rays and the things you need to take on board, it might be too much to bombard them on the first couple of visits.

(FG1)

Practitioner time for data interpretation and reporting was also considered to inhibit clinical integration of PROMs. The participants discuss the usefulness of a simple internet-based PROM system:

P3: If you could just hand someone an iPad, and just go bang, bang, bang, send, and then it automatically adds it up for you and sends you an email and says "this is their score," that would be the easiest. 'Cause then your CA [chiropractor's assistant] wouldn't have to plug it in, or you wouldn't have to plug it in.

P2: If you get a score out at the end of this, if you were to say "here's a survey you do online, I can't see what you answer to each question, but I get an overall picture of where you are at."

(FG1)

P7: Depending on how you calculate it.

P6: How it's spat out. If it's spat out as a number or a graph?

(FG2)

Online-based systems were considered respectful of patient privacy in more personal questioning. The importance of PROM score interpretation was noted.

**Checking In: Assessing QOL Through Talk and Observation.**

The participants unanimously reported making various informal assessments of patient QOL at each patient interaction. Clinical experience helps inform practice enabling the chiropractor to choose relevant areas to discuss:

P1: Our experience might make us delve into those things, which is perhaps something that a chiropractor that hasn't perhaps been out as much can do. I don't know that I would have done that when I first came out potentially. Your experience starts to get you working to think about these things and ask about them.

P2: You know you can pick the right questions and you can do the right thing, 'cause you've got a bank of understanding in your brain.

P1: You know, you shouldn't just rely on what the patient says, you need to give that same questionnaire about that patient to their spouse or to someone else, or their children. You get more honest answers from other people. They might not know that they have stopped snoring unless their wife tells them.

(FG1)

P7: [asking patients about QOL] Lots of different ways, depending on the person at the time and what their situation might be.

(FG2)

The participants reported always trying to evaluate QOL. However, as each individual differed, this was somewhat case dependent. Additionally, QOL changes can be ascertained from a variety of sources, including family members.

## DISCUSSION

To date, no study has explored the perspectives of chiropractors on the definitions and meanings of the QOL construct and its assessment in clinical practice. This is the first study of its kind evaluating New Zealand chiropractors' views of QOL. Previous chiropractic studies report QOL improvements after chiropractic intervention.<sup>3,4,54</sup> However, there is a lack of knowledge relating to chiropractors' perspectives on the construct of QOL. This may have ramifications on how chiropractors communicate and evaluate QOL in chiropractic practice. Here we will discuss our viewpoints of this qualitative study.

### Practice Objectives

Since chiropractic's inception, there have been some who have viewed it as a model for natural care of the whole person that provides patient-centered care.<sup>55,56</sup> Intra-professionally, there is debate surrounding the need to have an exclusive musculoskeletal scope of practice,<sup>57,58</sup> compared to others who emphasize subluxation-focused/wellness patient care.<sup>14,15,59,60</sup> The participants were not asked information about their personal practice style; however, the analysis identified that the focus group participants believed that the primary intention of chiropractic care is more wellness-focused rather than symptom-focused. Although this sample of New Zealand chiropractors seemed unified in their practice objective, according to some authors the general chiropractic profession remains heterogeneous.<sup>61,62</sup>

The focus group findings suggest that the QOL concept is rarely part of communication with patients, potentially owing to chiropractors themselves being affected by the professional divide on practice objectives. This was evident when the participants contrasted practice styles and the unclear market position for the public and among health care professionals. It has been expressed that chiropractors may become defensive when they focus on the public's image of the profession.<sup>62</sup>

The understanding of QOL improvement under chiropractic care expands as a patient continues with care. In this way, it is possible that chiropractors introduce the concept of chiropractic having the potential to positively affect other aspects of a patient's health status in addition to symptom relief, which may not originally be recognized as related to intervention effects. Through communication, it may be the chiropractor's responsibility to shape the perception of patient benefits surrounding what chiropractic care may provide.<sup>63</sup>

### Communicability

Little is known concerning how health care professionals conceptualize the QOL construct or how it informs practice. Researchers tend to overlook the question of what QOL means, which has led to an emphasis among researchers on the technicalities of QOL measurement.<sup>64-66</sup> The results of

the current study concur with this. The chiropractors in this study expressed general confusion surrounding the QOL construct and how it can be communicated. If researchers fail to provide definitions in the research papers that evaluate QOL, then it is not surprising that this confusion extends into practice, as evidenced by these participants.

Satisfaction with life, happiness, and HRQOL have been used interchangeably to describe QOL.<sup>67</sup> Within chiropractic literature, there are no clear definitions relating to well-being or wellness, and these definitions are reported to be variable and inconsistent.<sup>56,68,69</sup> The current study uncovers a potential need for clearer understanding of the difference and similarities of QOL and its related concepts of HRQOL, health, wellness, and well-being. Greater definitional clarity of terminology could enable best practices and facilitate evidence-informed practice and research. In contrast, perhaps the limited knowledge by these participants on these related concepts and PROMs in general may simply have resulted in the uncertainty in communicating the QOL construct.

A qualitative study<sup>70</sup> identified that a chiropractor's confidence was considered paramount in developing a therapeutic relationship with their patient. When chiropractors felt they had successfully communicated their practice objective, they felt they were more successful in the application of chiropractic intervention. Our focus group results highlighted a lack of clarity and certainty as to how and when to best measure and evaluate QOL. Research oriented toward QOL communication and evaluation may enhance the chiropractor's ability to confidently articulate and assess the QOL construct for their patients.

### Clinical Integration

The PROMs evaluated in this study mirror those available for general use and ranged from simple to complex and single- to multi-item measures.<sup>71,72</sup> However, as seen in the data of this study, the availability or use of a PROM does not guarantee intended clinical benefits because most offer advantages and disadvantages depending on the context and intended population being studied.<sup>20,65,71</sup> The focus group participants also expressed that, for a PROM to be integrated into practice, it needs to be economical, efficient to administer and interpret, and easy to use in a practice setting. This sentiment is shared and noted in chiropractic and health care research.<sup>28,73,74</sup>

Our findings showed varied views on the PROM stimuli presented, with no conclusion as to which constituted the best outcome measure. The GWS was considered most appropriate for a simple and quick assessment of overall QOL. The NZWHOQOL and the SRHWQOL questionnaires were deemed most suitable when a more comprehensive QOL assessment was warranted, although no definitive suggestions were offered of which clinical presentations would require this. Overall, the PROMIS questionnaire had



the most favorable feedback. It was considered of manageable length for the patient while still providing insight into patient progress. Additionally, although the focus groups were not given information on its implementation, the PROMIS questionnaire is an online-based assessment system.<sup>75</sup> The focus group data reported that such a system would be advantageous. One UK study demonstrated that routine PROM online collection is both cost-effective and feasible within a practice environment.<sup>76</sup>

The current study suggests that there is little known accepted practice on how and when to evaluate QOL. In actuality, whether a gold standard measure of QOL can ever be achieved is debatable.<sup>11</sup> This lack of knowledge is also evident in patient visit frequency for varying patient presentations at differing stages of patient care (eg, acute care, maintenance care), which adds to the challenge of integrating QOL PROM assessment into clinical practice.<sup>28</sup> The findings from this study suggest that chiropractors may require more education (be it undergraduate or continuing professional development) around both QOL and PROM use, which has the potential to facilitate greater clinical integration.

### Future Studies

The currently evolving health care environment demands that clinicians provide evidence of high-quality care through PROMs, and this focus provides an exciting opportunity for the chiropractic profession to demonstrate effectiveness.<sup>28</sup> Future studies, including an evaluation of the current research within a wider health care context, are required. Other health disciplines may share commonalities regarding operational definitions and PROM integration in clinical practice. Such research could assist in positioning the role of chiropractic within integrative health care and provide a platform for collaborative interprofessional research. Future research where participants are given background material and more time to evaluate PROMs could enable deeper questioning on face and content validity from a practicing chiropractor's perspective.

### Limitations

This was a study of chiropractors in New Zealand, therefore these findings may not be generalizable to chiropractors in other world regions. Limitations related to sampling include potential bias of the recruitment being conducted at the NZCC. Although not all participants were NZCC faculty, perhaps those who participated had philosophical ties with the NZCC, which may have introduced a bias. Because New Zealand has a small population and a relatively small number of chiropractors, a small sample could also provide a bias to this study, although the sample size would generally be considered appropriate for this type of study.<sup>30,40,43</sup>

Focus groups can be influenced by the relationship and rapport between the researcher and participants. There is a possibility that there was a social desirability bias present among the group members. The impression of the author or focus group moderator was that the focus group sessions exhausted each topic that was discussed and that they were open and honest, with the discourse flowing easily between researcher and participants.

A further limitation may be that participants may have been unfamiliar with the concept of QOL and how to use PROMs in everyday practice. The author did not select participants based on prior knowledge of either of these, as the project was directed to explore the understanding of practicing chiropractors on QOL and its measurement. In addition to this, it is possible that the participants did not have sufficient time to carefully consider and evaluate the PROMs.

### CONCLUSION

The findings from this group of New Zealand chiropractors demonstrated that the QOL construct and its related concepts are indeed relevant to the chiropractic profession. As the QOL concept is difficult to define, the focus group participants chose not to explicitly discuss QOL in clinical practice with only a few typically assessing QOL in practice. Coupled with a perceived unclear public identity limiting the public's view on the profession, chiropractors found the communication of the concept of QOL challenging. Ambiguity arose as to how and when to best measure QOL in clinical practice. The PROM instruments evaluated in this study had both disadvantages and advantages. Factors of questionnaire design and complexity, practitioner and patient time burden, and interpretability were considered most significant to integration in clinical practice.

Chiropractors must balance both professional and practical issues when striving for excellence in practice. The findings of this qualitative inquiry could provide better understanding of one's own practice with the potential to aid clinical decision-making. Clarification surrounding QOL and related concepts is needed for appropriate PROM selection to demonstrate chiropractic intervention effectiveness.

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No funding sources or conflicts of interest were reported for this study.

### CONTRIBUTORSHIP INFORMATION

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

Design (planned the methods to generate the results): T.T.G., C.U.K., P.F.

Supervision (provided oversight, responsible for organization and implementation, writing of the manuscript): C.U.K., P.F.

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

Analysis/interpretation (responsible for statistical analysis, evaluation, and presentation of the results): T.T.G., P.F.

Literature search (performed the literature search): T.T.G.

Writing (responsible for writing a substantive part of the manuscript): T.T.G.

Critical review (revised manuscript for intellectual content, this does not relate to spelling and grammar checking): T.T.G., C.U.K., P.F.

### Practical Applications

- This study may influence the chiropractor's ability to more confidently communicate the QOL concept in clinical practice.
- This study may encourage the chiropractor to begin measuring health status through PROMs.
- This may encourage chiropractors to begin to assess the QOL of their patients.
- This study may encourage future research that can more clearly define QOL and its related concepts.
- This may facilitate new PROM development for QOL for clinical practice.

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