

Characterisation of the Multimodal Care Provided by Uk Chiropractors: a Survey

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Research

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Abstract

Background

Evidence indicates that chiropractors provide multimodal care. However this has not been characterised for any individual condition, other than low back pain and for maintenance/wellness care. It is also unclear how treatment approaches may be implemented over a course of care. The modalities utilised by chiropractors in the United Kingdom (UK) have not been evaluated since 1977. The study's purpose was to characterise the initial phase of care, provided by chiropractors, for different presenting conditions.

Methods

A prospective longitudinal survey was conducted. Participating chiropractors recruited first time patients to the study and subsequently recorded in an electronic data collection form the care approaches used for each presenting condition. This was repeated for up to 4 consecutive visits over a maximum period of 1 month. Data were descriptively analysed to characterise the modalities used for each condition and whether these were introduced at the first visit, formed a core approach used at every visit, or were introduced at a later point within the early phase of care.

Results

137 chiropractors provided data from 3687 visits for different conditions. Multimodal care was provided across all different conditions. Most patients received manual therapy that included articular and soft tissue techniques. Exercise approaches were used for many patients, across most conditions. Pain education was used at a moderate level (more frequently than previously reported) for most conditions. A wide range of other approaches were used at lower frequencies. Some differences in approach between conditions were identified. Chiropractors usually introduced an intervention at the first visit, frequently continuing this as a core approach to the early phase of care. Exercise had a slightly greater tendency than other approaches to be introduced later.

Conclusions

This survey characterised for the first time the high level of multimodal care provided by participating chiropractors in the UK for all individual presenting conditions, across the initial phase of care. Limitation in the generalisability of the study findings may exist. The rationale for differences in multimodal care between conditions is unclear and the level of concordance with clinical guidelines and best evidence remains to be established.

Background

Chiropractic is a healthcare profession concerned with the diagnosis, treatment and prevention of disorders of the musculoskeletal system and is based upon a biopsychosocial model of care(1).

A number of studies have evaluated the approaches that chiropractors use in treatment of their patients(2). Evidence indicates that chiropractors provide multimodal care that includes spinal manual therapy (SMT), patient education, soft-tissue therapy, mechanically-assisted manipulative therapy, nutritional supplements, exercise instruction, ice, heat, mobilization/manual traction, orthopaedic supports, electrical stimulation, therapeutic ultrasound and acupuncture(2). However, there is limited understanding of how these treatment approaches are used in the management of different individual conditions. Previous studies either evaluate interventions used across all conditions combined(3–28), or interventions used for management of low back pain(29–33) or maintenance/wellness care(5, 34) only. As such, there has been no characterisation of the care approaches used for other conditions. Standards for advertising of conditions that chiropractors can manage are based upon the existence of reasonable evidence of treatment effectiveness for each condition(35), but predominantly focus on the use of SMT(36). Detailed

understanding of the package of care used for each condition would enable fuller evaluation of the extent to which practice is evidence-based.

Most existing studies attempting to characterise care have evaluated interventions at individual encounters (3–23, 25–29, 32–34, 37–44) with limited exploration of the care approach over time(24, 30, 31). There is no characterisation of how some interventions (e.g. exercise/rehabilitation, soft tissue techniques, advice, psychological approaches) may be introduced and combined over a course of care that may include several encounters.

The only study evaluating care approaches among chiropractors in the United Kingdom (UK) was conducted in 1977 characterising interventions used in managing low back pain(45), while a further prospective study in 1994 characterised interventions used across all presenting conditions among European chiropractors, of which approximately half were practising in the UK(46). There are no recent data regarding UK chiropractic practice.

The aim of this study was therefore to characterise the interventions used by UK chiropractors in management of patients with different presenting conditions during the initial phase of care.

Methods

A prospective longitudinal survey collected data on presenting conditions, and interventions used in their management, among new patients seen by participating chiropractors, either over a maximum of 4 visits or one month from the first encounter, whichever was the sooner. Data were recorded by the chiropractors in web-based case forms.

Recruitment of chiropractors

All registrants of the General Chiropractic Council (GCC) in the UK were invited to participate. A postal letter of invitation was mailed in December 2016 and the invitation repeated twice electronically and through social media forums within the profession. Interested chiropractors completed a web-based survey providing demographic information to enable representativeness of the sample of the population to be evaluated. A signed consent form for participation in the study was returned and participant codes issued enabling subsequent anonymity.

Recruitment of patients

Participating chiropractors recruited patients to the study and gave information sheets and consent forms to patients prior to enrolment. Chiropractors were instructed to invite the participation of every consecutive new patient encountered where the first visit took place in a defined one-month period. Chiropractors issued each patient with a unique reference number ensuring anonymity of patient data.

Provision and recording of care

Chiropractors were instructed to provide care and record case notes in their usual manner. Following completion of a maximum of 4 encounters, or after one month from each patient's enrolment (whichever occurred sooner) chiropractors entered details of the care provided into a bespoke online survey form. Up to three separate presenting conditions managed per patient could be entered. Care provided for each condition at each encounter was recorded.

Online Survey Design

An electronic case data collection form was designed and administered using Survey Monkey (www.surveymonkey.com). This included patient demographic data, presenting condition categories that the chiropractor selected, and condition duration data (acute = 0–6 weeks, sub-acute = > 6 weeks up to 3 months, or chronic = > 3 months). Since a key use of the study findings was to enable comparison of care provided with the published evidence of effectiveness, condition categories and intervention terms were pre-specified in drop-down lists to facilitate mapping to the terms used in existing reviews of effectiveness studies(36, 47) as well as to the intervention approaches specified by the WHO(48). Open fields enabled recording of 'other' conditions and interventions as well as reasons for referral of patients to other healthcare providers.

Data Analysis

Data relating to the participating chiropractors were analysed descriptively and compared to the distribution of characteristics across the whole GCC register of UK chiropractors. The demographic characteristics of patients were described, along with details of their presenting conditions. For each condition, the care package was characterised descriptively by the proportion of patients who received a specified intervention: i) at any encounter within their initial phase of care, ii) at their first encounter ('first line' approach), iii) at every encounter ('core' approach) and iv) introduced after the first visit ('adjunct' approach).

Ethical Considerations

The ethics committee of the University of South Wales gave approval for the study.

Results

At the time of the study, 3108 chiropractors were registered in the UK. Of these, 342 registered to take part in the study and, of these, 137 returned collected data (response rate = 4.41% of total population).

The mean age of participants was 43.9 years (age data were not available for comparison in the GCC register). The gender distribution of the participants (males = 43%) was comparable to the register (males = 50%). The number of years registered is a proxy indicator of time since graduation and experience level. The mean (SD) registration duration was slightly higher at 11.8 (5.56) years for participants compared to 10.3 (5.23) years for all registrants. Institutions of graduation had overall comparable ranking between participants and the register (Fig. 1). Detailed analysis however indicated some distribution differences, with overrepresentation of graduates of AECC University College (AECC) and underrepresentation of graduates of overseas institutions in the participant group (only 1 participant), compared with the register (12%). Graduates of the McTimoney College of Chiropractic (MCC) were slightly underrepresented.

Patient characteristics

A total of 1022 patients were enrolled into the study (54% male). In this sample a total of 1360 presenting conditions and 3687 visits were recorded. The mean (SD) age of patients was 45.3 (19.00) yrs. Seventy-four (7%) were under 16 years old and 11 (1%) were pregnant.

Table 1 details the conditions for which care was sought in the patient sample. The most common condition was low back pain (n = 427 (31.4%)) and the least common was temporomandibular pain (n = 4 (0.29%)). In the whole sample, 37 (2.7%) patients sought wellness or care for a variety of non-MSK conditions although the open field descriptors suggested that 8 of these may have been MSK-related problems (e.g. back/body pain, hips clicking, posture problems) that may not have clearly fitted within the pre-defined MSK condition categories. Wellness and non-MSK care presentations were more common among children under 16 years (n = 14 (18.9% of children)), of which 6 were infants presenting with colic or reflux, 1 for a 'baby check-up' and 1 child with nocturnal enuresis.

Characterisation of care

The care provided for patients with each condition is characterised in Fig. 2a-d. For clarity, some categories of intervention are combined (manipulation and mobilisation, general and specific exercise and imaging and referral). The full data set with these interventions separated is provided in Appendix 1. Temporomandibular joint pain care is not presented since only 4 patients had this condition. Due to inconsistencies in categorisation by chiropractors of patients recorded as either receiving wellness care or care for non-MSK conditions, these categories were combined.

Appendix 2 provides data for the many 'other' interventions that chiropractors reported using. Since none was utilised at high frequency, these are not included in the detailed results presented in Fig. 2a-d, but trends are outlined in the text below, which summarises interventions used for the conditions treated by chiropractors.

Low back pain

Articular techniques were used at every visit for most patients with low back pain, while soft tissue techniques were also widely included and were a core component of care (used at every visit) for approximately half of patients. While exercise was widely used within the care package, this was less often as a core approach. Pain education was included for almost a quarter of patients, being most often introduced at the first visit but infrequently forming a core approach. Dry needling/Acupuncture was included in the overall package of care for a moderate number of patients. In contrast, psychological approaches were included very infrequently. Few patients underwent imaging and/or referral procedures and very few received no treatment. Blocking/SOT (sacro-occipital technique) was the most frequently reported 'other' approach utilised in lower back pain care

Leg pain with or without back pain

Components of the package of care for patients with leg pain +/- back pain broadly followed a similar pattern to lower back pain. Exercise was, however, more often introduced at the first visit than for all other MSK conditions. Both acupuncture/dry needling and pain education were included at a somewhat higher rate, with acupuncture being included more frequently than for any other condition. Imaging and/or referral and non-treatment of the condition occurred at a higher rate than for lower back pain on its own. Blocking/SOT was used more often than for any other condition, while ice/topical analgesia, instrument assisted articular or soft tissue approaches and electrotherapy were also reportedly used.

Neck pain

For patients with neck pain, soft tissue techniques were more frequently included and more often formed a core component across the course of care, while exercise approaches were less frequently included, compared with lower back or leg pain +/- back pain. Approximately 1 in 5 patients received acupuncture, while pain education formed a component of care for fewer patients. Stretches, instruments (assisted articular and soft tissue techniques), electrotherapy, posture, movement and ergonomic advice were among other approaches reportedly used in the management of neck pain.

Arm pain with or without neck pain

Some differences from other conditions were indicated in the package of care for arm pain +/- neck pain. The mean number of visits per patient was higher, with all receiving the maximum of 4 visits within the data collection period (table 1). While the majority of patients did receive articular techniques and/or soft tissue techniques), these were less often introduced at the first visit compared with all other conditions. Approximately half received exercise approaches (fewer than for other MSK conditions) and 1 in 5 received acupuncture. Pain education was more often utilised than for neck pain alone and rates of imaging and/or referral procedures and non-treatment was also slightly higher. Ice/topical analgesia, stretches, instruments and electrotherapy were reportedly used other interventions.

Mid-back pain

For mid-back pain, while exercise was widely included, this was only introduced at the first visit for one third of patients and was more likely to be an adjunct (introduced later in the course of care) than a core approach. Pain education was utilised for almost a quarter of patients, usually at the first visit. Psychological approaches were reported in almost 1 in 10 patients, more frequently than for neck pain and low back pain. In addition, instruments, posture/movement advice, stretching and electrotherapy and flexion/flexion-distraction/traction techniques were also reportedly used.

Pelvic pain

Articular techniques were used in the majority of pelvic pain patients but less often formed a core approach than for spinal pain (neck, mid-back or low back) or lower limb +/- back pain conditions. The inclusion of soft tissue techniques followed a similar pattern. Over half of patients received exercise prescription. One in 5 received pain education, almost always from the first visit, while inclusion of psychological approaches was the highest of all the presenting conditions evaluated. Blocking/SOT was the commonest other intervention, with drops, myofascial/active release and stretches also reportedly utilised.

Upper limb conditions

Articular techniques, although widely included, were utilised less often than for other MSK conditions, while soft tissue techniques were included more often. Exercise prescription was included for the majority of patients, and was introduced at the first visit more frequently than for most other conditions. Acupuncture/dry needling was also included more frequently. Clinicians reported not

treating a patient for an upper limb presenting condition, at one or more visits, more often than for any other presentation. Electrotherapy and kinesiotaping were reportedly used more often than for other conditions.

Lower limb conditions

Articular techniques were included for most patients with lower limb conditions at a higher frequency, and more often forming a core approach, than for upper limb conditions. In contrast, soft tissue approaches were included less often and were the component of care most likely to be introduced as an adjunct treatment for lower limb conditions. Overall levels of exercise prescription were lower than for the upper limb but, where used, were more likely to be a core component of care. Acupuncture/dry needling was included less often than for other MSK conditions. Approximately 1 in 10 patients underwent imaging/referral procedures and the same proportion were not treated for their lower limb condition at one or more visits. Other interventions reported included kinesiotaping and orthotics.

Temporomandibular joint pain

Only 4 patients presented with temporomandibular joint pain (all chronic). All received soft tissue approaches, while 2 also received articular and exercise approaches. No other interventions were reported.

Headaches

Articular techniques were very widely included in the package of care for headaches, usually as a core approach. Soft tissue techniques were also frequently included. Exercise was less widely prescribed than for any MSK condition, was rarely used and never formed a core approach. Pain education was also less widely included than for MSK conditions. One in 10 patients were not treated for their headache condition at one or more visits, although rates of imaging/referral were low. Stretches and cranial techniques were among the other approaches used for headaches.

Wellness care and non-musculoskeletal conditions

Articular and soft tissue techniques, exercise and dry needling/acupuncture were all less often included in wellness care and care of non-MSK than for MSK conditions and headaches. Psychological approaches were used for 1 in 10 patients and a similar number were not treated for these presentations. Imaging/referral procedures were undertaken, at the first visit, for some. Cranial techniques, diet/nutrition/lifestyle advice and self-management/active care were among the other approaches used.

Discussion

This was the first survey of the care approaches of UK chiropractors since 1977 and characterised the care provided, across an initial course of visits, for all new patients who presented with any condition during the data collection period. A key finding was that multimodal packages of care, that included a range of different interventions, were utilised for all presenting conditions. Similar patterns that were seen for all conditions included the extensive use of manual articular and soft-tissue techniques and the prescription of specific or general exercise. Moderate numbers of patients received pain education interventions and acupuncture or dry needling, however few reportedly received psychological approaches. A wide range of additional approaches were reported, although none at high frequency. Chiropractors usually introduced interventions at the first visit and often continued their use across the initial course of care. Although widely used, exercise prescription was more likely than manual techniques to be introduced later in the care plan. Some differences in the care approach for different conditions were identified.

The predominance of manual articular approaches in management of low back pain is consistent with the findings reported in previous studies(29, 31, 45). Similar findings are also reported for low back/spine maintenance care(5) and for care combined across all presenting conditions(2, 27). This is the first study to evaluate levels of use in the management of other conditions and identifies variations in practice, notably lower levels of use in management of upper limb conditions, and a reduced tendency to introduce manual articular approaches at the first visit for arm pain +/- neck pain. Reasons for the latter trend are unclear, but might reflect a greater perceived risk of adverse events for spinal manipulation/mobilisation in the presence of possible cervical radiculopathy. These patients had, on average, more visits than for other conditions, potentially suggesting more severe symptoms, and evidence suggests that higher levels of neck pain are associated with a greater risk of more severe neurologic adverse events following spinal manual therapy(38), which may promote a more cautious approach.

Soft tissue approaches were very commonly included in the package of care for all MSK conditions and headaches, being particularly frequently included in the management of upper limb conditions and headaches. The rates found in this study are higher than those previously reported for chiropractic treatment of all conditions(2), and historically recorded in UK practice for patients treated for low back pain(45). Contributing factors are unclear, but it is possible that increased inclusion of soft tissue approaches reflects awareness of emerging, albeit limited evidence and recommendations for the use of soft tissue approaches for some conditions, including shoulder pain(49) and chronic tension-type headaches(50).

In 1977, only 2–3% of UK patients receiving care for low back pain received exercise approaches(45). This is in contrast to a much higher proportion (61.83%) of patients in this study. This may reflect awareness and implementation of UK clinical guidelines recommending exercise for acute or chronic lower back pain in adults, with or without sciatica(51) and broadly consistent recommendations across low back pain guidelines for education that supports self-management, return to normal activities and exercise and a move away from passive interventions in isolation(52). The UK guideline recommends that manual therapy be considered, but only as part of a treatment package that includes exercise, with or without psychological therapy(51). The findings of this survey indicate that while exercise is widely used, it is not included for all low back pain patients who receive manual therapy, thus there is a need to further enhance guideline-concordant care for low back pain among UK chiropractors. Across the different MSK conditions in this survey, exercise approaches were included in the care package for a majority of patients. This is comparable to a study of practice in Australia(27) where, across all conditions, patients received therapeutic exercise prescription at just over half of visits and or advice about exercises in general at approximately one fifth, and is in the higher range of levels of exercise use as a care approach by chiropractors identified in a scoping review(2). Exercise approaches in this study were somewhat less utilised for the management of patients presenting with headaches than for musculoskeletal conditions. A recent clinical practice guideline that post-dates this present survey recommends exercise interventions for certain tension-type and cervicogenic headaches(53), while two systematic reviews and meta-analyses concluded low-moderate quality evidence that aerobic exercise was effective in reducing migraine burden and episodes(54, 55). There may be a need therefore for chiropractors to further increase implementation of exercise approaches in their management of primary headache presentations.

The use of pain education approaches by chiropractors was greater in this study than previously reported. For example, surveys in Australia(27) and Canada(28) reported very low rates of advice (various types without specification of pain education), at less than 4% of patient encounters. The current study identified similar various types of advice within its open field 'other intervention' question at over 60% of all visits. In addition to this, pain education was specifically reported as used for most conditions, with the highest level of use for 1 in 4 patients with leg pain +/- back pain. This might indicate differences in UK practice, however, in this study chiropractors were explicitly questioned about pain education, which might have resulted in greater reporting. Two recent systematic reviews of clinical practice guidelines found consistent recommendations for advice and education for neck pain(56) and low back pain(56, 57), although there remains uncertainty over what should be included and how best to deliver this, with recent studies seeking to develop and evaluate structured education programmes for low back pain(58) and hip and knee osteoarthritis(59). Some studies report benefits specifically of pain education for recent low back(60) and chronic spinal pain(61). However, not all studies report benefits for patient education in low back pain(62). This awareness of recommendations but lack of clarity in what to include and how to deliver education approaches within multimodal chiropractic care may underlie the moderate utilisation levels of pain education reported by chiropractors in this survey. Further studies are needed to evaluate the optimum content and delivery strategy in this setting.

Chiropractors in this survey reported low rates of utilisation of psychological approaches. Defined psychological therapies, such as cognitive behavioural approaches that are recommended for low back pain (NICE) are outside the scope of practice of chiropractors in the UK. However, it was anticipated that chiropractors might report using basic preliminary psychosocial approaches such as discussion with patients of fear avoidance beliefs or barriers to return to work. A limitation of the survey was that 'psychological approaches' were not defined and participants may have interpreted these as meaning psychological therapies. It is therefore unclear to what extent chiropractors engage with discussions around psychological factors with their patients.

Few patients presented seeking care for non-MSK conditions, or wellness care, although this was more common in children. Maintenance care(63) would not be captured in this survey as the study period was limited to 4 weeks from first presentation. Robust evidence for effectiveness or efficacy of SMT is lacking for non-MSK conditions(64). The findings of this survey did

indicate that manual articular techniques were utilised for non-MSK conditions, albeit at lower rates than for other conditions, while cranial techniques were notably used more often than for other conditions. There was also evidence that for patients who presented with a non-MSK condition or for wellness care as the primary reason for seeking care, chiropractors did not always provide care. There was also a greater tendency to utilise diet/nutrition/lifestyle advice and supportive self-management than for other conditions although due to small numbers of patients, caution should be exercised in interpretation of this data.

The main limitation of this study was its low participation rate among chiropractors compared to other studies with different methodologies. This limits the generalisability of the study's findings regarding multimodal care to the wider population of UK chiropractors. Participating chiropractors entered data from their patient consultations into the electronic data collection form themselves, which may have been perceived as burdensome. The more resource-intensive method of data extraction from chiropractors' records by researchers, in line with some other studies(27, 28) may have increased the participation rate. Despite this limitation, graduates of all UK institutions were represented and age and gender characteristics were comparable with the GCC's register. However it is still possible that selection bias with respect to practice approaches of participants compared with non-participants may exist. An unanticipated finding was the notable lack of representation of chiropractors who graduated outside the UK, with almost no data captured for this group. Factors that underlie this absence of engagement with the study are unclear.

Conclusion

The aim of this prospective survey was to characterise the interventions used by UK chiropractors in management of patients with different presenting conditions, during the initial phase of care. Multimodal care, utilising a variety of interventions, was provided for all conditions. For most conditions, the majority of patients received articular techniques, soft tissue techniques (massage/trigger point therapy) and exercise (specific/general exercise) prescription. All interventions utilised were usually introduced at the first visit and often formed a core approach used at every visit thereafter. In patients whose care included exercise approaches, this was most often introduced at the first visit. Compared with other interventions, however, there was a greater tendency for the introduction of exercise at later visits and a lower tendency for it to form a core approach at every visit. Pain education was used for many patients with MSK conditions, however very low utilisation of psychological approaches were reported. Some variations in approach between different conditions were identified. However, the rationale for these differences within multimodal care provision is unclear and the level of concordance with key clinical guidelines and best evidence remains to be established.

Abbreviations

UK – United Kingdom

SMT – spinal manual therapy

MSK - musculoskeletal

GCC - General Chiropractic Council

AECC – University College Anglo-European College of Chiropractic

MCC – McTimoney College of Chiropractic

WIOC – Welsh Institute of Chiropractic

SOT – sacro-occipital technique

Declarations

Ethics Approval

The study included human participants. Ethical approval was obtained from the University of South Wales Ethics Committee.

Consent for Publication

Not applicable

Availability of data and materials

The datasets generated during and/or analysed during the current study available from the corresponding author on reasonable request.

Competing interests

Author GS is a trustee of the Royal College of Chiropractors (RCC) and is its Director of Research. As the RCC is an affiliated society of Chiropractic and Manual Therapies, this represents both a financial and non-financial competing interest. Author KW is a member of the Research Committee of the RCC and received research fellowship funding from the RCC to conduct the study.

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Authors' contributions

The study was designed by GS, with input from KW. KW executed the study, recruiting chiropractic participants, developing the data collection tool, managing data collection and collating and processing data. GS analysed the data and wrote the manuscript.

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Table

Table 1. Characterisation of presenting conditions managed: For each condition, the number of patients who presented with the condition and the number of visits are indicated. Data quantifying the primary presenting conditions for which patients sought care are provided. Condition duration data at first presentation are also detailed [acute (0-6 weeks), subacute (6 weeks-3 months) or chronic (> 3 months)]. Percentages indicate the proportion of all presentations.

CONDITION	PATIENT PRESENTATIONS N (%)	VISITS FOR CONDITIONS N (mean visits per patient presentation)	PRESENTATION CHARACTERISTICS			
			Primary complaint patient presentations N (%)	Acute patient presentations N (%)	Subacute patient presentations N (%)	Chronic patient presentations N (%)
All conditions	1360 (100)	3687 (2.71)	1022 (75.15)	446 (32.79)	155 (11.40)	746 (54.85)
Low back pain	427 (31.40)	1216 (2.85)	360 (84.31)	184 (13.53)	33 (2.43)	210 (15.44)
Leg pain+/- back pain	166 (12.2)	436 (2.63)	152 (11.18)	71 (5.22)	23 (1.69)	72 (5.29)
Neck pain	195 (14.33)	440 (2.26)	143 (10.51)	53 (3.90)	27 (1.99)	115 (8.46)
Arm pain+/- neck pain	95 (6.99)	380 (4.0)	67 (4.93)	33 (2.43)	12 (0.88)	44 (3.24)
Mid-back pain	96 (7.06)	244 (2.54)	63 (4.63)	29 (2.13)	12 (0.88)	55 (4.04)
Upper limb condition*	118 (8.68)	297 (2.52)	73 (5.37)	25 (1.84)	12 (0.88)	81 (5.96)
Lower limb condition**	120 (8.82)	324 (2.70)	75 (5.51)	19 (1.40)	20 (1.47)	76 (5.59)
Pelvic pain	66 (4.85)	151 (2.29)	42 (3.09)	17 (1.25)	9 (0.66)	40 (2.94)
Temporomandibular pain	4 (0.29%)	7 (1.75)	1 (0.07)	0 (0)	0 (0)	4 (0.29)
Headaches	36 (2.65)	107 (2.97)	19 (1.40)	6 (0.44)	5 (0.37)	25 (1.84)
Non-MSK/Wellness care***	37 (2.72)	85 (2.30)	27 (1.99)	9 (0.66)	2 (0.15)	24 (1.76)
* Upper limb conditions sub-category presentations (drop down list): adhesive capsulitis n=3, CTS n=10, shoulder disorder n=51, rotator cuff disorder n=28, lateral epicondylitis n=8, other/unspecified n=18						
**Lower limb conditions sub-category presentations (drop down list): Hip OA n=10, Knee OA n=16, foot problems n=22, patellofemoral pain syndrome n=9, plantar fasciitis n=5, other/unspecified n=58						
***Non-MSK/Wellness sub-category presentations (open ended question): nocturnal enuresis (n=1), Difficulty sleeping (n=2), Balance issue (n=1), colic or reflux (n=6), Nystagmus (n=1), Anxiety attacks (n=1), abdominal pain (n=1), chest pain when stressed (n=1), Sensory processing disorder (n=1), Back/body pain (n=4), Support for anger due to autistic spectrum disorder (n=1), GI pain/discomfort &/or constipation/problems (n=4), wellness/wellbeing/check-up (n=7), pre-natal check-up (n=1), hypermobility (n=1), Postural dysfunction/correction (n=2), Alignment (n=1), hips feeling unbalanced/clicking (n=1)						

Figures

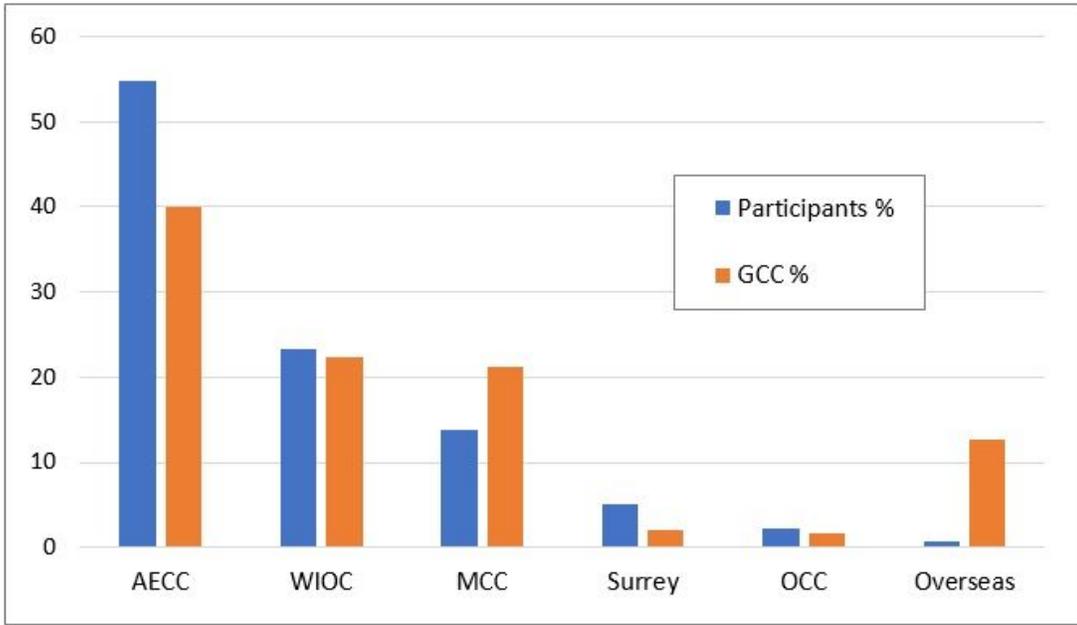


Figure 1

Comparison of the demographic characteristics of study participants with the GCC Register.

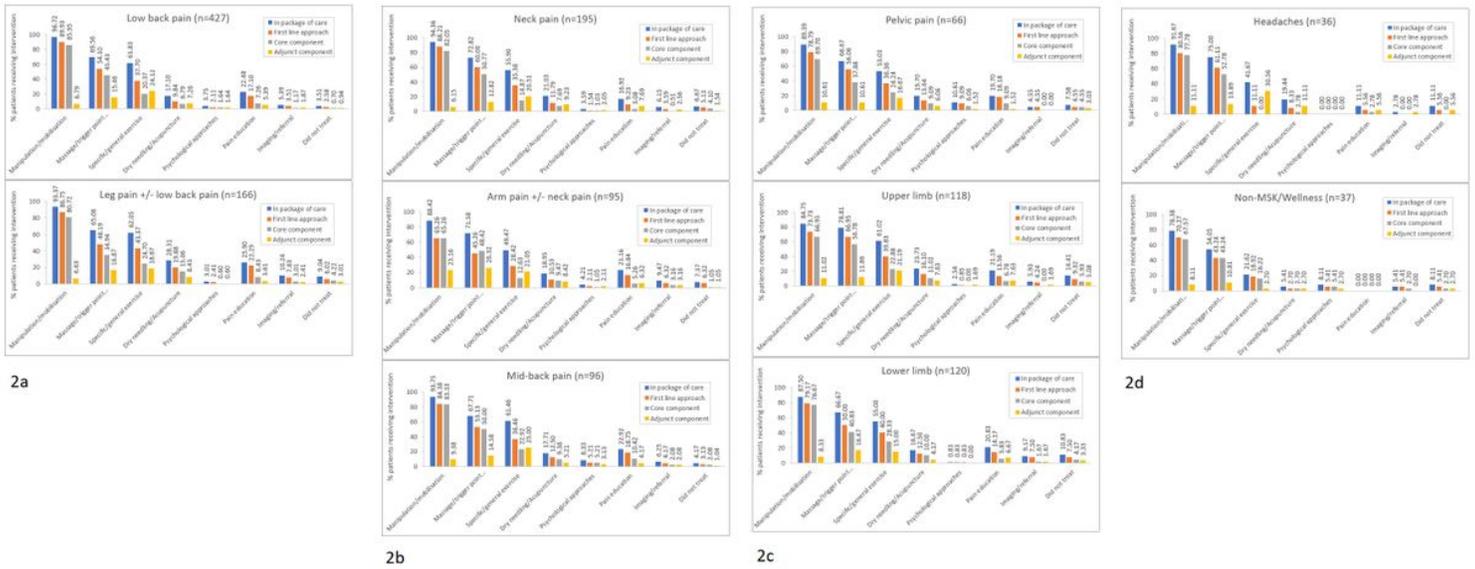


Figure 2

2a Care provided for patients with low back pain or leg pain with/without low back pain.

2b Care provided for patients with neck pain, arm pain with/without neck pain or mid-back pain.

2c Care provided for patients with pelvic pain, upper limb pain or lower limb pain.

2d Care provided for patients with headache or non-MSK/wellness conditions.

Supplementary Files

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