

SHORT REPORT

Exploring workload, satisfaction and sense of safety of health care professionals dealing with musculoskeletal conditions in out-patient clinics during the COVID-19 pandemic

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KEYWORDS

access, musculoskeletal, rehabilitation

1 | INTRODUCTION

At the end of 2019, a new severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) also called COVID-19, emerged. With a high rate of contamination and the unknown impact of COVID-19 on humans, it set off a global sanitary crisis with the World Health Organization (WHO) declaring COVID-19 a public health emergency of international concern on 30 January 2020 (World Health Organization, 2020). The contamination level became high and rapidly the virus was brought to Quebec, Canada with the first case being reported at the end of February 2020 (Gosselin, 2020). WHO classified the virus as a pandemic as of 11 March 2020 (World Health Organization, 2020). With increasing rates of contamination, hospitalisations and unfortunately deaths, the government of Quebec, under a never before seen burden overshadowing the health care system, put the population in total lockdown from the end of March 2020–June 2020 (TVA Nouvelles, 2020). This lockdown limited many health resources to the public. Moreover, some health care professionals (HCP) were encouraged to join efforts in fighting the virus and in keeping the health care system afloat by volunteering in much needed areas of the system, such as caring for the elderly. HCP working in outpatient clinics, such as those treating musculoskeletal

conditions, for example, athletic therapists, podiatrists and chiropractors, were also instructed to limit in-patient appointments to urgent cases only (Guillaume Piedboeuf, 2020). Urgent cases referred to post-operative cases, presence of neurological signs and symptoms, recent trauma, important pain or loss of function. Measures such as telehealth and phone follow-ups were brought forward for non-urgent cases.

With the prevalence of musculoskeletal conditions being on the rise over the past few decades (Cieza et al., 2020; March et al., 2014), it is yet unknown how such dissociation between urgent and non-urgent care may have affected the work of HCP dealing with such conditions. Moderate quality scientific evidence prior to the COVID-19 pandemic suggests that telehealth may be as reliable, feasible and effective, while assessing common musculoskeletal conditions, as in-person visits (Bucki et al., 2021), but may not be as satisfactory for certain assessments such as lumbar, orthopaedic, neurologic and scar related (Bucki et al., 2021; Mani et al., 2017). With regards to telehealth treatments specific to musculoskeletal conditions, limited information is available, where telehealth may be best suited for very precise conditions and protocols (Mani et al., 2017). In addition, when such measures were implemented it remained unclear whether or not HCP would have been able to appropriately adapt to such new

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measures without affecting the load and quality of their work and their satisfaction and sense of safety at work. Previous studies from prior pandemics such as SARS outbreak in 2002–2004 have shown that HCP were at elevated risk of suffering from mental health conditions such as burnout and psychological distress in the aftermath of the outbreak (Maunder et al., 2006). It had also been reported post-SARS that healthcare seeking habits tended to shift amongst patients and that factors such as being worried about transmission may have affected healthcare seeking behaviours in patients (Chang et al., 2004; Lu et al., 2007).

Previous studies have led us to hypothesise that changes in health care practices such as the dissociation between urgent (e.g., major limitations, post-op) and non-urgent care and the broad implementation of telehealth may have various impacts on HCP working with musculoskeletal conditions. Given that the pandemic was a never-before-seen challenge for HCP, it remains unclear how they felt with regards to the care they offered, their sense of safety and sense of efficacy while providing treatments, both in-person and through telemedicine. Thus, this study aimed to explore the workload, satisfaction and sense of safety of HCP treating musculoskeletal conditions with regards to sanitary measures to prevent the spread of COVID-19 in out-patient clinics during the pandemic in Quebec.

2 | METHODS

Health care professionals (HCP) working in Quebec, Canada were recruited from December 2020 to July 2021 from the following professions: athletic therapy, podiatry, physiotherapy, orthotherapy, chiropractic, osteopathy, massage therapy, kinesiology and occupational therapy. In order to be eligible for the study, HCP must have worked in their profession prior to the reach of COVID-19 in the province of Quebec, Canada (i.e., February 2020). Participants were excluded if they had started working in their profession after February 2020, were unable to answer and/or understand the survey in English or French, and if they had a vision disorder or uncorrected vision that made it impossible to read and/or understand the survey.

Participants were asked to complete an online-based survey which consisted of 6 different sections; 11 questions on socio-demographic information (age, profession, type of workplace), 6 questions on the risk of contracting COVID-19 in the workplace and 38 questions on the satisfaction regarding implemented sanitary measures (telehealth, changes in treatment methods, salary impact, security at work). Sanitary measures related to HCP in the province of Quebec during the lockdown included wearing a mask for both the HCP and the patient, wearing protective eyewear or a face shield, wearing a lab coat or long-sleeved scrubs to be changed between patients, disinfecting work areas between patients, hand washing for both the HCP and the patient prior to treatment. The survey was created by two members of the research team (RM and MR) and was validated by the remaining authors (LACB, PF and VB). The survey was then sent to five HCP for pilot purposes, where upon completion solely minor grammatical errors were fixed. The survey was then

distributed to HCP in the province of Quebec through professional orders, colleges, federations, corporations, groups' communications (e.g., social media, newsletters, mass mailing) and word of mouth. The survey was held on the QualtricsXM platform (Seattle, Washington, USA) and the approximate time to complete was 20 min. Ethical approval was obtained by the Université du Québec à Trois-Rivières ethics research board (CER-20-267-07.28); informed consent was provided by all participants.

3 | STATISTICAL ANALYSIS

Descriptive statistics (mean, standard deviation and frequency) were performed for all research variables on IBM SPSS Statistics version 28.0.

4 | RESULTS

A total of 75 HCP responded to the survey from various professions: massage therapy ($n = 15$), athletic therapy ($n = 14$), physiotherapy ($n = 14$), podiatry ($n = 12$), chiropractic ($n = 10$), kinesiology ($n = 4$), orthotherapy ($n = 3$), osteopathy ($n = 3$), occupational therapy ($n = 1$). Mean age was 36.09 ± 10.90 years, with 75% of the sample being female. Recruited HCP had been working within their profession for an average of 9.89 ± 8.60 years, where 62.67% of them worked in multidisciplinary clinics and 78.67% worked in private clinics as their main work affiliation. On average, HCP allocated their workload mainly to the general population ($46.24 \pm 31.02\%$ [range 0–100]), followed by working with athlete ($26.61 \pm 27.94\%$ [range 0–100]), geriatrics ($15.73 \pm 23.04\%$ [range 0–100]) and finally with paediatrics ($8.41 \pm 15.85\%$ [range 0–95]) (Refer to Table 1 for demographic characteristics of participants).

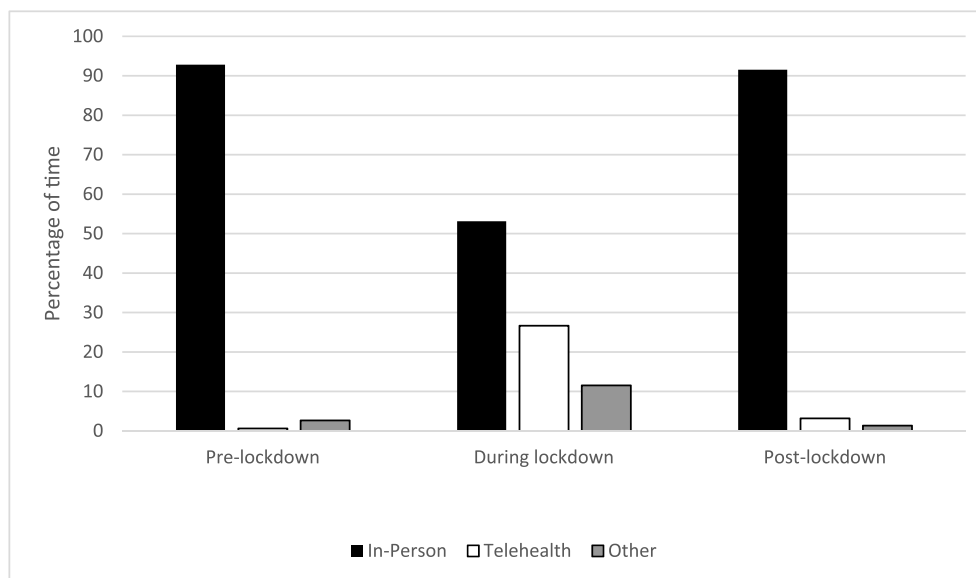
4.1 | Health care professionals workload

At the time of the study, HCPs worked an average of 26.61 ± 27.94 h per week, and allocated on average $22.8 \pm 19.78\%$ (range 0–100) for acute, $28.69 \pm 18.45\%$ (range 0–80) for subacute and $43.55 \pm 26.20\%$ (range 0–100) for chronic conditions respectively. Amongst respondents, 26 HCP did not work with patients during the pandemic due to the following reasons: work setting closure ($n = 11$), temporary layoff ($n = 4$), change in job description ($n = 4$), medical reasons ($n = 1$), family reasons ($n = 1$) permanent layoff ($n = 1$) and other non-disclosed reasons ($n = 4$). Prior to the pandemic, HCPs reported allocating their work time between in-person treatment (92.80% of the time), telehealth (0.61% of the time) and other treatment types (e.g., field work, home visits) (2.67% of the time). During the lockdown (March–May 2020), where solely urgent cases were allowed for in-person visits as per Quebec regulations, HCPs reported allocating their work time between in-person treatment (53.13% of the time), telehealth (26.65% of the time) and other (e.g.,

TABLE 1 Demographic characteristics of study participants.

Age (mean, SD)			
36.09 ± 10.90 years			
Biological sex (n) (%)			
Female: 57 (76)		Male: 18 (24)	
Profession distribution (n) (%)			
Massage therapists: 15 (20)	Podiatrists: 12 (16)	Orthotherapists: 3 (4)	
Athletic therapists: 14 (18.7)	Chiropractors: 10 (13.3)	Osteopaths: 2 (2.5)	
Physical therapists: 14 (18.7)	Kinesiologists: 4 (5.3)	Occupational therapist: 1 (1.3)	
Years of work experience (mean, SD)			
9,89 ± 8,60 years			
Weekly workload (mean, SD)			
26.61 ± 27.94 h			
Yearly salary in CDN \$ (n) (%)			
<30,000: 3 (4.1)	45,000–60,000: 3 (4.1)	>75,000: 55 (74.3)	
30,000–45,000: 7 (9.4)	60,000–75,000: 6 (8.1)		
Type of work setting (%)			
Public: 16 (21.3)		Private: 59 (78.7)	
Average work load per population type (%)			
General population: 46.2	Athletes: 26.6	Geriatrics: 15.7	Paediatrics: 8.4

Abbreviations: CDN, Canadian; SD, standard deviation.

**FIGURE 1** Percentage of work time allocated to in-person, telehealth and other work-related tasks before, prior, during and after the COVID-19 lockdown.

emails and phone follow-ups) (11.52% of the time). After the lockdown (May 2020–September 2021) HCPs reported allocating their work time between in-person treatment (91.51% of the time), telehealth (3.16% of the time) and other (e.g., field work) (1.3% of the time) (Figure 1). When asked if they believed in the effectiveness of telehealth 57.97% of participants responded favourably, even though

31.88% of them reported having difficulties adjusting to the change at the beginning of the pandemic. When asked about whether they wanted to pursue telehealth as part of their work life, 17.39% of HCP responded favourably. A total of 47 (62.67%) respondents reported a salary loss during the last 2 months of participating in the study (post-lockdown period), with an average 15.05 ± 12.18 h loss weekly.

4.2 | Satisfaction with COVID-19 prevention measures in the workplace

When asked about their satisfaction with regards to the reopening of clinics for in-person treatment (i.e., urgent and non-urgent cases) after the lockdown, the totality (100%) of respondents mentioned agreeing with reopening of in-person treatments. Satisfaction with regards to the number of patients consulting weekly in the post-lockdown period was present in 69.57% of the sample, not present in 18.84% of the sample, and did not apply to 11.59% of the sample. Most of the respondents (63.77%) thought that the quality of treatments offered to patients was not influenced by the pandemic, while 17.39% and 18.84% reported improved and poorer care, respectively.

4.3 | Perceived sense of security in the workplace

When asked about their general satisfaction with the preventative measures put in place (social distancing, hand washing, masks) by the government during the COVID-19 pandemic, 76.81% of respondents answered favourably. HCP reported feeling well protected with regards to COVID-19 in their workplace environment in 91.30% of the cases, with 17.39% of respondents feeling insecurities and

anxieties about the risk of contamination in the workplace. When asked about their fear of patients not respecting health measures with regards of signs and symptoms of COVID-19, 43.47% of respondents mentioned being fearful (Table 2).

5 | DISCUSSION

We surveyed HCP working in the musculoskeletal practice about the effects of the COVID-19 pandemic on their workload, satisfaction and sense of security in the workplace. To our knowledge, this was the first study of this type performed with this population in the province of Quebec, Canada.

Results show that pandemic has various repercussions on the professional life of HCP. Many HCP were professionally burdened by lockdown measures, with one third of surveyed HCP losing work during the lockdown period of the pandemic, and almost two third (about 63%) struggled to bring their workload (in term of worked hours) back to pre-pandemic levels beyond the extent of the lockdown. Almost 19% of the sample reported being unsatisfied with their post-lockdown workload. While mental stress of COVID-19 has been studied in HCP working in the frontlines of the COVID-19 battle (e.g., hospitals) (Vizheh et al., 2020), very little studies have

Do you agree with the reopening of clinics and in-person treatments?			
	Yes	No	
<i>n</i> = 69	69 (100%)	0 (0%)	
Are you satisfied with the number of patient who consult you per week since the reopening of clinics?			
	Yes	No	N/A
<i>n</i> = 69	48 (69.57%)	13 (18.84%)	8 (11.59%)
Do you find that the quality of care has changed since the start of the pandemic?			
	Yes, quality has improved	Yes, quality has decreased	No
<i>n</i> = 69	12 (17.39%)	13 (18.84%)	44 (63.77%)
In general, are you satisfied with the measures established by the government in relation to health care during the pandemic?			
	Yes	No	
<i>n</i> = 69	53 (76.81%)	16 (33.19%)	
Do you think you are well protected against COVID-19 at your workplace?			
	Yes	No	N/A
<i>n</i> = 69	63 (91.30%)	4 (5.80%)	2 (2.90%)
Does in-person work cause you insecurities or anxiety of an increased risk of contamination?			
	Yes	No	
<i>n</i> = 69	12 (17.39%)	57 (82.61%)	
Are you worried that your patients will not follow the safety instructions in the presence of signs and symptoms of COVID-19?			
	Yes	No	N/A
<i>n</i> = 69	30 (43.47%)	38 (55.08%)	1 (1.45%)

Abbreviation: N/A, not applicable.

TABLE 2 Satisfaction and sense of security of health care professional during the COVID-19 pandemic.

yet looked at HCP working in other areas such as in this specific study. Our results suggest that HCP working with musculoskeletal conditions in ambulatory or out-patient clinics might have suffered from the COVID-19 pandemic in different ways such as salary loss or work layoff as opposed to frontline HCP who were more likely to suffer from tiredness or mental distress for instance (Pearman et al., 2020; Vizheh et al., 2020).

Satisfaction about telehealth was present in more than half of our sample, but a considerable portion of our respondents (almost 80%) mentioned that they did not intend to continue telehealth practices in the future. Our results supports those of Bennell et al. (2021), which reported that physiotherapists in Australia showed moderate to high satisfaction with regards to telehealth during the COVID-19 pandemic (Bennell et al., 2021). One tenth of HCP included in our study reported allocating less time to manual therapy because of the pandemic, and 19% of respondents mentioned that the quality of care had reduced. It is yet unknown if respondents' perception in quality of care is solely from their perspective, and if indeed care offered really decreased amongst patients seeking care for musculoskeletal conditions.

Finally, our results show that despite changes in workload and satisfaction, the HCP in our sample agreed with COVID-19 preventative measures. Over 90% of the HCPs in our sample felt secure in the workplace. These results contrasts those of HCP working in the frontlines of COVID-19, such as nurses (Nowicki et al., 2020) who showed symptoms of traumatic stress. Their sense of safety was lowered and was accompanied by intensified thinking about safety issues (Nowicki et al., 2020). Some limitation to the study are worth reporting; (1) the questionnaire used was not validated, despite created specifically to answer COVID-19 work-related questions and (2) insufficient representation of HCP from different professions prevented group comparisons. Despite these limitations, we believe that this study will contribute to the scarce body of literature on satisfaction of HCP during the COVID-19 pandemic. We hope these results may shed light on future decisions, for HCP by the government, in the event of a future lockdown related or not to the current COVID-19 virus.

AUTHOR CONTRIBUTIONS

Laurie-Ann Corbin-Berrigan, Virginie Blanchette and Philippe Fait participated in the design of the study and data collection instrument. Rose Mochon and Myriam Rose conducted recruitment and data management. Laurie-Ann Corbin-Berrigan, Rose Mochon and Myriam Rose organised, cleaned, and analysed the data. All authors participated in interpreting the results and contributed to the redaction of the manuscript. All authors have read and have approved the manuscript in its current form.

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CONFLICT OF INTEREST STATEMENT

Authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

Ethical approval was obtained from the Université du Québec à Trois-Rivières ethics research board (CER-20-267-07.28). Consent was obtained from all participants.

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