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Original article

An exploration of psychosocial practice within private practice musculoskeletal physiotherapy: A cross-sectional survey

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A B S T R A C T

Background: Patients with pain associated with musculoskeletal disorders often seek treatment from physiotherapists, necessitating these practitioners' competence to practice within the biopsychosocial framework. Qualitative research suggests musculoskeletal physiotherapists may not have adequate proficiency in psychosocial practice to assess and address psychosocial factors effectively.

Objective: To collect quantitative self-report data via an online survey from a large cross section of Australian musculoskeletal physiotherapists regarding their psychosocial practice.

Methods: The study involved an iterative survey development process followed by the conduct of this survey. A provisional survey named the 'Triple P Questionnaire' was developed, informed by the knowledge and experience of the research team. This Questionnaire was piloted by experts (n = 6) to provide feedback on the instrument. Changes were made to the survey based on this feedback. The finalised Triple P Questionnaire was distributed to Australian musculoskeletal physiotherapists.

Results: 181 participants completed the full survey. Not all demographic characteristics were representative of the population. Most participants indicated that they 'agree' to most statements posed in the questionnaire including confidence, routine practice of specific psychosocial skills and barriers. Some questions presented a majority response of 'disagree' or a spread of responses, indicating some evidence-practice gaps, including the use of questionnaires, and explicit assessment of psychological factors. Inferential statistics revealed no significant correlations between demographic characteristics and psychosocial practice.

Conclusion: The Triple P Questionnaire identified musculoskeletal physiotherapists' general confidence in their psychosocial practice but highlights some apparent inconsistencies in reported practice and areas where confidence is not as strong, reflecting possible evidence practice gaps.

1. Introduction

Patients with pain associated with musculoskeletal (MSK) disorders often seek treatment from physiotherapists, necessitating these practitioners' competence in the biopsychosocial framework. The biopsychosocial approach to healthcare introduced by Engel (1978) involves the inclusive consideration of the biological, psychological and social factors contributing to the health and disability of the patient. Historically medical education, that influenced early physiotherapy education, took a largely biomedical approach to health while relatively neglecting psychological and social (psychosocial) factors (Borrell-Carrió et al., 2004; Chipchase et al., 2006). The World Health Organisation's (WHO) adoption of the International Classification of Functioning, Disability and Health in practice is based on the strong evidence indicating that disease or pathology does not predict the patient's disability experience that are instead dependent on the complex interrelation between an individual's biopsychosocial factors (Brinjikji et al., 2015; Culvenor et al., 2018; WHO, 2002; WHO, 2017).

Physiotherapy psychologically informed interventions can significantly improve patients' pain, disability and psychological outcomes (e.g. Vibe Fersum et al., 2013; O'Sullivan et al., 2015). A systematic review by Guerrero et al. (2018) demonstrated that studies which incorporated individually tailored interventions addressing patients' maladaptive cognitions (e.g. negative thoughts) and behavioural strategies to modify maladaptive behaviours (e.g. goal setting, relaxation, graded activities) tended to have large effect sizes while a behavioural focus without attending to patient cognition resulted in small effect sizes.

Qualitative self-report research suggests current practicing MSK physiotherapists do not have adequate understanding of psychosocial factors and practice to assess and address psychosocial factors effectively (Singla et al., 2015; Synnott et al., 2015). This highlights the need to better understand MSK physiotherapists' perceived level of confidence with different aspects of psychosocial practice. For example it is not known what aspects of psychosocial factors MSK physiotherapists assess in their practice, how they perform those assessments (e.g. via interview or questionnaire), their confidence in their assessments or

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whether factors identified in assessment are then addressed in management.

As evidence suggests that psychosocial assessment and management measures in musculoskeletal physiotherapy practice are effective, yet currently underutilised, investment into further education in this area is indicated. Overmeer et al. (2008 & 2011) investigated the effects of physiotherapists' psychosocial education to identify and treat psychosocial risk factors. These randomised controlled trials revealed that an eight-day professional development course changed physiotherapists' attitudes and beliefs toward a more biopsychosocial perspective although made no difference to patients' pain and disability outcomes, including specific psychosocial measures. Importantly however, they did find a trend that patients with higher levels of catastrophizing or higher level of depression may have had greater improvements in disability when receiving treatment by the biopsychosocially trained therapists. These positive results are further supported by Beneciuk and George (2015) who identified potential benefits to patients when care was delivered by physiotherapists who were trained in psychosocial stratified care. These are just three examples of the many education programs that have been attempted in order to improve physiotherapists' psychosocial knowledge, attitudes, beliefs and practice (Domenech et al., 2011; Colleary et al., 2017; O'Sullivan et al., 2013).

The aim of this study was to collect quantitative self-report data from a large cross section of Australian MSK physiotherapists regarding their psychosocial practice. This data was collected via an online survey. This will highlight MSK physiotherapists' psychosocial practice on a national scale, while previous literature has only assessed this in qualitative small scale studies. This includes information regarding their understanding, assessment, treatment and barriers to psychosocial practice. The survey is projected to highlight evidence practice gaps in order to inform physiotherapy undergraduate and postgraduate education as well as professional development education.

2. Methods

2.1. Ethics

Ethical approval for this study was provided by the University of South Australia's Human Research Ethics Committee prior to study commencement *(Ethics Protocol Reference number: 00000200122)*. Given the anonymous nature of the survey, informed consent was obtained electronically prior to the commencement of the survey.

2.2. Survey development

As there was no dedicated survey to measure physiotherapists' psychosocial practice, a customized survey instrument was developed by the research team. The development process was informed by the knowledge and experience of the research team with more than 50 years accumulative physiotherapy clinical and academic experience related to biopsychosocial practice. The developmental process was iterative, where over the course of approximately five rounds, the Triple P Questionnaire (Physiotherapists' Psychosocial Practice) was developed (Supplementary file 1).

2.3. Piloting

A non-probability convenience sample (Portney and Watkins, 2015) of six experts provided feedback on the Triple P Questionnaire as means of establishing face and content validity (Portney and Watkins, 2015). Experts were required to fulfil at least one of the following criteria to be contacted by the research team for inclusion: is a currently practicing private practice MSK physiotherapist with at least one decade of experience; is an academic staff member at a university responsible for teaching psychosocial factors/practice in physiotherapy; has published research involved in psychosocial factors/practice in physiotherapy. Nine physiotherapy psychosocial practice experts identified by the research team were contacted by email. The email contained information regarding the nature of the study, their potential role and a participant information sheet. Should they choose to participate, the email also included a link to the Triple P Questionnaire and a feedback survey, which was administered through Survey Monkey ™ (Survey Monkey, 2017). Due to the anonymous nature of the surveys it could not be identified who did and did not participate. Therefore, reminder emails were sent to all nine experts twice, approximately three weeks apart. Consenting participants completed the Triple P Questionnaire and the feedback survey. The feedback survey asked the participants to comment on the structure, clarity, time taken, relevance and suitability of the survey questions, and any other questions/concepts they believed were not covered in the Triple P Questionnaire. Anonymous feedback was collated and reviewed by the research team and where appropriate changes to the Triple P questionnaire were made. All questions in the final survey were formatted as a Likert scale, except for background characteristics. Questions within physiotherapy psychosocial practice covered practitioners' perspectives, assessment, management and barriers. Due to time and resource constraints, while formal intra and inter-rater reliability testing was not undertaken with the external experts, during iterative rounds of development and testing, the research team continually reviewed and reflected on the reliability of the questions specifically and the questionnaire more broadly.

2.4. Conduct of the survey

2.4.1. Sampling and sample size

Participants were sampled from the Australian Physiotherapy Association's (APA) 'Find a Physio' database (APA n.d). While APA registration is voluntary, compared to physiotherapists' compulsory registration with Australian Health Practitioner Regulation Agency (AHPRA), AHPRA does not provide a similar physiotherapy database within the public domain (AHPRA, 2018). The database searches involved the Australian capital city postcodes with their corresponding state and the largest radius provided by the search engine (160 km). Every search included the 'Treatment' area domain as 'musculoskeletal' (APA n.d). A database of all results was compiled by IM, with 896 Australian MSK physiotherapists' names and email address recorded. Participants were included in the study if they self-identified as; having an undergraduate degree or higher in physiotherapy practice and are currently practicing physiotherapy predominantly in a private practice setting, MSK field. Participants were excluded if they were experts involved in the Triple P Questionnaire development. A sample size of approximately 200 was considered appropriate given the sample size of previous similar studies sampling physiotherapists (Foster et al., 2018; Gardner et al., 2018; Matifat et al., 2018).

2.4.2. Data collection

The Triple P Questionnaire (Supplementary file 1) was disseminated via email. The email contained basic information regarding the Triple P Questionnaire, the survey link and the participant information sheet as an attachment. Four fortnightly reminders were sent. Before each round of emails, members were deleted from the email database who responded to the email informing IM that they had, completed the Triple P Questionnaire, did not fit the inclusion criteria or would no longer like to receive reminder emails. Potential participants could access the participant information sheet and complete the Triple P Questionnaire once following the consent process built into the online survey indicating they read and agree to the conditions of participation. The Triple P Questionnaire was also posted on the APA Facebook page (APA, 2018) by IM, inviting potential participants to email IM if interested in participation.

2.4.3. Data analysis and interpretation

Quantitative data were analysed descriptively using the Microsoft

Excel ™ (Microsoft, 2017). Pearson's correlation coefficient was calculated for a range of questions using the Statistical Package for Social Sciences (SPSS) (IBM n.d). Correlations were calculated between the psychosocial practice questions responses and background characteristics identified to potentially correlate with responses. Background characteristics included in the calculations were 'years of practice' and 'highest qualification'. Correlations of all questions could not be calculated due to time and resource limitations although calculation of this cross-section allowed the authors to view any particular trends within each section. Any significant correlations found would be followed up by calculating correlations for all questions within that section.

3. Results

A total of 218 participants responded to the Triple P Questionnaire indicating a 24% response rate. At the screening stage 14 did not meet eligibility so could not proceed further. Of the 204 respondents who were eligible to complete the Triple P Questionnaire, 181 fully completed the survey while the remaining 23 respondents partially completed the survey. Therefore, results are reported for the 181 respondents who completed the full survey, which represents a response rate of 20%.

3.1. Background characteristics

Background characteristics were only collected for those who completed the full Triple P Questionnaire as these questions were placed at the end of the survey. Background characteristics are summarised in Table 1. Most background characteristics align with corresponding demographic data (Health Workforce Australia, 2014) with some exceptions. 42.0% of respondents' highest qualification was an Entry level Bachelor or Graduate entry, while according to the Health Workforce Australia (2014) 71.1% of Australian physiotherapists indicate a Bachelor degree to be their highest qualification. South Australian physiotherapists were overrepresented compared to other states (Health Workforce Australia, 2014). A large majority of participants identified more than 20 years in practice. This is far greater than physiotherapists' average of 13 years of experience identified by the Health Workforce Australia (2014).

Table 1
Background characteristics.

		n (%)
Highest qualification	Entry level Bachelor or Graduate Entry	76 (42.0)
	Research Master	8 (4.4)
	Clinical Master	84 (46.4)
	PhD	13 (7.2)
Entry level qualification location	Australia	161 (88.9)
	Overseas	20 (11.1)
Current practice location	South Australia	40 (22.1)
	New South Wales	22 (12.2)
	Victoria	41 (22.7)
	Queensland	37 (20.4)
	Australian Capital Territory	5 (2.8)
	Western Australia	34 (18.8)
	Tasmania	2 (1.1)
Clinical practice (years)	Less than 5 years	19 (10.5)
	More than 5 years	18 (9.9)
	More than 10 years	23 (12.7)
	More than 15 years	14 (7.7)
	More than 20 years	107 (59.1)
Predominant client population	Private funds	163 (90)
	Medicare	8(4.4)
	Worker's compensation	9 (5.0)
	Veterans Affairs	0 (0)
	Third Party Insurance	0 (0)
	Other	1 (0.6)

Descriptive summary of results.

Table 2 presents the summarised data of the Triple P Questionnaire. Questions are abbreviated, and full survey questions can be found in Supplementary file 1. Generally there was overall agreement across several questions. Strong agreement identifies that respondents routinely encounter patients with psychosocial issues. MSK physiotherapists disagree to routinely assessing psychosocial factors by questionnaire. A broad spectrum of results were found for confidence in which questionnaire to use and routine management of patients with other health professionals. However, some apparent contradictions in responses present a dichotomy. Respondents 'Agree' to routinely assessing psychosocial factors overall, as well as by general impression and explicit questions in the patient interview, while there is a split majority response between 'Disagree' and 'Agree' to routinely explicitly assessing psychological factors. Furthermore, the majority of participants 'agree' that they are confident in their psychosocial practice understanding and application although also identify confidence in psychosocial practice as a barrier. Respondents also 'agree' with all other barriers posed in the questionnaire except for 'fear of opening a psychological issue which I cannot deal with adequately'.

3.2. Associations of responses and background characteristics

Following descriptive analysis of the results, Pearson's correlation coefficient was calculated for those questions which explored therapists' confidence or routine application of psychosocial practice across all 4 sections of the Triple P Questionnaire. Responses were correlated with years of practice and highest qualification. Correlations were also calculated for these groups with the response categories in 2 groups ('Strongly disagree' and 'Disagree' grouped and 'Agree' and 'Strongly Agree' grouped). There was no significant correlation (Portney and Watkins, 2015) between a therapist's confidence or routine application of psychosocial practice and the various demographic characteristics measured.

4. Discussion

Given to date there has been no large-scale research to survey MSK physiotherapists' psychosocial practice across Australia, this study aimed to address this knowledge gap. The results from this research highlight mixed findings whereby MSK physiotherapists reported that they were moderately confident (majority of 'agree' responses) in their psychosocial practice, while on the other hand less confident in specific areas of this practice such as application of questionnaires and co-management of patients with other health professionals. While no statistically significant correlations between responses and participants' years of practice or highest qualification were found, this is the first time these important concepts have been captured from physiotherapists at the coalface of clinical practice.

Results generally indicate self-assessed proficiency in psychosocial practice, which on the surface, should be encouraging. However, some discrepancies in reported practice may reflect different conceptions of what psychosocial practice constitutes. As such, these results may still align, at least in part, with previous literature that concluded physiotherapists' self-identified lack in confidence regarding knowledge, assessment and management of psychosocial factors (Connaughton and Gibson, 2016; Singla et al., 2015; Synnott et al., 2015). For example, respondents 'agree' to routinely assessing psychosocial factors overall, as well as by general impression and explicit questions in the patient interview. However, this appears to contradict the split majority response between 'disagree' and 'agree' to routinely explicitly assessing psychological factors.

An interesting finding from this research was that 75%–85% of participants 'agree' or 'strongly agree' that they are confident in their psychosocial practice understanding and application. However, 49% 'agree' or 'strongly agree' that their confidence in psychosocial practice

Table 2
Descriptive results.

Prefix	Question	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Questions regarding psychosocial perspectives						
Routinely	Encounter patients with influential psychosocial issues	2.21	5.52	2.21	**45.86**	**44.20**
Confident	understanding of psychosocial practice	0.55	5.52	8.84	**60.77**	24.31
	application of psychosocial practice	0.00	11.60	13.81	**59.67**	14.92
	predicting likelihood of dependence on passive therapy	0.00	4.42	5.52	**65.75**	24.31
Questions regarding psychosocial Ax						
Routinely	Assess psychosocial factors	1.10	16.57	8.29	**51.93**	22.10
	Assess psychosocial factors by general impression gained from the patient interview	0.55	5.52	3.87	**62.98**	27.07
	Assess psychosocial factors by explicit questions asked in the patient interview	3.31	17.13	11.05	**49.17**	19.34
	Assess psychosocial factors by questionnaire	16.02	**37.02**	11.05	23.20	12.71
Confident	the patient interview	1.10	16.57	16.02	**55.25**	11.05
	which questionnaires to use	9.39	**25.97**	**21.55**	**27.62**	15.47
	Ax of cognitive factors	0.00	10.50	16.57	**55.80**	17.13
	Ax of emotions and how these emotions relate to pain symptoms and behaviour	0.00	6.08	7.73	**64.64**	21.55
	Ax of behaviour	0.55	4.42	9.94	**64.09**	20.99
	Ax of social factors	0.00	5.52	5.52	**66.85**	22.10
Routinely	identify negative psychosocial factors	0.00	12.71	9.39	**62.43**	15.47
	identify positive psychosocial factors	0.00	4.42	10.50	**67.40**	17.68
	explicitly assess psychological factors	6.08	**33.15**	16.02	**35.36**	9.39
	explicitly assess social factors	3.31	17.13	13.81	**50.28**	15.47
Confident	how to judge the relevance of psychosocial factors	0.55	7.73	16.57	**63.54**	11.60
Questions regarding psychosocial Mx						
Routinely	identified psychosocial factors inform my Mx strategies	1.10	12.71	11.60	**56.35**	18.23
	prioritise hands off Mx for patients with significant psychosocial factors	3.31	23.20	12.15	**46.41**	14.92
	explicitly target identified psychosocial factors	2.21	19.89	16.57	**48.07**	13.26
Confident	Mx of cognitive factors	0.55	16.57	14.36	**54.70**	13.81
	Mx of emotions	0.55	21.55	18.23	**51.93**	7.73
	Mx of behaviour	0.55	16.02	14.36	**59.67**	9.39
	Mx of social factors	1.66	14.92	15.47	**58.56**	9.39
	psychosocial factor Mx	0.55	17.68	27.07	**45.86**	8.84
	psychosocial factor education	0.55	8.84	15.47	**61.33**	13.81
	facilitation of mutually agreed behavioural change in my patients	1.10	10.50	19.89	**62.43**	6.08
	when to refer my patients for psychosocial Ax and Mx	0.55	7.73	6.08	**53.59**	32.04
	how to suggest referral to other health professionals for psychosocial Ax and Mx	1.10	7.18	12.71	**54.70**	24.31
	who to refer to for psychosocial Ax and Mx when indicated	2.21	22.10	16.57	**43.09**	16.02
Routinely	co-manage my patients with other health professionals	3.87	**30.39**	19.89	**34.81**	11.05
	monitor psychosocial factor outcomes	1.10	17.13	18.23	**52.49**	11.05
Questions regarding barriers to psychosocial practice						
	Time constraints in daily practice	1.66	16.57	6.63	**50.28**	24.86
	Patient expectations	2.21	12.71	7.73	**57.46**	19.89
	Confidence in my psychosocial practice	7.18	24.86	18.78	**41.44**	7.73
	Lack of formal undergraduate training	2.76	18.78	12.15	**41.99**	24.31
	Lack of formal professional development	10.50	27.07	12.15	**35.91**	14.36
	Lack of practice or organizational support	9.39	24.86	16.02	**39.23**	10.50
	Fear of opening a psychological issue which I cannot deal with adequately	14.36	**40.33**	11.05	26.52	7.73

Bold writing = majority response.
Abbreviations: Ax: Assessment, Mx: Management.

is a barrier. This presents an apparent contradiction. Is the reported confidence reflecting increased psychosocial awareness in the profession with its inherent difficulty still being a barrier? Alternatively, does this reflect differing understandings of and perceptions about what psychosocial and psychological factors are comprised of and perhaps the avenues of questions for assessing these factors? As the Triple-P questionnaire did not clarify how participants interpret 'psychosocial' 'psychological' and 'social' factors, this might reflect a limitation of the questionnaire.

Other sections of the Triple P Questionnaire identify further discrepancies. Most participants indicated they 'disagree' to routinely assessing psychosocial factors by questionnaire and 34.92% responded 'strongly disagree' or 'disagree' that they are confident in which questionnaire to use. The benefit of questionnaire use within physiotherapy assessment to screen for psychosocial factors and explore patient responses through follow-up discussion has been discussed in the literature (e.g. Beneciuk et al., 2019; Haggman et al., 2004; Wimja et al., 2016), supporting the value of knowledge regarding which questionnaires to use and their application.

Literature aimed at educating physiotherapists regarding their psychosocial practice can provide guidance in further strengthening MSK physiotherapists' psychosocial practice and addressing practice barriers identified in this research. Physiotherapy psychosocial practice education has been trialed with various degrees of success (Colleary et al., 2017; Domenech et al., 2011; Overmeer et al., 2008, 2011). While these educational programs improved physiotherapists' theoretical knowledge of psychosocial practice, evidence of consistent translation of these benefits to patient outcomes is only emerging. The Triple-P Questionnaire identified lack of formal psychosocial education as a barrier, despite the trend for increased psychosocial and pain neuroscience training in Australian physiotherapy education (Colleary et al., 2017; Domenech et al., 2011; Hush et al., 2018; Slater et al., 2018). Overmeer et al. (2011) highlighted the need for greater focus on psychosocial treatment training, improved supplementary resources (e.g. manual) and follow-up on the job reinforcement to assist in applying psychosocial theory in practice. Addressing these specific gaps in

MSK physiotherapy psychosocial education may ameliorate such barriers in the future.

Other barriers identified in the Triple P Questionnaire findings included patient expectations, lack of organizational support and time constraints. Foster and Delitto (2011) identified that patients typically expect to be given an accurate diagnosis, and given treatment with symptomatic relief. Given the difficulty or even impossibility of these tasks, the issue of patient expectations appears to be a significant one requiring further investigation to determine how these are developed and perpetuated. A number of evidence-practice gaps in other areas of MSK physiotherapy, such as manual therapy, identifies similar difficulty in translating best evidence into practice (Carlesso et al., 2014; Holden et al., 2018; Ladeira and Cheng, 2017; Struyf et al., 2012).

4.1. Limitations

As with any research, there are some limitations to this study which needs to be taken into consideration. Psychosocial practice is a nuanced topic, typically explored by qualitative research, presenting difficulty in diluting a qualitative topic to a quantitative survey without losing any complexity. Some of the language used in the questionnaire, for example 'psychosocial', 'psychological' and 'social', may mean different things to different therapists which may have contributed to mixed findings. However, given that the questionnaire was developed by an experienced team of therapists and pilot tested with a group of expert physiotherapists, the impact of these limitations were minimized. Furthermore, this survey was not designed to establish how psychosocial factors should be assessed and/or managed. Therefore, the survey only reflects therapists' perceptions of current practice, and has not been compared to physiotherapy psychosocial 'best practice'. In an effort to improve the accuracy of results garnered, the pilot and final Triple P Questionnaire were administered entirely online. This meant participants had to complete the Triple P Questionnaire in one sitting (i.e. the results could not be saved and returned to at a later stage which may provide opportunities and time for reflection and revision). Despite this self-report questionnaires do hold inherent self-reporting bias. It is unclear if the participants' reported skills and confidence in this area accurately reflects their actual practice. In order to truly capture what occurs in the physiotherapy practice setting, direct observation methods may be used, which have been recently trialled in other physiotherapy research (Emilson et al., 2016; Kunstler et al., 2018). Considering the length of the Triple P Questionnaire (49 questions) and the Likert scales responses, biases such as acquiescence bias, central tendency bias, and social desirability bias should be acknowledged (Nadler et al., 2015). While the response rate was less than anticipated, the sample size (181) corresponds closely with what has previously been considered representative of the population (200), garnering results that may be generalized to the population of MSK physiotherapists in Australia. However, unlike a typical physiotherapist (who has an average experience of 13 years (Health Workforce Australia, 2014)), many of the respondents to the Triple P Questionnaire had more than 20 years of experience and clinical postgraduate training. A likely explanation for this is, due to the voluntary nature of participation in this research those physiotherapists with extensive clinical experience may have developed an interest in psychosocial issues over time and hence volunteered to complete the Triple P Questionnaire (resulting in high numbers).

4.2. Implications for practice and research

There is increasing recognition of the importance of physiotherapy practice to be underpinned by a biopsychosocial approach. This Australian-wide survey has shone-light on the fact that while MSK physiotherapists are increasingly confronted with patients requiring a biopsychosocial approach, this is not met with consistent practice due to a range of barriers. This is despite a growing trend of biopsychosocial education embedded as part of formal (undergraduate and postgraduate curriculum) and informal (professional development) educational strategies. While contradictions in responses along with other limitations make it difficult to discern how closely results garnered from this survey reflect actual practice, results still provide an introductory insight into current Australian physiotherapists psychosocial practice. This is an important issue to address if the biopsychosocial approach was to be consistently implemented in MSK physiotherapy practice. Further research may build on findings from this study by exploring MSK physiotherapists' understandings of concepts such as psychosocial, psychological and social and compare this with definitions commonly accepted in the literature. This may also provide an opportunity for ongoing refinement of the Triple P Questionnaire (for example through iterative steps to further clarify the wording of the questions) to fit with the shared understandings of these definitions. Furthermore, to explore MSK physiotherapists' current psychosocial practice, without self-reporting bias, observational research may clarify some apparent contradictions highlighted by this research. Education research could also be undertaken to identify best methods for further strengthening MSK physiotherapists' psychosocial-focused practice and to address barriers reported in this research. Finally, given that this research was undertaken with Australian MSK physiotherapists, future research could involve the global physiotherapy community.

5. Conclusion

This survey of Australian MSK physiotherapists has shed new light on psychosocial practice at the coalface of MSK physiotherapy. The findings highlight the complexities in providing MSK physiotherapy care underpinned by a biopsychosocial approach and the barriers in its application in practice contexts. While the need for ongoing education to strengthen the psychosocial aspects of MSK physiotherapists' biopsychosocial practice is still required, focus should also be on translation of this knowledge and skill to its practical application in MSK physiotherapy.

Declarations of interest

None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.msksp.2019.06.004.

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