



Original article

‘There is a very distinct need for education’ among people with rotator cuff tendinopathy: An exploration of health professionals’ attitudes

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ABSTRACT

Background: Clinical practice guidelines recommend non-surgical care in the management of rotator cuff tendinopathy prior to considering imaging or surgery. However, this requires effective education to promote adherence to treatment.

Objectives: To explore expert shoulder clinician’s experiences with managing rotator cuff tendinopathy including practice beliefs towards providing education.

Design: An in-depth qualitative study.

Method: We conducted interviews (n = 8) with an international sample of expert shoulder clinician-researchers. Data were analysed using an inductive thematic approach with constant comparison.

Results: Three key themes emerged: (1) The need for early, focused education: “Some beliefs can be detrimental to rehabilitation options”, (2) Developing therapeutic alliance: “If a patients trust you then you are generally going to get much better results” and (3) What is required moving forward in current day RT management: “Maybe we can get better.”

Conclusions: Our findings highlight the importance of education to alleviate potential barriers to effective conservative care (including exercise) and self-management for rotator cuff tendinopathy. We also identified actionable ways to promote a collaborative therapeutic alliance however, this hinges on sufficient clinical time to educate patients adequately, which may be a barrier in busy clinical settings. Further, there is need for targeted education to facilitate development of clinical skills required to implement effective patient education strategies.

1. Introduction

Rotator cuff tendinopathy (RT) is a common, painful and disabling musculoskeletal condition characterised by pain with shoulder elevation. The estimated prevalence of shoulder pain in the population is 15–30% and RT accounts for 70% of cases (Lewis, 2016). RT is more common as people age (Lewis, 2016), which means more and more Australians are likely to be affected by shoulder pain given our aging population. RT can severely limit work and daily functions including dressing and eating, and up to 40% of people affected will experience

ongoing disability beyond 12 months (Lewis, 2016). Clinical practice guidelines recommend non-surgical care (activity & medication advice, & exercise) in the management of RT prior to considering imaging or surgery (Hopman et al., 2013).

Scientific understanding of chronic musculoskeletal pain (including RT) has increased substantially (Tseli et al., 2019), resulting in greater recognition and implementation of the biopsychosocial approach to non-surgical management of persistent musculoskeletal pain (Nijs et al., 2010). Central to a non surgical approach is the understanding and recognition of key lifestyle and psychosocial factors such as self-efficacy,

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depression, pain catastrophising and physical activity which may impact on musculoskeletal health outcomes (Martinez-Calderon et al., 2019). Appropriate identification of these factors may empower self-management and efficient recovery. Furthermore, such an approach aligns with the Common Sense Model of self-regulation of health and illness (Leventhal and Ian, 2012; Hale et al., 2007), which highlights the importance of how the patient perceives their problem as being pivotal in conservative self management.

Prospective studies demonstrate that patient expectation of benefit and self-efficacy are stronger predictors of non-surgical treatment outcome than structural factors (e.g. extent of rotator cuff tendon pathology) (Dunn et al., 2005). Evidence suggests these factors can be promoted by effective self-management and by equipping patients with the necessary self management skills required to take responsibility for persisting conditions (Jonkman et al., 2016). This is consistent with a patient centred approach being underpinned by a patient-health professional partnership and the promotion of self-management skills such as education, goal setting, decision-making, activity maintenance and self-monitoring (Jayadevappa and Chhatre, 2011; Delaney, 2018). As a result, it is critical that health professionals provide patient-centred self-care education, being an educational approach that targets education tailored to and individual patients needs, preferences and values (Casimir et al., 2014), promote health literacy by providing information to health consumers that enables informed health decisions (H WOos-terhaven, 2018).

This qualitative study was nested in a broader program of study focusing on developing and testing the efficacy of an education intervention for RT. The aim of this study was to explore expert shoulder clinician-researchers experiences with managing RT including practice beliefs towards providing education.

2. Method

2.1. Recruitment

This qualitative study involved semi-structured interviews (n = 8) with shoulder clinicians with expertise in tendinopathy research and clinical practice. We purposively sampled clinicians working as sports medicine physicians, surgeons or physical therapists who had published about shoulder tendinopathy within the last five years, and evidenced a minimum of 10 years clinical experience as determined by online searches in Google Scholar and ExpertScape (<http://expertscape.com/>) using key search terms ('tendinopathy', 'rotator cuff tendinopathy', 'shoulder pain'). Potential participants were contacted via e-mail to invite participation in the study. Written consent was obtained prior to interview. In instances where invitees did not respond or refused to participate, we continued to invite additional suitable participants from our sampling frame. Sampling continued until thematic saturation was achieved, with two co-coders agreeing that no new themes were emerging. Recruitment occurred between December 2018 and February 2019. Approval for this project was obtained from the xx University Human Ethics Committee (number 16571).

2.2. Procedure

In-depth semi-structured interviews (n = 8) were conducted by two researchers (xx) using an interview guide (see Table 1). The interview guide was designed by a sub-group of the investigators (xx) with the research questions in mind and by reviewing existing literature, however participants had freedom to express views and experiences in their own words and diverge from the interview guide. Interviews began by asking participants to share their experience of the management of RT and subsequent questions explored their practice and experiences towards patient education. The iterative process of cumulative and concurrent data generation and analysis, incorporating a process of constant comparison, allowed emergent themes to inform continuing data

Table 1
Interview guide.

Question	Prompt
Overall what is your experience of dealing with people with RTC How frequently?	How does it make you feel?
What is your experience in providing education to people towards the management of rotator cuff tendinopathy	What education do you normally provide if any? Do you review patient's knowledge? Are you happy with the way you provide education?
What aspects of RTC do you think require and educational intervention?	Expand
Time is often limited in the clinical context, so what do you feel are the most important education messages for patients with rotator cuff tendinopathy?	Expand How do you typically educate patients about these key messages? Do you feel your education works? Why? Why not? What else do you think would work?
What factors do you feel are important to consider when deciding on what education content you deliver?	Expand
What are your thoughts on tailored or individualised education for patients with RTC	Can you describe this? What does it look like? What is the most important aspect of personalised education? Do you think it works? Why? Why not? How? Why?
Do you do anything to see if your patient has understood your education?	What do you do? How do you test retention and understanding?
How do you think your education is received?	Have you noticed any negatives? Or positives? Expand
How did you learn about how to deliver and structure education for patients?	Do you feel that as a HCP you require additional training on providing patient education?
What formats do you think are best to deliver education to patients with rotator cuff tendinopathy?	Expand Do you feel that as a HCP you require additional training on providing patient education?
Do you know of any examples of good practice in regards to delivery of education in health care that you would recommend?	What is good about them?

collection (Lewis-Beck et al., 2003).

2.3. Data analysis

Interviews ranged from 45 to 90 min in length, were audio recorded with permission, and transcribed verbatim and identifying data was removed. The primary author checked transcripts for accuracy. Two authors (xx), one physiotherapist and an exercise physiologist, independently coded data using an inductive thematic analysis (Braun et al., 2014). This involved (i) identifying units of meaning by reading the transcripts line-by-line, (ii) grouping units into categories to assist with data retrieval, irrespective of the research question, and (iii) examining relationships between codes to form themes. Two researchers (xx) enacted this methodological process and created separate codebooks in word documents. Following regular meetings and discussion, these codes were merged into a single word document. Codes were subsequently refined into categories. Any differences in researcher-perspective were resolved by negotiation; and, if necessary, regrouped and recoded until reaching consensus. Through regular discussion with authors (xx) the final step examined relationships between categories to form themes. Trustworthiness of our data was achieved using several strategies, including immersion in data; reflexive analysis, peer debriefing and member checking (Krefting, 1991; Pandit, 1996). Member checking involve emailing all participants with a summary of the study themes for feedback. Two of the eight responded providing confirmation the findings and provide suggestions for clarity. These

strategies ensured that the researchers remained open to the data and did not demonstrate bias during the data analysis as a result of pre-conceptions inherent in the researchers' clinical status and experience (Krefting, 1991; Pandit, 1996). Coders captured exemplar quotes supporting each theme.

3. Results

Three themes emerged related to the management of people with of RT, which are discussed below

1. The need for early, focused education: "Some beliefs can be detrimental to rehabilitation options."
2. Developing therapeutic alliance: "If a patient trusts you then you are generally going to get much better results."
3. What is required moving forward in current day RT management: "Maybe we can get better."

3.1. The need for early, focused education: "Some beliefs can be detrimental to rehabilitation options"

The majority of clinicians reported that the first consult was critical for engaging patients in the overall RT management plan in order to facilitate patient education and understanding. Clinicians outlined the importance of understanding their patients' history and addressing any early misconceptions that they may have formed about their RT injury and treatment. As a result, they prioritised understanding patient expectations and provided education that clarified misconceptions about treatment, pain and structure, and treatment philosophies.

"[If you try] to understand the patient's previous concerns and expectations very early in the consultation, [then] you can then start addressing them early." (Participant (P) 4, Physiotherapist (PT))

Clinicians noted that education was also needed to address patient fears (e.g. moving their shoulder would exacerbate symptoms) and regarding the impact of tears on pain and rehabilitation outcomes.

"Just because they have a tear it does not necessarily mean that pain will persist and they will not get better." (P5, Surgeon)

"We are on a losing streak if patients arrive with ... a catastrophizing mind set about this torn tendon or piece of bone. We are achieving absolutely nothing unless we can break those down, educate the patient." (P3, PT)

Providing reassurance was identified as a central method to address patients' concerns, anxieties and hypervigilance about their RT.

"It's about trying to reduce anxiety through education or reassurance and to reduce any hypervigilance, which actually may affect their outcome ... and ultimately affect their adherence to any exercise intervention." (P1, PT)

All clinicians expressed that it was central that patients had a clear understanding of treatment outcomes and treatment philosophy. In scenarios where patients did not understand the treatment philosophy then clinicians reported they were more likely to become antagonistic and reticent to adhere to advice given.

"So, it's really important to find exactly where your patient is [with regards to understanding] because patients can be in very different places. ... you could easily develop quite an antagonistic relationship early on." (P5, surgeon)

"If you do not have one big blast [session] where you can get the patient actually understanding what is going on with them ... I just think you are setting yourself up for failure." (P1, profession)

An education focus on prognosis and conservative treatment approaches was important since most patients "haven't been told much," (P5, surgeon) or had received "mixed messages ... and different advice about various treatments." (P7, PT). Indeed, many patients perceived to hold negative beliefs surrounding treatment preferring passive or invasive treatment approaches rather than adherence to exercise.

"A lot of the time there's that belief that, 'I need injection, I need pain-killers or I need surgery'. Instead you are trying to roll back on some of that and re-educate the patients. Some of these myths and beliefs can be detrimental to rehabilitation options as well and can actually prolong disability in some of these patients. (P1, PT)

Education was also perceived to allay patients requests for unnecessary imaging, to monitor recovery, and instead promoted understanding that even if the tear does not heal that their pain and function can recover.

"When on imaging they see a tear they say 'ah, you have to fix it because it's a tear', while we know that you don't have to fix the tear to have a good function." (P6, PT)

3.2. Patient centred care promotes development of a therapeutic alliance: "If a patients trust you then you are generally going to get much better results"

All clinicians highlighted that developing trust and an early therapeutic relationship was closely linked with achieving better treatment outcomes. Techniques towards developing a therapeutic relationship reportedly included: active listening, therapeutic touch, mutual sharing, as well as collaboration towards establishing achievable goals that the patient was committed and motivated to achieve.

"The relationship is so important because if they believe what you say, then that is kind of half the battle. Because then whatever you do they are likely to trust you and whatever you do it is likely to work." (P5, Surgeon)

While patients were perceived to demonstrate similar misconceptions RT, clinicians readily acknowledged there was no 'one size fits all' method to guide treatment, and patients should be assessed and managed on a case-by-case basis. As a result, the importance of tailoring therapy to the individual was underscored by differing amounts of time or topics covered.

"Some patients might need five minutes of education, another patient may need two or three sessions where it is quite intensive, or they might need to cover different areas, so I think it depends on the patient that you have in front of you similar to what exercise you prescribe". (P1, PT)

"You just got to run with their understanding to begin with - even if it's unhelpful. You might even modify your treatment according to their understanding whilst you develop that relationship." (P6, PT)

3.3. What challenges and enablers should be considered in RT education delivery "Maybe we can get better?"

Clinicians expressed that it was important for patients to understand what is involved with exercise management in RT, given that it can be a substantial commitment and required significant behaviour change. This was viewed as integral to adherence.

"I want them to know really what that involves. I will say to them that physiotherapy is a big commitment ___ I want them to opt in rather than passively have this kind of forced it on them, you know." (P4, PT)

"Work together in a positive pathway with me describing the exercises and illustrating how to do them and motivate patients and have the patients adhere to the program. Because adherence is the key to success. If they

come back and they say, well, I forgot your exercises, I did them once a week instead of every day, then we are not moving forward so it is shared responsibility." (P2, PT)

However, promoting behaviour change through education took time and many clinicians reported that their work setting did not recognise the value of taking extra time in consults to have "a long conversation" (P5, surgeon). This was especially the case in private healthcare domains as opposed to public settings. Not taking time was viewed as counter-productive in the long term and, at times unethical, in cases where patients may be uninformed and potentially coerced into an inappropriate treatment regime.

"I think a lot of bad decisions and bad relationships are created by rushing patients, trying to rush them through the clinic quickly. Maybe you will make the right treatment decision for the patient but if it has not been communicated well and they are not happy and had all their concerns addressed, then you won't get a great rapport and they [patient] won't be very satisfied." (P5, surgeon)

As a result, in order to facilitate the development of the therapeutic alliance that aided behaviour change, many clinicians expressed the need for health care providers to allow adequate time during consultations. Clinicians expressed that there is no set time that may be deemed adequate, and the time needed depended on the requirements of each individual patient, but was ultimately central to adherence with management and exercise.

"So I think it is very hard to try and communicate. It's doable with most patients, but it just takes more time probably than you have. It does take a lot of time to try and communicate that complexity. But I think it is important to try and do it." (P5, surgeon)

Further, how education was provided was closely linked to patient needs (i.e. content and comprehension needs) and other factors such as gender, age, and level of education. Adapting education requirements took time on the part of the clinician.

"I do notice the difference in men and women. I know men find it harder to seek help a little bit more impatient. I think have to work much, much harder with men to get them on board to really sell them the idea that they can get themselves better." (P1, PT)

"Some of the older patients just like the more paternalistic type of care. But it not just old patients, some younger patients do to. They just trust you and want you to tell them what is the best thing to do. It can often be quite a long conversation. I have to explain I can't tell you what to do, you have to make the decision, and these are your options." (P5, surgeon)

Despite the importance of RT education in daily practice, all clinicians expressed concerns about having had no formal training concerning how to best educate their patient in order to form a collaborative partnership and address many of the patient education issues raised.

"We do get a bit of training ___ post graduate training. However, most of it is kind of just experience really." (P2, PT)

In an attempt to enhance or complement their education, clinicians reported having experience with different patient education aids such as group classes, or patient leaflets and handout material to try and educate and reinforce information. However, they indicated these should be further developed, and that they should be complimentary, as that nothing could replace the educational component achieved through fostering the patient - therapist therapeutic relationship.

"Undergraduates should also be exposed to lots of different ways of presenting information, be that leaflets infographics, giving presentations, developing small videos. (P3, PT)

"It would be nice if it was kind of there are better resources out there, because really there are not great resources out there on how to educate. (P1, PT)

Similarly, clinicians reported that, although challenging, it was important to try to establish whether patients understood the educational strategies provided. Typically, participants achieved this by asking clients to repeat instructions or describe how they would explain their consult to a loved one. However, poor client recall and misinterpretation remained an issue and barrier to the potential effectiveness of educational strategies.

"The number of times you know, I have spoken with patient and asked them to interpret what I have said and they are completely at odds with what I have said ... I ask them, "What you think I have said?" and other they cannot recall. It is quite different to how I perceive so at least based upon my practice and my experience I think we could do a lot better with education." (P1, PT)

4. Discussion

This study generates understanding towards the provision of education as a fundamental component of RT management. We identified that clinicians highlighted the need to engage patients early in the treatment process through appropriate education strategies, but were concerned about the effectiveness of their educational strategies.

Consistent with a growing evidence base, highlighting the role of psychological factors as predictors of treatment outcomes in musculoskeletal pain, we identified the need for early intervention addressing fear, misconceptions and expectation towards the treatment of RT. Addressing patient beliefs and expectations about pain and function using early focussed education may help improve commitment to rehabilitation through the fostering of patient self-efficacy. Unfortunately, despite clear and apparent benefits adherence to exercise programs for musculoskeletal disorders remains low. In fact only 50% of patients in clinic have been found to be adherent to exercise programs when in the clinic (Kolt and McEvoy, 2003) and even less adherent to their home exercise instruction (Bassett, 2003; Chan and Can, 2010). In response, self-efficacy, defined as one's belief in one's ability to perform a particular task, may be an important factor when working with patients with musculoskeletal conditions to improve adherence to exercise programmes. Common characteristics of those with low self-efficacy include fear of risks and uncertainty, low aspirations, feelings or fear of failure, and impression management. Therefore, as indicated by clinicians in the current study, the implementation of early focussed education may help to improve self-efficacy and commitment to rehabilitation, aligning favourably with the concept of patient centeredness (Casimir et al., 2014). This aligns favourably with the trend of providing patient centred care for MSK disorders as care that respects and responds to the individual patient's preferences, needs and values and ensures that clinical decision incorporates patients' values (Jayadevappa and Chhatre, 2011).

Clinicians in the study also identified the importance of developing a sufficient patient-therapist relationship or alliance. Therapeutic alliance has been defined as a positive working interaction between the health professional and their patient (Joyce et al., 2003). There is a growing interest towards understanding how the patient-therapist alliance affects physical rehabilitation and treatment outcomes (O'Keefe et al., 2016; Hall et al., 2010). A systematic review by Hall et al. (2010) investigating the role of therapeutic alliance in physical rehabilitation across a diverse array of healthcare practitioners concluded that the enhanced patient-therapist relationships had a positive effect on treatment outcomes (Hall et al., 2010). A further systematic review by Manzoni et al. (2008) reported mixed results between the having a therapeutic alliance and pain relief amongst physiotherapists (Manzoni et al., 2008). Results from this study provide preliminary data on the key

components that are needed towards promote an effective therapeutic relationship in the delivery of RT treatment. Specifically these involve developing trust, and communication techniques, including verbal expressions of empathy, as well as listening to patients and expressing words of support and understanding (Ackerman and Hilsenroth, 2003; Horvath, 2001).

Clinicians in this study also expressed concern that there are no formalised or consistent process toward learning to deliver patient education, especially complex education. As a result, they all desired to be upskilled. This is despite the well-documented and crucial role that education plays in rehabilitation and the management of chronic musculoskeletal conditions, such as RT. While interventions such as pain education, motivational interviewing, goal setting, imagery and cognitive behavioural therapy have been utilised over recent years (Neilson, 2016; Scobbie et al., 2009; Scherzer et al., 2001), there remains a lack of consensus surrounding the efficacy and effectiveness of many of these interventions in MSK pain, particularly their potential role in RT.

4.1. Strengths and limitations

This is one of few qualitative studies describing the experiences and perceptions of education in RT. The strength of this study lies in access to an international sample of clinicians in health services caring for a diverse population. However, we did not capture the patient or family perspective. Future research should explore mechanisms for overcoming some of the barriers that clearly exist in the treatment of RT such as how to promote patient understanding and strategies to help busy clinicians learn skills to be effective educators.

4.2. Conclusion

This study identified several key themes that healthcare practitioners may need to consider when providing education as part of RT management: early, focused education; developing a therapeutic alliance; continuous professional development by healthcare practitioners to acquire the necessary skills to provide educational interventions in RT. However, there is a need to develop strategies that equip clinicians to be effective educator.

Ethical approval

This project was approved by the Monash University Human Ethics Committee (number 16571).

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Declaration of competing interest

None.

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Appendix A. Supplementary data

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