

**Playing with Pain: Experiences of Music Group Membership and Psycho-Social Wellbeing for
Adults Living in the Community with Persistent Pain**



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Abstract

Existing literature exploring the efficacy of musical modalities in the management of persistent pain primarily focus on music listening interventions. Whilst some studies explore the role of active music participation on pain management, most of these studies focus on choirs. Given the cost effective and accessible nature of community centered interventions, this study aimed to explore the experiences of individuals who participate in community music groups and live with persistent pain to understand potential benefits and challenges. Music groups were defined as a recurring, scheduled musical activity between two or more people. Using a qualitative design, eight participants participated in semi-structured interviews which were subsequently analysed using reflexive thematic analysis. Participants lived with persistent pain of various origins and participated in a range of music groups including bands of different genres, cabaret groups and choirs. Four themes were identified. Analysis indicated that there were a range of benefits to music group participation, including increased positive affect, distraction from pain and increased social support. Challenges of music group participation were potential pain exacerbation. Overall, music group participation protected against psycho-social challenges co-occurring with pain. Findings from this study support the use of community music groups as a modality to assist individuals living with persistent pain. Avenues for further research include investigating what instruments and roles within music groups are most suitable for individuals of different pain categorisations.

Declaration

This thesis contains no material which has been accepted for the award of any other degree of diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the school to restrict access for a period of time.

██████████

December 2023

Table 1*Contributor Roles*

Role	Role Description	Student	Supervisor 1	Supervisor 2
Conceptualization	Ideas; formulation or evolution of overarching research goals and aims.	X	X	X
Methodology	Development or design of methodology; creation of models.	X	X	X
Project Administration	Management and coordination responsibility for the research activity planning and execution.	X		
Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team.	X	X	X
Resources	Provision of study materials, laboratory samples, instrumentation, computing resources, or other analysis tools.	X		
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code.			
Investigation	Conducting research - specifically performing experiments, or data/evidence collection.	X		
Validation	Verification of the overall replication/reproducibility of results/experiments.			
Data Curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later re-use.			
Formal Analysis	Application of statistical, mathematical, computational, or	X	X	X

	other formal techniques to analyze or synthesize study data.			
Visualization	Visualization/data presentation of the results.	X		
Writing – Original Draft	Specifically writing the initial draft.	X		
Writing – Review & Editing	Critical review, commentary or revision of original draft.	X	X	X

Playing with Pain: Experiences of Music Group Membership and Psycho-Social Wellbeing for Adults Living in the Community with Persistent Pain

Background

Persistent pain affects approximately one in five Australians and is a leading cause of disability (Australian Government Department of Health, 2019; Blyth et al., 2001). The use of music as a modality to aid in the management of persistent pain has been of growing interest in the literature and in healthcare settings (Dingle et al., 2021; Suda et al., 2008). While various studies focus on the benefits of listening to music on pain management (Gold & Clare, 2013; Harney et al., 2023; Hohneck et al., 2023), the benefits of participatory music activities, such as making music, have not been as widely researched. Additionally, existing studies exploring the benefit of music making for pain management tend to focus on singing or participating in choirs rather than playing an instrument (Daykin et al., 2018; Hohneck et al., 2023; Lonsdale & Day, 2021). Further, these studies have often focused on clinical settings, rather than community-based groups (Clements-Cortes et al., 2017; Corvo et al., 2020; Glomb et al., 2022). Given the established effectiveness of community music group interventions on the psycho-social wellbeing of other vulnerable groups (Bolger, 2015; Carroll, 2020; Corvo et al., 2020) this study aimed to investigate the psychosocial experiences of individuals living with persistent pain who participate in community music groups.

Defining Persistent Pain

According to the International Association for the Study of Pain (IASP), chronic pain is defined as pain that persists longer than three months (IASP, 1994). The term persistent pain is often used interchangeably with chronic pain (Raffaeli et al., 2021). The use of the adjective 'chronic' to label pain continuing beyond a time point such as three months has been contested, as the label may be interpreted as meaning high intensity (Raffaeli et al., 2021; Siddall & Cousins, 2004). The use of empowering language is crucial to healthcare, where strengths-based and bias free terms are encouraged (Jones, 2020). Therefore, the term persistent (rather than chronic) pain will be utilised in this study.

Psycho-Social Factors Associated with Persistent Pain

Although persistent pain is mediated by bio-psycho-social factors, it is nevertheless often accompanied by various psychological factors (Douglas et al., 2004; Gatchel et al., 2007). A meta-analysis conducted by Burke and colleagues (2015) synthesised literature regarding the psychological problems faced by individuals with persistent pain. The study focused on individuals with general persistent pain, rather than diagnostic specific pain as many individuals with persistent pain do not fit into clear diagnostic categories. The meta-analysis revealed that individuals with persistent pain experience significant psychological challenges, with largest effect sizes for pain anxiety, reduced self-efficacy and general anxiety. Due to persistent pain experiences, individuals are often unable to participate in work, social or community events to the same capacity as they did before their persistent pain developed. A report conducted by Deloitte Access Economics (2019) found that 56% of Australians living with persistent pain were restricted within their daily activities. Further, research shows that the psychological and physical challenges from persistent pain often lead to social exclusion (Schofield et al., 2015; Tardif et al., 2019; Van Leeuwen et al., 2006). Overall, the often-invisible nature of persistent pain leads to an increase in social isolation and stigmatisation from friends, family, co-workers, and healthcare professionals (Bannon et al., 2021; Cohen et al., 2011).

While social exclusion and a lack of participation in workplaces are problems in and of themselves for those with persistent pain (Australian Government Department of Health, 2019), the literature additionally suggests that these psycho-social factors play an important role in pain perception. Karayannis and colleagues (2019) conducted a longitudinal assessment using retrospective observational data from participants living with persistent pain conditions of different characterisations. Results demonstrated that patients with higher social isolation reported higher pain intensity and significantly lower levels of social functioning. Further, across the study, social isolation predicted pain intensity. In other studies, the level of social support individuals receive has been noted to impact recovery for people living with rheumatoid arthritis and lower back pain (Evers

et al., 2003; Ferreira-Valente et al., 2014). In summary, psychological, social, and physical challenges produced by persistent pain have complex interactions with one another.

Music as a Pain Management Strategy

The use of musical modalities as self-management strategies for individuals living with persistent pain are of interest in the literature (Sihvonen et al., 2022). A systematic review and meta-analysis conducted by Garza-Villareal and colleagues (2017) investigating the efficacy of music-based interventions in randomised control trials for adults with persistent pain, found significant effects on depression and pain experience. Further, participants who chose their own music for either listening or playing reported higher analgesic effects (Garza-Villarreal et al., 2017). As such, music interventions to treat persistent pain in healthcare settings and the community have been of interest due to their accessible, non-invasive and inexpensive nature (Sihvonen et al., 2022).

Music therapy is an evidence-based intervention, which can be applied in an array of settings. Treatment within music therapy may take the form of experiential methods, such as listening to recorded music, or participatory methods, where the individual plays music by singing, playing instruments or songwriting (Australian Music Therapy Association, 2023). Literature on the efficacy of music to aid in the management of persistent pain has tended to focus on experiential interventions (Harding et al., 2023; Hohneck et al., 2023; Howlin & Rooney, 2020; Mitchell et al., 2007). Whilst these studies have outlined benefits including improved social functioning (Hohneck et al., 2023), decreased pain intensity (Hauck et al., 2013) and distraction and relaxation (Mitchell et al., 2007), knowledge of participatory interventions is limited. Where research has considered participatory music playing and persistent pain, it has typically focused on singing or participation in choirs. Studies set in clinical choral settings on individuals with persistent pain have found a range of psycho-social benefits including increased self-efficacy and decreased depression (Bradt et al., 2016; Irons et al., 2020; Low et al., 2020) an increased sense of belonging (Bradt et al., 2016) as well as an increased perception of resilience (Hopper et al 2016). Further, studies comparing the effects of music listening versus singing interventions within adolescents with mental disorders have found

that singing sustains positive affect and improved mood longer than listening (Boyd et al., 2020).

Research has also found that community-based music activities are beneficial for psycho-social wellbeing (Ansdell & DeNora, 2016; Carroll, 2020). Studies of vulnerable individuals who participate in community music groups have demonstrated positive social, emotional and mental wellbeing outcomes (Cain et al., 2020) including strengthened peer relationships, social inclusion, and increased self-efficacy and self-empowerment (Bolger, 2015; Vougioukalou et al., 2019). In their 2021 study, Lonsdale and Day investigated whether the psychological wellbeing effects of community choirs extended to solo singers, band and orchestra members, solo musicians, team sport players and solo sport players. Results demonstrated that similar levels of psychological wellbeing were experienced by individuals of all groups implying that choral singing benefits may not be of unique benefit; however further research is required.

Psycho-Social Wellbeing Models Applied to Persistent Pain

Psycho-social wellbeing lies in the interaction between subjective and relational aspects of wellbeing, particularly an individual's mental health and social adaptation (Edwards et al., 2016; INEE, 2017). Various models of wellbeing facilitate an understanding of persistent pain.

Engel's (1977) bio-psycho-social model is a holistic model conceptualising illness and ill health, and is applied to persistent pain assessment, management, and prevention (Bever et al., 2016; Guillemin & Barnard, 2015). From a persistent pain perspective, the bio-psycho-social model (Engel, 1977) focuses on the inter-related influence of biological, psychological and socio-cultural states and factors on an individual's unique pain characterisation (Bever et al., 2016; Turk & Monarch, 1996). In their review highlighting the applicability of the bio-psycho-social model to persistent pain, Bever and colleagues (2016) outline how Engel's model of illness can be applied to the progression of, and individual identification with, pain. First the individual presents with a physical problem, which becomes distressing, leading individuals to present pain related behaviour, and lastly, identifying with a 'sick role' (Bever et al., 2016). Whilst all components of the bio-psycho-social play complex inter-related roles with one another, psychological and behavioural dimensions

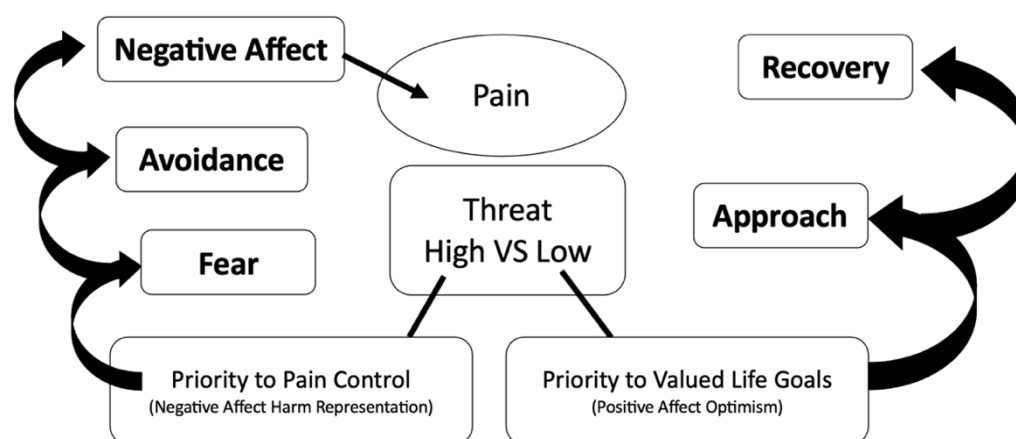
are emphasised in persistent pain treatment, which often encompass a cognitive behavioural perspective (Beehler et al., 2019; Ehde et al., 2014)

Persistent Pain Models

Vlaeyen and Linton's (2000) fear avoidance model of pain is frequently applied to understanding and treating pain-related behaviour (Crombez et al., 2012; Zale & Ditre, 2015). The fear avoidance model, outlined in Figure 1, takes a cognitive behavioral approach and posits that persistent pain can develop when pain related fear and avoidance persist in the presence of healing, or when protective mechanisms generalise to non-threatening situations (Vlaeyen et al., 2016; Vlaeyen & Linton, 2000).

Figure 1.

The Fear Avoidance Model of Pain



Note. This model has been adapted from Vlaeyen & Linton in 2016, Outlining the Fear Avoidance Model when pain is interpreted via high vs low threat appraisals. From "The fear-avoidance model of pain." By J. Vlaeyen, G. Crombez and S. Linton, 2016, *Pain*, 157(8), 1588-1589

According to Claes and colleagues (2015), avoidance is often dependent on environmental factors and the presence of competing goals. For example, fear-avoidant behaviours may not occur in contexts where a life goal outweighs the value of pain (Claes et al., 2015). Further, situations associated with negative affect and perceived harm can reinforce avoidance and pain control, whereas contexts associated with positive affect and optimism can reinforce a prioritisation of values and life goals (Goubert et al., 2004; Hanssen et al., 2013).

Whilst not a model, the concept of overactivity is widely applied to pain-centered cognitive behavioural therapy (CBT). The concept was first proposed by Philips (1988), describing periods of excessive activity engagement that result in periods of pain exacerbation and incapacity. Individuals who are overactive often resume daily activities once pain starts to decrease or if frustration from being inactive pre-empts new activity (Huijnen et al., 2009; Nicholas et al., 2011). These drastic changes in activity patterns are described as underactivity, overactivity cycling (Birkholtz et al., 2004; Brown, 2002). Activity pacing is a pain treatment strategy which aims to reduce overactivity by restructuring and scheduling daily tasks so that activities do not exacerbate pain (Birkholtz et al., 2004; Nielson et al., 2014; Torrance et al., 2011). Whilst systematic reviews exploring the therapeutic effects of pacing have revealed inconsistent findings on its effects on pain severity, the literature highlights that pacing assists in the reduction of fatigue and joint stiffness, and decreases overall activity variability within individuals (Gill & Brown, 2009; Nielson et al., 2013).

Aims

This study aimed to investigate the psycho-social experiences of individuals living with persistent pain who also participate in community music groups. Community music groups were defined as music groups occurring separately to any treatment or pain centered intervention. Given that most studies on persistent pain focusing on choirs have been conducted within clinical settings, community choirs were also considered for this study. Using the pain and wellbeing models outlined, this study aimed to explore the experience of music group involvement for people living with persistent pain. Further, this study aimed to investigate any perceived psycho-social wellbeing effects individuals experienced alongside music group participation.

Method

Study Design

This study utilised a qualitative, inductive design with a contextualist epistemology (Braun & Clarke, 2021a). Contextualist epistemology was utilised as it acknowledges that to study humans, it is imperative to simultaneously examine the contexts which provide meaning to their lives (Tebes,

2005). Pain can be analysed from a contextualist standpoint, as it is subjective and influenced by unique cultural, cognitive and bio-medical factors (Osborn & Rodham, 2010).

Participants

Eight participants were interviewed for the study; six women and two men. Average participant age was 48 years ($SD = 12.64$, range = 31-68). Six participants identified as Australian, one as English Australian and one as Chinese Australian. Occupational status of participants included IT sales ($n = 1$), workplace relations ($n = 1$), occupational therapist ($n = 1$), software engineer ($n = 1$), statistical analyst ($n = 1$), venue owner ($n = 1$), retired ($n = 1$) and unemployed ($n = 1$).

Participants varied in the number of music groups they attended, as well as the type of music groups they participated in. Four participants attended a singular music group, three participants attended two music groups and one participant attended three music groups. The length of music group membership for participants ranged from 3 months to 10 years ($M = 2.5$ years). Considering the small sample and unique population of interest, separate tables have been provided to protect participant anonymity (Kaiser, 2009). Overall, participants described their experiences in thirteen different music groups, as can be seen in Table 2. The roles which participants took within their respective music groups can be seen in Table 3.

Table 2

Types of Music Groups Attended by Participants

Type of Music Group	n
Choir	3
Town Band	1
Brass Band	1
Rock Band	3
Jazz Band	1
Funk Band	1

Comedy Cabaret	1
Guitar Club	1
World Music Band	1

Table 3*Roles of Participants in Respective Music Groups*

Role in Music Group	n
Lead Performer	1
Choral Singer	3
Flutist	1
Drummer	1
Pianist	1
Rhythm Guitarist	1
Trumpeter	1

Four participants' pain originated from a diagnosis and four participants' pain originated from specific injuries. Three participants identified living with multiple pain originating diagnoses and three participants identified living with multiple pain originating injuries. The different pain diagnoses and injuries are outlined in Table 4.

Table 4*Participant Persistent Pain Diagnoses and Injuries*

Persistent Pain Origin	n
Endometriosis	2
Adenomyosis	1
Chronic Migraine	2

Fibromyalgia	2
Osteo Arthritis	1
Rheumatoid Arthritis	1
Tarsal Tunnel Syndrome	1
Knee Injury	1
Back Injury	3
Shoulder Injury	1
Wrist Injury	2

The Chronic Pain Grade Questionnaire (CPGQ) is an instrument used to evaluate the severity of persistent pain on dimensions of pain intensity and pain related disability (Von Korff et al., 1992). The CPGQ was administered to participants during the interviews to aide in understanding the pain characteristics of individuals living with persistent pain in this study. The original questionnaire asks individuals to reflect on their pain experiences over the past six months; however, to align with the most current definition of persistent pain from the IASP, participants were asked to reflect on the previous three-months. The CPGQ classifies individuals into five pain grade categories on domains of pain related disability and pain intensity. Table 5 outlines the different CPGQ categorisations of participants.

Table 5

Participant Chronic Pain Grade Questionnaire Categorisations

CPGQ Grade	n
Grade Zero: Pain Free	0
Grade One: Low disability- Low Pain Intensity	1
Grade Two: Low Disability- High Pain Intensity	2
Grade Three: High Disability- Moderately Limiting Pain	2

Procedure

Ethical approval was granted for this study by the University of Adelaide's Human Research Ethics Sub-Committee. Participants were required to self-identify as experiencing regular pain for three months or longer in line with the IASP's definition of persistent pain (IASP, 1994) and participate in a music group, which was defined as a scheduled and regular music activity comprising or two or more individuals. Individuals experiencing pain which required help from healthcare professionals for daily functioning, as well as individuals with pain originating from cancer or neurological conditions were excluded for this low-risk study.

For recruitment, fliers, included in Appendix 1, were sent to council-based music groups, venues and musical organisations as well as music-oriented Facebook groups and social media platforms. Recruitment also occurred through snowball and convenience sampling. Potential participants were prompted to contact the student researcher via email. The student researcher then provided information sheets, included in Appendix 1, as well as informally screened potential participants for study suitability.

Interviews took place face to face ($n = 2$) and over zoom ($n = 6$), with lengths varying from 51 to 161 minutes ($M = 79$). Verbal consent was provided prior to commencing each interview. A pilot interview was conducted to review the suitability of the selected semi-structured questions, which were then altered after review with the academic supervisors. Final interview questions are in Appendix 2. Participants were debriefed at the end of each interview and were sent follow up emails to assess if they needed more support after the interview. To protect anonymity, each participant was assigned a pseudonym (Kaiser, 2009). All interviews were transcribed using Microsoft Word software and checked to ensure verbatim accuracy.

The stopping rule for recruitment for this study was guided by Braun and Clarke's most recent recommendations for reflexive thematic analysis regarding having a lower and upper limit, as well as

being reflective on the richness of data in relevance to the research question (Braun & Clarke, 2021b). These metrics are recommended as reflexive thematic analysis can never be truly 'complete' due to the evolving nature of codes and avenues of interpretation which the researcher can elicit reference (Braun & Clarke, 2021b). Based on other studies with similar populations of interest, a lower and upper limit of participants was established between 6-16.

Data Analysis

The interview data was analysed using the steps to reflexive thematic analysis outlined by Braun and Clarke (2021), including dataset familiarisation, data coding, initial theme generation, theme development and review, theme refining, and writing up. Overall, an inductive approach to data collection was used to develop themes (Braun & Clarke, 2021a). Both academic supervisors crosschecked and provided feedback on the student-researcher's codes and initial theme ideas, leading to discussion and refinement of findings consistent with qualitative research.

Reflexive Research

The student researcher participates in a music group and has individually played music from a young age, allowing her to have some shared musical knowledge with participants. Despite not experiencing persistent pain, her experience with chronic illness provided some mutual understanding with participants, particularly with challenges of symptomatic management. Self-reflexivity was promoted by the student researcher by keeping an audit trail (Tracy, 2010) as well as making voice recordings following interviews to document and question any values, attitudes and assumptions, which may have arisen internally throughout the interviewing process.

Results

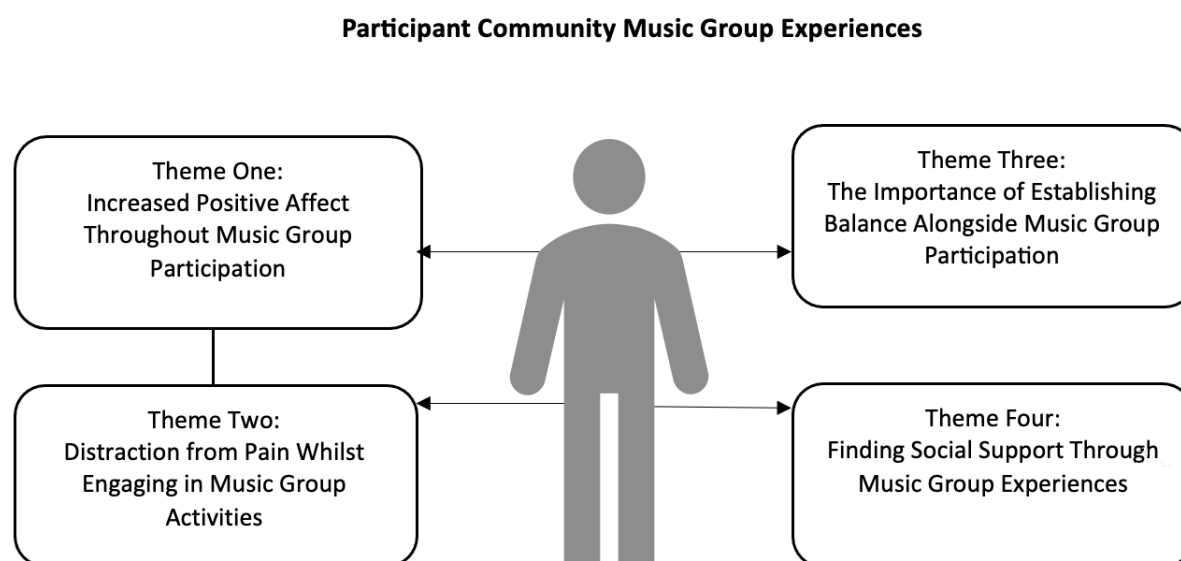
Overview

Four themes were identified within the data, as illustrated in Figure 2. The first theme outlined the increased positive affect participants described throughout their music group participation. The second theme regarded the distraction from pain that participants experienced while playing with their music groups. The third theme referred to the importance of establishing

balance alongside music group participation considering potential pain exacerbation. The fourth and final theme centered on the social support participants experienced by playing in their music groups. At the end of extracts throughout the results, participant pseudonym, music group role and CPGQ grade will be stated for context.

Figure 2

Thematic Map



Increased Positive Affect Throughout Music Group Participation

All participants reported experiencing increased positive affect in conjunction with participation in music group activities. For context, it is important to note most participants also outlined experiencing mental health challenges, as well as having a strong connection to musical activities from a young age. Ella, a choral singer living with grade four pain, described her experiences of positive affect after choir practice when she mentioned: “I just walk away from choir feeling better like I just love, you know, you come out feeling more positive”. Further, Ella explained how looking back on her choir experiences the next day prolonged her happiness. She described:

I would say the next day at work, you know they (colleagues) are like, “oh what did you do last night?” And I say “Oh, I went to choir, and it was really great”. And so, obviously I’m

feeling a longer-term happiness that continues for the next day (Ella, Choral Singer, CPGQ Grade Four).

In Ella's response, there is also a sense of satisfaction that comes from sharing with others that she participates in a choir. Similarly to Ella, Sue, another choral singer, described how participating in her choir elevated her mood and gave her something to look forward to. She noted:

I'm not depressed when I'm singing, and I'm not depressed if I've got something to look forward to, yes, I look forward to choir. And I think, "OK. You know, you're gonna have a nice time tonight, and this might be in two days, you know, or whatever". I'll be thinking "in two days I'll be going. I'll be getting out." (Sue, Choral Singer, CPGQ Grade Four)

Here Sue describes how choir is something she looks forward and in turn increases positive affect. Sue also emphasises that choir is an opportunity to leave the house. Whilst Sue described her positive affect through the absence of feelings of depression, other participants described the specific emotions they experienced alongside music group participation. Further, participants described how these emotions were protective factors from pain. May, a pianist living with grade one pain described that the happiness she felt from playing music prevented her from feeling pain. She mentioned: "The other way that it (playing in band) affects me, I think when you're feeling happy you just feel painless because pain is, a lot of the time, to do with 'can you distract yourself from it?'" May here notes the link between distraction and painlessness which will be further elaborated in the next theme. May also noted that, when playing in her band: "You just lose yourself, and that is especially true when I'm playing with other people... it's not as true when I'm playing by myself." Whilst for May, the emotion which promotes distraction is happiness, for Lisa, a trumpeter living with grade three pain, being calm is a crucial element of her pain management. She explained: "I get a sense of calm from playing so, I know for me that one of the ways I manage my pain is to be calm... we talk about riding the wave of pain at our house".

Various participants touched on the negative impact which pain had on their mood. David, a rhythm guitarist living with grade two pain, stated that although pain does not interfere with his routine, it is a burden by putting him in a negative headspace. He commented: "It (pain) doesn't stop my daily activities, but it makes me a grumpy old bastard and it stops me from enjoying life." For David, the magnitude of the barrier pain presents is exemplified when he reflects that it stops him from "enjoying life". Further, his negative moods are contrasted by his remarks of how he feels after playing with his band. For example, he reflected on the first time his rock band played together:

I think the endorphins covered it (the pain) the first few times I did it (playing in his band). I came away going yeah, I feel like a million bucks. But it (the pain) didn't hit me until about an hour and a half later... I can say in all honesty right now, when I'm playing, I don't feel it (pain). (David, Rhythm Guitarist, CPGQ Grade Two)

Here, David notes positive affect by stating he felt "a million bucks". Further, he notes that the positive affect from playing also had an element of distraction from pain, which will be further explored in the next theme. Overall, participants indicated that music group participation promoted positive affect either through direct engagement, anticipation, or reflection of activities. Further, the perceived positive affect from participating in music groups provided a distraction from pain.

Distraction from Pain Whilst Engaging in Music Group Activities

Distraction from pain whilst participating in music group activities was another theme prevalent in participants' responses. For example, Lisa, who also attends a local choir, described that for her, distraction from pain was largely influenced by her conductor's philosophy of "leaving your life at the door". Lisa expressed how the value of disconnection fostered in her choir provided a sense of calmness when she explained:

I don't think I realised until we said it, (during the interview) that, what probably brings me calmness is when our choir conductor says to "leave your life at the door" Leaving all that stuff (everyday life) and developing our identity as a group is what we're doing (in choir) I

think that is probably what brings me calmness of going into music in all sorts of places, even listening to it, you leave all that stuff at the door. (Lisa, Choral Singer, CPGQ Grade Three)

When discussing pain, it is evident that Lisa derives a strong sense of distraction from immersing herself in her choir, particularly whilst collaborating with her conductor and fellow members. Like Lisa, other participants outlined how music group activities distracted them from pain. Danny, a drummer living with grade four pain, explained that independent music practice in his home studio is important to his membership in multiple bands. Danny described how his daily music routine (in preparation for group music practice) allowed him to move through his days:

The habit of going in there (music studio) was happening and when music started to pick up a bit and I had more projects I went, "I'll do my morning routine and by midday the latest I'm going into my studio to work on something specific". And then I'll be working working working and all the sudden I'll look at the time and go "oh it's five o'clock". And I go "oh wow, I put in a good effort today". (Danny, Drummer, CPGQ Grade Four)

In this recollection it's evident that Danny's music practice gave his days routine and a sense of achievement, allowing him to look back and feel proud of himself. Further, throughout his interview, Danny described how before he was part of his bands, his attention was often directed towards his fear of movement. He reflected on the experience of fearing pain when he stated:

It's not really talked about (the fear of pain). It's like I'll be sitting at home, and I think I need to do this, this and this and this... but I'll do that in case it hurts, then I won't do any of the other (things). So I'll do the thing that will hurt the least first... Why am I doing this? Doing this cause I'm trying to avoid that. What the hell you know? (Danny, Drummer, CPGQ Grade Four)

Here, Danny describes frustration (e.g., "what the hell") as he outlines a way of trying to organise his activities which revolves around fearing pain and avoiding certain activities. Further, there is a contrast between Danny's frustration when he fears and anticipates pain to the distraction provided by his musical practice where time passes him by in the extract above. Whilst Danny and

Lisa's comments had a mental focus on pain and distraction; other participants emphasised the physical disconnection from pain through describing a complete disconnect from their body. For example, May explained:

There's something that is like automatically distracting you (playing music). So you don't have to think about distracting yourself. Then it's (pause), you know, that's great. That's how I have felt like something when I'm playing, I'm like in (pause) in like a different universe. You know, I'm not in a universe where I have a body. (May, Pianist, CPGQ Grade One)

In the extract above, May described being in music activities as effortlessly distracting, further, the strength of her distraction is emphasised by her mentioning feeling she's in a "different universe" where she has no body. Like May, Sue described feeling disconnected from her body through feeling completely immersed in the choir's musical activity. When asked what a time of positive wellbeing looks like, she said:

Yeah, when I'm in the choir, that's when I feel really really good. When I'm in the action of singing, it feels wonderful...It takes you out of your mind, it's like dance that you have to concentrate on the thing that you're doing. It's like one point concentration, like meditation. When I'm singing, there's nothing else happening, not in my mind, not in my body, nothing. I'm not really in my body. I'm in the song. (Sue, Choral Singer, CPGQ Grade Four).

In Sue's extract above she likens her enjoyment from singing to meditative activities. Further, like May, there is a description of being completely disconnected and totally focused, or as she notes, meditating, whilst singing. Overall, participants' recollections describe a restorative nature to the distraction they experience whilst engaging with their music group activities.

The Importance of Establishing Balance Alongside Music Group Participation

The importance of establishing balance alongside musical participation was expressed by participants, particularly those who played instruments or performed in high energy settings. Despite the benefits from music participation outlined in previous themes, some participants

reported pain exacerbation which built up over time, or directly after they finished playing music.

For example, Amelia, a flutist living with grade two pain, noted how the ergonomics of playing the flute contributed to the development of her persistent pain. She explained:

Flute is probably the least ergonomic instrument that you can play as you've got this metal tube and you're reaching across your body and you're also holding it up to your mouth... my left shoulder has started to yeah, ache and then I'll get pins and needles kind of sensations every now and then. Yeah, and then my jaw as well is quite tight. (Amelia, Flutist, CPGQ Grade Two)

As seen in Amelia's description, ergonomics of playing the flute led to uncomfortable sensations over time. Like Amelia, David noted the ergonomic challenges of playing, particularly when his preferred guitar was heavy, increasing the risk of back pain. He stated:

Well, yes, I mean, you know how much a Les Paul Studio weighs... and I was really worried about the impact of having to stand (whilst playing the guitar). So, I picked a lighter guitar to start with and it just didn't cut it... Like I need this alright, I'm breaking out the Les Paul. It has done the job, but it's heavy and what I've found is that stretching and exercising before and after is helping (with the pain). (David, Rhythm Guitarist, CPGQ Grade Two)

David experienced back, neck and wrist pain from pre-existing injuries. In his description, he describes first trying to accommodate his experience of pain by using a lighter guitar, which did not fulfill him musically. Later, he made another accommodation that consisted of stretching before and after to ease pain. Amelia also described the importance of accommodations to manage her pain along with support from her conductor. As was the case with David, she had the option to play a lighter instrument. She described:

To manage the pain sometimes instead of playing flute, I switch to piccolo... it's nowhere near as heavy, and because it's much closer to my mouth, I don't have to play with my arms out here (demonstrates). I can bunch it and it can help manage it (the pain). I know a lot of musical conductors wouldn't allow me to do that... I'm quite fortunate that my conductor

trusts me to make that call and it's an artistic call.... But yeah, I can sort of switch and play piccolo if it's bad (the pain), which I appreciate, but I try not to, especially if I'm playing something I think should be a flute piece. (Amelia, Flutist, CPGQ Grade Two)

As can be seen, and as was the case with David, Amelia noted having the accommodation to change instruments to prevent pain flare ups. However, this was not always as fulfilling musically since the lighter instrument may not fit stylistically. Importantly, however, Amelia has indicated that she could make this choice if she needed to, and this was due to the support of her conductor, highlighting the importance of positive relationships within music groups.

For other participants, the importance of balance was demonstrated in their need for rest and recovery following music group participation. Mel, a lead cabaret performer, outlined that although her happiness comes from performing, if she does not rest after performing periods, it can become detrimental to her wellbeing. She explained:

I'm happiest when I'm performing. Yeah, that's when I'm at my best. But that comes with (pause) a need to find rest, and I'm not good at that. So I need to be better at that because I will crash and burn. I did twenty-three shows at a festival this year and I got a chest infection slash pneumonia before the festival started. And then I got COVID, and I didn't rest. I just kept going and going and then I ended up in home in bed for four or five weeks straight, so I need to be better. Wellbeing is being on stage and loving life, and then finding recovery. (Mel, Lead Cabaret Performer, CPGQ Grade Three)

In Mel's account she describes the contrast of being happiest whilst performing but then becoming unwell when pushing through shows. Participants also outlined that because persistent pain leads to fatigue, logistical parts of performing, such as setting up, require more time and energy. For example, Danny stated that he overcomes the potential pain complications of setting up by giving himself more time, as sudden movements can also create pain. He described:

If I'm getting ready for a gig, I just move a bit and "ohh" (points to neck) and I just feel the shooting pain (in my neck) "my ohh no no". So it's just about managing my movement

better.... It all comes down to me planning very carefully (Danny, Drummer, CPGQ Grade Four)

Danny describes planning as a strategy to prevent pain. The extract above also highlights his increased bodily awareness when he describes his need to manage “movement better”. Overall, through participants accounts of pain after musical activities, it was evident that not only was balance necessary to maintain physical and psychological wellbeing, but also to allow participants to perform at a level which was satisfying for them. Further, support from other individuals was important to attain balance between playing and recovery, as seen further in the following theme.

Finding Social Support Through Music Group Experiences

Another key theme in participants’ accounts was finding social support through their music group experiences. Often, the social support they received through engaging with music acted as a protective factor to the pain challenges participants described. David outlined that whilst pain does not interfere with his daily activities, it does interfere with his state of mind. He said: “I’m doing social things, but I usually can’t be bothered with social stuff. It’s usually because I don’t have the energy or the desire as I’m constantly exhausted. So pain doesn’t change my ability, it changes my desire.” As can be seen, David outlines how socialising is often a burden due to his fatigue. Throughout the interview, David noted that his decreased capacity to socialise impacted on his family relationships. Further, he contrasted how being in his music group gives him joint activities to share with his family. He stated:

I’ve noticed that a really positive outcome for me being involved in my band is that my daughter has really taken an interest in it and has been massively supportive and really proud of me... and it’s not only her, but also my wife and my son. (David, Rhythm Guitarist, CPGQ Grade Two)

Noted in David’s extract is his ability to feel close to his family through their support of his band. Like David, Ella noted making connections as a core benefit from participating in her choir.

However, in Ella's case this was from being able to create deeper friendships rather than connect further with family. Ella commented:

Well, I mean, if I look at it very literally, you know, eighty percent of my friendships in this city are from choir. So, that's a direct benefit. There are many benefits that come from that support network... I live by myself, and I work from home to manage my health. If I had a bad day and I walk up to choir, there's a friend to physically give me a hug, or to ask how I'm going. We also eat together, so if I'm not feeling great, there's dinner sorted. So, it's just those extra little things that come with choir. (Ella, Choral Singer, CPGQ Grade Four)

In this extract Ella describes how social support from choir helps when she struggles with her health conditions, particularly through the choir's community building activities (such as helping with meals). Like David, she notes her social isolation (for example, the fact that she lives by herself), but she states that she can find proximity to others (such as receiving a hug) from her choir activities.

Mel also touches on community; however, in her case, it was through creating a connection to her audience. Mel's cabaret show aims to empower individuals who share her diagnosis. Mel described:

We've sold out shows, we've had 100 people in there and it's like, you look around and you go, "that's 100 people that know my condition".... I love my main cabaret show because I'm creating community and I'm educating people and I get a buzz from that as well. Yeah. It feels good to help people... People wanted to feel like they were being heard. That's all they wanted was just to have somebody say I believe you. And that's what I wanted my whole life. (Mel, Cabaret Performer, CPGQ Grade Three)

In the extract above, Mel reflects on how she feels empowered from her cabaret show by validating the experiences of other individuals who live with her condition. Further, Mel also gets a sense of empowerment through educating others, and normalising talking about pain. This was particularly impactful for Mel, who shared her own experiences of feeling isolated from being

medically invalidated prior to being diagnosed. Mel reflected on this time and contrasted to where she is now on her pain journey:

I think I was 21. When a surgeon took my appendix out because I was in pain. And it was a healthy appendix. And I said, "Well, what's wrong with me?" And he said, "Oh, you probably just got your knickers in a twist mate." (Pause) You know I'm proud that I didn't let them (medical professionals) get me down. And I'm proud that I didn't lean into the idea that I was batshit crazy and you know, just a person who couldn't get shit done... that actually I've got a physical disability and several chronic illnesses. (Mel, Lead Cabaret Performer, CPGQ Grade Three)

In the extract above, there is a contrast between the isolation of not being taken seriously by medical professionals, and the sense of accomplishment which Mel felt in persevering in getting her diagnoses. Like Mel, Ella also expressed her feelings of isolation, however, it was due to other people misunderstanding the nature of her disability. This misunderstanding became a burden for Ella, as she felt the need to manage other's expectations of her condition. Ella commented how choir was a safe space for her where the burden of managing expectations was not placed on her. She described:

You know I genuinely enjoy being in this (choir) space and I was like, "Why is it that it keeps coming up in this conversation?". I think it's because it (choir) is inclusive of disability... It's inclusive because it's expectation free. I think that's one of the hardest things of living with invisible disabilities. Specifically, because people don't know you have disabilities...So, I find a lot of my time spent managing other people's expectations around my disability, whereas at that space (choir) there are no expectations. So, it's like I don't have to do that work. And I find people can sometimes be accommodating of disability, but then still want you to educate them about it. So, it's a space where you can have that combination. We don't need

to talk about it again unless you want to, you know. And that's really liberating. (Ella, Choral Singer, CPGQ Grade Four)

Like Mel, Ella expressed how the liberating feeling of overcoming isolation was created by mutual understanding within the choir space. However, in Ella's case it was her choir's no expectations policy. Through Ella and Mel's examples of overcoming isolation, it is evident that mutual understanding was a core component of the social support found in their music group participation. Overall, through participant's recounts, it was evident that their respective music groups gave them the opportunity to connect with others in ways that were conducive to their needs and reduced their feelings of isolation associated to their pain, highlighting the importance of social support.

Discussion

There exists a gap in the literature regarding the psycho-social experiences of music group participation for individuals in the community living with persistent pain. In this study, findings of increased positive affect and pain distraction presented psychological benefits from music group participation, whilst psycho-social benefits were demonstrated in experiences of increased social support for participants. Challenges of music group participation were most notably the potential pain exacerbation associated with music activities. Below key findings considering psycho-social wellbeing and music group participation will be described. The fear avoidance and bio-psycho-social models will be utilised to interpret the findings at a broader level.

Key Findings in Relation to Psycho-Social Wellbeing

Findings of Psycho-Social Pain Challenges

Psycho-social pain challenges found in this study will be noted to contextualise the music group psycho-social findings discussed below. On a psychological level, this study demonstrated fear of pain, decreased motivation and decreased mood as persistent pain factors impacting individuals. Whilst fear of pain was consistent with existing literature (Burke et al., 2015; Edwards et al., 2011),

reduced self-efficacy as a result of pain was not found in this study, contrasting existing literature (Burke et al., 2015; Jackson et al., 2014). A potential explanation for this is that individuals in this study were able to prioritise valued musical goals. In the context of the fear avoidance model of pain (Vlaeyen et al., 2016), outlined in Figure 1, the capacity to prioritise goals is associated with low threat appraisals to pain and recovery. Findings of this study also demonstrated isolation associated with pain, including a reduced capacity to socialise, and misunderstanding from peers and medical professionals. Such findings are consistent with literature noting experiences of isolation for individuals with persistent pain (Bannon et al., 2021; Karayannis et al., 2019).

Psycho-Social Benefits of Music Group Participation

A key psycho-social benefit found in this study was that music group participation facilitated a redirection of attention towards positive experiences. Positive experiences were demonstrated by positive affect, including an increased sense of calm and happiness. These findings are similar to existing quantitative literature, which have found decreased effect sizes for depression (Garza-Villarreal et al., 2017) and increased distraction and relaxation (Mitchell et al., 2007) with the use of musical interventions. Findings of positive affect also reflect qualitative literature of singing interventions for pain, which demonstrate increased positive feelings and enjoyment (Hopper et al., 2016; Irons et al., 2020). In the context of the fear avoidance model, feelings of calmness and happiness are conducive to low threat pain appraisals (Vlaeyen et al., 2016), and thus enable individuals to act in accordance with their goals. This was the case within this study, where individuals were able to get out of the house, find structure from musical activity and socialise with others (thus gaining social support) as a result of their music group participation.

Further, this study found strong feelings of distraction from pain, including feeling disconnected from one's body and being in a meditative state. Existing music listening studies attribute this distraction to an automated attention, where individuals are cognitively occupied by music and henceforth have less capacity to focus on pain (Hauck et al., 2013; Howlin & Rooney, 2020). Such explanations are plausible for the distraction which participants reported within this

study. Further, the active nature of music playing requiring bodily awareness and cues from other players may contribute to the reduced capacity from participants to focus on pain. Another explanation for distraction reported in this study is that all participants in the sample had strong connections to music playing and their respective groups. Howlin and Rooney's (2020) review of music listening interventions found that when individuals ascribe meaning to their music listening experience, positive affect and subsequent analgesic effects tend to be greater. Whilst the benefits of positive affect and distraction may not be unique to community music groups (Lonsdale & Day, 2021), through the lens of the fear avoidance model, it is important to have activities where individuals find value and meaning in, in order to facilitate goal driven behaviour (Claes et al., 2015).

Another key finding within this study were decreased feelings of isolation developed through ongoing music group participation. From a bio-psycho-social perspective (Engel, 1977), individuals reduced isolation by using their respective community music groups as avenues to meet their social needs. For example, to reconnect to their family (in cases where pain challenges strained family relationships) and find individuals who made them feel understood (in cases where individuals did not feel validated in their pain experiences). Whilst qualitative studies on singing interventions for pain have also found decreased social isolation (Bradt et al., 2016; Irons et al., 2020; Low et al., 2020), the decrease has been attributed to the support individuals received from others who share their pain diagnosis, rather than the music group participation itself (Hopper et al., 2016). However, in this study, persistent pain was not a commonality in individual's community music groups. Thus from a bio-psycho-social perspective, the community environment may have encouraged individuals not to engage with a 'sick role' (Bever et al., 2016), facilitating individual agency and further distraction from pain.

Another psycho-social benefit from music group involvement included the additional support from community activities. For example, meals provided during music group activities reduced burden when returning home and forming relationships with members allowed individuals

to ask for social support outside music group contexts. In their book regarding research in the development of community music in non-traditional spaces, Higgins (2012) explains that non-musical acts of hospitality and an open approach are a defining characteristics of community music groups, which allow for the empowerment of individuals. From a bio-psycho-social perspective (Engel, 1977), the acts of hospitality in the study's findings facilitated participants needs to be met physically by increasing access to help from others in the community.

Psycho-Social Challenges of Music Group Participation

Psycho-social challenges from music group participation in this study centered on pain exacerbation. Pain exacerbation was present in individuals living with a range of CPGQ grades. However, individuals who performed in high energy groups, such as rock bands and cabaret, reflected on pain exacerbation in contrast to individuals playing in more stationary, low impact roles such as choral singing and piano. As noted in the introduction, pacing enables individuals to break down large activities into smaller increments, as well as seeking accommodations to reduce injury (Birkholtz et al., 2004; Torrance et al., 2011). In this study, principles of pacing were applied by participants in ways such as changing to more ergonomic instruments, using stretching techniques to reduce muscle stiffness, and taking longer time periods to set up musical equipment. Further, individuals who reported using pacing principles also described a smoother recovery from pain and less time spent in over-activity underactivity cycling. In relation to the fear avoidance model (Vlaeyen et al., 2016), pacing principles enable individuals to act in accordance to their goal directed behaviour, which in the case of this study was music group participation. The application of pacing principles and accommodations to ensure music group participation does not cause further disability is a potential direction for future research.

Implications and Future Research

There are various practical implications from this study. Firstly, the similar benefits between community music group participation on psycho-social wellbeing and group singing interventions

suggest that community music groups may also be an avenue to managing the psycho-social factors presented by individuals with persistent pain. Another implication is that in comparison to existing literature, where group singing interventions are based in clinical settings (Bradt et al., 2016; Irons et al., 2020; Low et al., 2020), community settings are more accessible as they naturally occur in the community and have lower associated cost (Sihvonen et al., 2022). There may also be more variety in choosing a community music group which aligns with an individual's values and preferences, which is an important factor in the experience of increased psycho-social benefits (Howlin & Rooney, 2020) .

The potential for pain exacerbation may explain the scarcity of literature on instrumental music playing modalities for individuals living with persistent pain (Gasenzer et al., 2017; Stanhope & Weinstein, 2021). However, by solely focusing on singing modalities for musical persistent pain intervention, potential avenues to increase social engagement and decrease psycho-affective challenges associated with persistent pain are left unconsidered. Not all individuals may be able to enjoy singing due to fear of embarrassment and having an affinity to other instruments (Abril, 2007). And as previously discussed, the importance of meaning and enjoyment and subsequent analgesic effects have been documented in the literature (Howlin & Rooney, 2020).

Given the exploratory nature of this study, there exist multiple avenues for future research. Firstly, given the range of pain presentations in this study, future research could explore the suitability of different community music group roles and instruments on individuals of different pain categorisations. Future research could also explore how to make music groups more accessible for individuals with persistent pain, for example, investigating the use of technology for participatory musical activities. As noted above, all individuals in this study had strong connections to music playing and their music groups, which may have mediated their reported psycho-social benefits. Thus, future research could investigate whether individuals with limited music playing experience report similar psycho-social benefits from music group activities in comparison to activities which

align with their interests. Considering the importance of meaning and enjoyment to attain psycho-social benefits, future research could expand upon accessible community activities which provide psycho-social benefits, as those seen in this study, to individuals living with persistent pain.

Strengths and Limitations

A notable strength of this study is the exploration of a participatory musical pain management avenue, which is not prevalent in the literature. However, a limitation of the exploratory nature of the study is its broad sample characteristics, both in relation to pain conditions and music group inclusion. The participants in this study had differing pain conditions and presentations, as well as CPGQ categorisation, making it difficult to provide specific pain related implications of this study. Further, half of the sample's pain originated from one or numerous diagnoses, whereas the rest of the sample's pain originated from injury. Pain is often researched from a bio-medical perspective (Steingrimsdóttir et al., 2017) where literature tends to focus individuals living with a specific diagnosis (Edwards et al., 2011; Torres et al., 2018; Usui et al., 2020) or pain in a given localisation (Åslund et al., 2010; Eshuis et al., 2021; Harding et al., 2023). As this study included individuals with diagnostic and injury-based pain origins, it makes it difficult to situate within the existing pain literature.

While it was a strength to include perspectives from a broad range of music groups, the small sample size of the study made it difficult to discuss whether stylistic differences, or specific instruments, are also influential in perceived wellbeing experiences. As acknowledged above, the small sample of this study included individuals who all had strong connections to music playing and their respective groups. This acted as a strength and limitation, as the connection individuals have to music may also play a role in the experience of psycho-social benefits (Howlin & Rooney, 2020). Further, this limitation arose from the nature of sampling utilised for this study, primarily through music-oriented Facebook groups and snowball sampling. Whilst these sampling methods allowed to

find individuals from the specific population of interest, it also risked sampling bias (Naderifar et al., 2017).

By chance, the sample predominantly consisted of women, identifying as cis gendered and Anglo Australian. A more culturally diverse sample would allow for investigation as to whether community music therapy benefits are influenced by culture. Particularly considering it is unclear whether psycho-social musical benefits are generalisable in diverse cultural contexts (Donley, 2017). Within qualitative literature, credibility is developed utilising triangulation, whereby different stakeholders in a subject area are included as participants (Tracy, 2010). Such was not the case in this study, and another limitation, as healthcare professionals and music therapists could also be included to further understand community music group experiences for individuals living with persistent pain. Nevertheless, as noted in avenues for future research, this study provides various directions for future studies to investigate the implications of community music group participation for individuals living with persistent pain.

Conclusion

Overall, this study provides support for the use of community music groups as modalities in the management of persistent pain. Whilst further research is needed, results from this study suggest community music groups are particularly suitable for individuals experiencing psycho-social challenges from living with persistent pain, and who also have a connection to music playing. Psychological benefits from music group participation included a redirection of attention away from pain, enabling individuals to act in accordance with their values. Socially, community music groups were found to aid in the feelings of isolation created by participant's persistent pain experiences. Challenges to continued music group participation centered on pain exacerbation. However, as seen in other literature, accommodations and pacing aided to resolve such barriers. Whilst further research is required to assess the suitability of community music groups to individuals living with

different pain characterisations, this study supports future avenues for accessible and diverse musical management modalities for those living with persistent pain.

References

- Abril, C. R. (2007). I have a voice but I just can't sing: a narrative investigation of singing and social anxiety. *Music Education Research, 9*(1), 1-15.
- Ansdell, G., & DeNora, T. (2016). *Musical pathways in recovery: Community music therapy and mental wellbeing*. Routledge.
- Åslund, C., Starrin, B., & Nilsson, K. W. (2010). Social capital in relation to depression, musculoskeletal pain, and psychosomatic symptoms: a cross-sectional study of a large population-based cohort of Swedish adolescents. *BMC public health, 10*(1), 1-10.
- Australian Music Therapy Association. (2023). *What is music therapy?*. AMTA.
<https://www.austmta.org.au/about-us/what-is-mt/#:~:text=Music%20therapy%20is%20a%20research,enhance%20their%20quality%20of%20life>
- Australian Government Department of Health. (2019). *National strategic action plan for pain management*.
- Bannon, S., Greenberg, J., Mace, R. A., Locascio, J. J., & Vranceanu, A. M. (2021). The role of social isolation in physical and emotional outcomes among patients with chronic pain. *General hospital psychiatry, 69*, 50-54.
- Beehler, G. P., Murphy, J. L., King, P. R., Dollar, K. M., Kearney, L. K., Haslam, A., Wade, M., & Goldstein, W. R. (2019). Brief cognitive behavioral therapy for chronic pain. *The Clinical Journal of Pain, 35*(10), 809-817.
- Bervers, K., Watts, L., Kishino, N. D., & Gatchel, R. J. (2016). The biopsychosocial model of the assessment, prevention, and treatment of chronic pain. *US Neurol, 12*(2), 98-104.
- Birkholtz, M., Aylwin, L., & Harman, R. M. (2004). Activity pacing in chronic pain management: one aim, but which method? Part one: introduction and literature review. *British Journal of Occupational Therapy, 67*(10), 447-452.
- Blyth, F. M., March, L. M., Brnabic, A. J., Jorm, L. R., Williamson, M., & Cousins, M. J. (2001). Chronic

- pain in Australia: a prevalence study. *Pain*, 89(2-3), 127-134.
- Bolger, L. (2015). Being a player: Understanding collaboration in participatory music projects with communities supporting marginalised young people. *Qualitative inquiries in music therapy*, 10, 77-126.
- Boyd, M., Von Ranson, K. M., Whidden, C., & Frampton, N. (2020). Short-term effects of group singing versus listening on mood and state self-esteem. *Psychomusicology: Music, Mind, and Brain*, 30(4), 178.
- Bradt, J., Norris, M., Shim, M., Gracely, E. J., & Gerrity, P. (2016). Vocal music therapy for chronic pain management in inner-city African Americans: a mixed methods feasibility study. *Journal of Music Therapy*, 53(2), 178-206.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Braun, V., & Clarke, V. (2021a). *Thematic analysis: a practical guide*. Sage Publications.
- Braun, V., & Clarke, V. (2021b). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative research in sport, exercise and health*, 13(2), 201-216.
- Brown, C. A. (2002). Occupational therapists' beliefs regarding treatment options for people with chronic pain. *British Journal of Occupational Therapy*, 65(9), 398-404.
- Burke, A. L., Mathias, J. L., & Denson, L. A. (2015). Psychological functioning of people living with chronic pain: a meta-analytic review. *British Journal of Clinical Psychology*, 54(3), 345-360.
- Cain, M., Istvandy, L., & Lakhani, A. (2020). Participatory music-making and well-being within immigrant cultural practice: exploratory case studies in South East Queensland, Australia. *Leisure Studies*, 39(1), 68-82.
- Carroll, A. (2020). *CREATEing Resilience: A Guide to Utilizing Community Music Therapy to Serve Military Families* (Doctoral dissertation).
- Claes, N., Crombez, G., & Vlaeyen, J. W. (2015). Pain-avoidance versus reward-seeking: an

experimental investigation. *Pain*, 156(8), 1449-1457.

Clements-Cortes, A., Ahonen, H., Freedman, M., & Bartel, L. (2017). The potential of rhythmic sensory stimulation treatments for persons with Alzheimer's disease. *Music and Medicine*, 9(3), 167-173.

Cohen, M., Quintner, J., Buchanan, D., Nielsen, M., & Guy, L. (2011). Stigmatization of patients with chronic pain: the extinction of empathy. *Pain Medicine*, 12(11), 1637-1643.

Corvo, E., Skingley, A., & Clift, S. (2020). Community singing, wellbeing and older people: implementing and evaluating an English singing for health intervention in Rome. *Perspectives in Public Health*, 140(5), 263-269.

Crombez, G., Eccleston, C., Van Damme, S., Vlaeyen, J. W., & Karoly, P. (2012). Fear-avoidance model of chronic pain: the next generation. *The Clinical Journal of Pain*, 28(6), 475-483.

Daykin, N., Mansfield, L., Meads, C., Julier, G., Tomlinson, A., Payne, A., Grigsby Duffy, L., Lane, J., D'Innocenzo, G., Burnett, A., Kay, T., Dolan, P., Testoni, S., & Victor, C. (2018). What works for wellbeing? A systematic review of wellbeing outcomes for music and singing in adults. *Perspectives in Public Health*, 138(1), 39-46.

Deloitte Access Economics. (2019). *The cost of pain in Australia*.

<https://www.deloitte.com/au/en/services/economics/analysis/cost-pain-australia.html>

Dingle, G. A., Sharman, L. S., Bauer, Z., Beckman, E., Broughton, M., Bunzli, E., Davidson, R., Draper, G., Fairley, S., Farrell, C., Flynn, L. M., Gomersall, S., Hong, M., Larwood, J., Lee, C., Lee, J., Nitschinsk, L., Peluso, N., Reedman, S. E., . . . & Wright, O. R. L. (2021). How do music activities affect health and well-being? A scoping review of studies examining psychosocial mechanisms. *Frontiers in Psychology*, 12, 713818.

Donley, J. M. (2017). *Understanding how Western-trained music therapists incorporate Chinese culture in their practice in China: an ethnographic study* (Doctoral dissertation, Appalachian State University).

Douglas, W., Graham, C., Anderson, D., & Rogerson, K. (2004). Managing chronic pain through

- cognitive change and multidisciplinary treatment program. *Australian Psychologist*, *39*(3), 201-207.
- Edwards, R. R., Cahalan, C., Mensing, G., Smith, M., & Haythornthwaite, J. A. (2011). Pain, catastrophizing, and depression in the rheumatic diseases. *Nature Reviews Rheumatology*, *7*(4), 216-224.
- Edwards, R. R., Dworkin, R. H., Sullivan, M. D., Turk, D. C., & Wasan, A. D. (2016). The role of psychosocial processes in the development and maintenance of chronic pain. *The Journal of Pain*, *17*(9), T70-T92.
- Ehde, D. M., Dillworth, T. M., & Turner, J. A. (2014). Cognitive-behavioral therapy for individuals with chronic pain: efficacy, innovations, and directions for research. *American Psychologist*, *69*(2), 153.
- Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science*, *196*(4286), 129-136.
- Eshuis, T. A. H., Stuijt, P. J. C., Timmerman, H., Nielsen, P. M. L., Wolff, A. P., & Soer, R. (2021). Music and low-frequency vibrations for the treatment of chronic musculoskeletal pain in elderly: A pilot study. *PLoS One*, *16*(11), e0259394.
- Evers, A. W., Kraaimaat, F. W., Geenen, R., Jacobs, J. W., & Bijlsma, J. W. (2003). Pain coping and social support as predictors of long-term functional disability and pain in early rheumatoid arthritis. *Behaviour research and therapy*, *41*(11), 1295-1310.
- Ferreira-Valente, M. A., Pais-Ribeiro, J. L., & Jensen, M. P. (2014). Associations between psychosocial factors and pain intensity, physical functioning, and psychological functioning in patients with chronic pain: a cross-cultural comparison. *The Clinical Journal of Pain*, *30*(8), 713-723.
- Garza-Villarreal, E. A., Pando, V., Vuust, P., & Parsons, C. (2017). Music-induced analgesia in chronic pain conditions: a systematic review and meta-analysis. *BioRxiv*, 105148.
- Gasenzer, E. R., Klumpp, M.-J., Pieper, D., & Neugebauer, E. A. (2017). The prevalence of chronic pain in orchestra musicians. *GMS German Medical Science*, *15*.

- Gatchel, R. J., Peng, Y. B., Peters, M. L., Fuchs, P. N., & Turk, D. C. (2007). The biopsychosocial approach to chronic pain: scientific advances and future directions. *Psychological bulletin*, *133*(4), 581.
- Gill, J. R., & Brown, C. A. (2009). A structured review of the evidence for pacing as a chronic pain intervention. *European Journal of Pain*, *13*(2), 214-216.
- Glomb, S., Böckelmann, I., Frommer, J., & Metzner, S. (2022). The impact of music-imaginative pain treatment (MIPT) on psychophysical affect regulation a single case study. *Frontiers Pain Research*, *3*, 943890.
- Gold, A., & Clare, A. (2013). An exploration of music listening in chronic pain. *Psychology of Music*, *41*(5), 545-564.
- Goubert, L., Crombez, G., & Van Damme, S. (2004). The role of neuroticism, pain catastrophizing and pain-related fear in vigilance to pain: a structural equations approach. *Pain*, *107*(3), 234-241.
- Guillemin, M., & Barnard, E. (2015). George Libman Engel: the biopsychosocial model and the construction of medical practice. In *The Palgrave handbook of social theory in health, illness and medicine* (pp. 236-250). Springer.
- Hanssen, M. M., Peters, M. L., Vlaeyen, J. W., Meevissen, Y. M., & Vancleef, L. M. (2013). Optimism lowers pain: evidence of the causal status and underlying mechanisms. *Pain*, *154*(1), 53-58.
- Harding, E. E., van der Wal-Huisman, H., & van Leeuwen, B. L. (2023). Live and recorded music interventions to reduce postoperative pain: protocol for a nonrandomized controlled trial. *JMIR Research Protocols*, *12*(1), e40034.
- Harney, C., Johnson, J., Bailes, F., & Havelka, J. (2023). Is music listening an effective intervention for reducing anxiety? A systematic review and meta-analysis of controlled studies. *Musicae Scientiae*, *27*(2), 278-298.
- Hauck, M., Metzner, S., Rohlfes, F., Lorenz, J., & Engel, A. K. (2013). The influence of music and music therapy on pain-induced neuronal oscillations measured by magnetencephalography. *Pain*, *154*(4), 539-547.

- Higgins, L. (2012). *Community music: In theory and in practice*. Oxford University Press.
- Hohneck, A., Meissner, R., Reyser, C., Heinemann, L., Christians, K., Merx, K., Weingartner, S., Mavratzas, A., Schulte, N., Burkholder, I., Hofmann, W. K., & Hofheinz, R. D. (2023). Effects of a sound intervention on physical and emotional well-being in patients with cancer: a prospective randomized trial. *Oncology Research and Treatment*, *46*(1-2), 1-10.
- Hopper, M. J., Curtis, S., Hodge, S., & Simm, R. (2016). A qualitative study exploring the effects of attending a community pain service choir on wellbeing in people who experience chronic pain. *British Journal of Pain*, *10*(3), 124-134.
- Howlin, C., & Rooney, B. (2020). The cognitive mechanisms in music listening interventions for pain: a scoping review. *Journal of Music Therapy*, *57*(2), 127-167.
- Huijnen, I. P., Verbunt, J. A., Roelofs, J., Goossens, M., & Peters, M. (2009). The disabling role of fluctuations in physical activity in patients with chronic low back pain. *European Journal of Pain*, *13*(10), 1076-1079.
- IASP. (1994). *Task force on taxonomy. Classification of chronic pain. Descriptions of chronic pain syndromes and definitions of pain terms*. IASP Press.
- Interagency Network for Education in Emergencies. (2017). *INEE thematic issue brief: psychosocial well-being*. <http://www.humanitarianinfo.org/iasc/content/products>
- Irons, J. Y., Kuipers, P., Wan, A., & Stewart, D. E. (2020). Group singing has multiple benefits in the context of chronic pain: an exploratory pilot study. *Pain Management Nursing*, *21*(3), 259-264.
- Jackson, T., Wang, Y., Wang, Y., & Fan, H. (2014). Self-efficacy and chronic pain outcomes: a meta-analytic review. *Journal of Pain*, *15*(8), 800-814.
- Jones, M. (2020). Nursing 2020 survey report: Empowering language in healthcare. *Nursing2023*, *50*(12), 47-49.
- Kaiser, K. (2009). Protecting respondent confidentiality in qualitative research. *Qualitative Health Research*, *19*(11), 1632-1641.

- Karayannis, N. V., Baumann, I., Sturgeon, J. A., Melloh, M., & Mackey, S. C. (2019). The impact of social isolation on pain interference: a longitudinal study. *Annals of Behavioral Medicine, 53*(1), 65-74.
- Lonsdale, A. J., & Day, E. R. (2021). Are the psychological benefits of choral singing unique to choirs? A comparison of six activity groups. *Psychology of Music, 49*(5), 1179-1198.
- Low, M. Y., Lacson, C., Zhang, F., Kesslick, A., & Bradt, J. (2020). Vocal music therapy for chronic pain: a mixed methods feasibility study. *The Journal of Alternative and Complementary Medicine, 26*(2), 113-122.
- Melloh, M., Elfering, A., Käser, A., Salathé, C. R., Barz, T., Aghayev, E., Röder, C., & Theis, J. C. (2013). Depression impacts the course of recovery in patients with acute low-back pain. *Behavioral Medicine, 39*(3), 80-89.
- Mitchell, L. A., MacDonald, R. A., Knussen, C., & Serpell, M. G. (2007). A survey investigation of the effects of music listening on chronic pain. *Psychology of Music, 35*(1), 37-57.
- Naderifar, M., Goli, H., & Ghaljaie, F. (2017). Snowball sampling: A purposeful method of sampling in qualitative research. *Strides in development of medical education, 14*(3).
- Nicholas, M., Molloy, A., Tonkin, L., & Beeston, L. (2011). *Manage your pain*. ABC Books.
- Nielson, W. R., Jensen, M. P., Karsdorp, P. A., & Vlaeyen, J. W. (2013). Activity pacing in chronic pain: concepts, evidence, and future directions. *The Clinical Journal of Pain, 29*(5), 461-468.
- Nielson, W. R., Jensen, M. P., Karsdorp, P. A., & Vlaeyen, J. W. (2014). A content analysis of activity pacing in chronic pain: what are we measuring and why? *The Clinical Journal of Pain, 30*(7), 639-645.
- Osborn, M., & Rodham, K. (2010). Insights into pain: a review of qualitative research. *Reviews in Pain, 4*(1), 2-7.
- Philips, H. (1988). Changing chronic pain experience. *Pain, 32*(2), 165-172.
- Raffaelli, W., Tenti, M., Corrado, A., Malafoglia, V., Ilari, S., Balzani, E., & Bonci, A. (2021). Chronic pain: what does it mean? A review on the use of the term chronic pain in clinical practice.

Journal of Pain Research, 14, 827-835.

Schofield, D. J., Shrestha, R. N., Cunich, M., Tanton, R., Kelly, S., Passey, M. E., & Veerman, L. J.

(2015). Lost productive life years caused by chronic conditions in Australians aged 45–64 years, 2010–2030. *Medical Journal of Australia, 203*(6), 260-260.

Siddall, P. J., & Cousins, M. J. (2004). Persistent pain as a disease entity: implications for clinical management. *Anesthesia & Analgesia, 99*(2), 510-520.

Sihvonen, A. J., Pitkaniemi, A., Sarkamo, T., & Soinila, S. (2022). Isn't there room for music in chronic pain management? *The Journal of Pain*, No Pagination Specified.

Stanhope, J., & Weinstein, P. (2021). Should musicians play in pain? *British Journal of Pain, 15*(1), 82-90.

Steele, M. E. (2016). How can music build community? Insight from theories and practice of community music therapy. *Voices: A World Forum for Music Therapy*,

Steingrimsdóttir, Ó. A., Landmark, T., Macfarlane, G. J., & Nielsen, C. S. (2017). Defining chronic pain in epidemiological studies: a systematic review and meta-analysis. *Pain, 158*(11), 2092-2107.

Suda, M., Morimoto, K., Obata, A., Koizumi, H., & Maki, A. (2008). Emotional responses to music: Towards scientific perspectives on music therapy [Article]. *NeuroReport, 19*(1), 75-78.

Tardif, H., Blanchard, M. B., Quinsey, K., Bryce, M. P., White, J. M., Blacklock, J. A., & Eagar, K. (2019). *Electronic persistent pain outcomes collaboration annual data report 2018.*

<https://ro.uow.edu.au/cgi/viewcontent.cgi?article=2073&context=ahsri>

Tebes, J. K. (2005). Community science, philosophy of science, and the practice of research.

American Journal of Community Psychology, 35(3-4), 213-230.

Torrance, N., Smith, B. H., Elliott, A. M., Campbell, S. E., Chambers, W. A., Hannaford, P. C., &

Johnston, M. (2011). Potential pain management programmes in primary care. A UK-wide questionnaire and Delphi survey of experts. *Family Practice, 28*(1), 41-48.

Torres, E., Pedersen, I. N., & Perez-Fernandez, J. I. (2018). Randomized trial of a group music and imagery method (GrpMI) for women with fibromyalgia. *Journal of Music Therapy, 55*(2), 186-

220.

Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative research.

Qualitative inquiry, 16(10), 837-851.

Turk, D. C., & Monarch, E. S. (1996). Biopsychosocial perspective on chronic pain. *Psychological approaches to pain management: A practitioner’s handbook, 2*. The Guilford Press.

Usui, C., Kirino, E., Tanaka, S., Inami, R., Nishioka, K., Hatta, K., Nakajima, T., Nishioka, K., & Inoue, R.

(2020). Music intervention reduces persistent fibromyalgia pain and alters functional connectivity between the insula and default mode network. *Pain Medicine, 21*(8), 1546-1552.

Van Leeuwen, M. T., Blyth, F. M., March, L. M., Nicholas, M. K., & Cousins, M. J. (2006). Chronic pain and reduced work effectiveness: the hidden cost to Australian employers. *European Journal of Pain, 10*(2), 161-166.

Vlaeyen, J. W., Crombez, G., & Linton, S. J. (2016). The fear-avoidance model of pain. *Pain, 157*(8), 1588-1589.

Vlaeyen, J. W., & Linton, S. J. (2000). Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. *Pain, 85*(3), 317-332.

Von Korff, M., Ormel, J., Keefe, F., & Dworkin, S. (1992). Grading the severity of chronic pain. *Pain, 50*, 133-149.

Vougioukalou, S., Dow, R., Bradshaw, L., & Pallant, T. (2019). Wellbeing and integration through community music: the role of improvisation in a music group of refugees, asylum seekers and local community members. *Contemporary Music Review, 38*(5), 533-548.

Zale, E. L., & Ditre, J. W. (2015). Pain-related fear, disability, and the fear-avoidance model of chronic pain. *Current opinion in psychology, 5*, 24-30.

Appendix 1: Research Flyer and Participant Information Sheets

DO YOU PLAY IN A MUSIC GROUP?

Our study named:

Playing with pain. Music group membership and wellbeing experiences for adults living with persistent pain.

Approval Number: 23/56

Is seeking volunteers to interview for up to one hour about their experiences of playing in a music group.

If you are 18+, play in a music group (like a duo, band, choir or even DJ with others)

AND

Experience persistent pain

We'd like to invite you to join our study.

If you'd like to participate or know more info, scan the QR code below or contact:

student researcher and supervisor contact details

THE UNIVERSITY of ADELAIDE

Participant Information Sheet

PROJECT TITLE: Playing with pain. Music group membership and wellbeing for adults living with persistent pain.

SCHOOL OF PSYCHOLOGY HUMAN RESEARCH ETHICS SUB-COMMITTEE APPROVAL NUMBER: 23/56

PRINCIPAL INVESTIGATOR: [REDACTED]

STUDENT RESEARCHER: [REDACTED]

STUDENT'S DEGREE: Honours in Bachelor of Psychological Science

Dear Participant,
You are invited to participate in the research project described below.

What is the project about?

This project aims to explore the experiences of music group involvement amongst individuals who live with persistent pain, as well as to outline what perceived wellbeing effects such groups may create. We also want to understand more about what attracts people living with persistent pain to join or continue participating in music groups, as well as what barriers and facilitators exist for music group involvement.

Who is undertaking the project?

This project is being conducted by [REDACTED]
[REDACTED]
The research will form the basis for [REDACTED] thesis as part of her Honours study at the University of Adelaide under the supervision of [REDACTED].

Why am I being invited to participate?

You are being invited to participate if you are a member of a music group and experience persistent pain.

- Music groups are regular scheduled musical activities comprising of two or more individuals who play and or perform together. These include but are not limited to community bands, choirs, and DJ duos.
- Persistent pain is regular pain lasting for over three months.

Note you must be over 18 and fluent in English to participate.

Please note that this study will not include individuals experiencing pain from cancer or neurological conditions, or individuals experiencing high levels of pain requiring daily assistance.

What am I being invited to do?

You are being invited to participate in an interview of up to 1 hour, at a time and place (teleconference, phone or in person) that suits you. The interview will ask you about your experiences of being in a music group, your wellbeing and whether you think that being in a music group has impacted your wellbeing.

The interview will be recorded and then transcribed (typed-up). We will send this transcription to you and you will have one month to make any changes you wish to make.

How much time will my involvement in the project take?

Involvement for this project will take up to 60 minutes for the interview plus any edits that you wish to make to your interview answers once transcribed.

Are there any risks associated with participating in this project?

We understand that the interview can be difficult to accommodate time for this interview amongst a busy schedule. This is why we have provided the option for phone or zoom interviews. We also understand some questions asked may lead to uncomfortable emotions. If you experience discomfort you can contact Lifeline on 13 11 14, Beyond Blue on 1300 224 636 or mental health triage on 13 14 65.

If you feel distressed during an interview, we can pause the recording. You can also choose not to answer questions and to end the interview at any time.

After the interview, the researchers will follow up with you to check you are alright and direct you to appropriate services if needed.

What are the potential benefits of the research project?

We don't know much about how music might affect wellbeing for people living with persistent pain. By participating and sharing your experiences, we will learn more about this. We also hope to learn more about how existing music group activities can be adapted to benefit and be more inclusive to individuals experiencing persistent pain.

While these are potential benefits from the project, you may not personally receive any benefit from participation.

Can I withdraw from the project?

Participation in this project is completely voluntary. If you agree to participate, and then change your mind, you can withdraw your interview data up to one month after receiving your transcript (typed-up) interview.

What will happen to my information?

Your interview responses are confidential and will be de-identified. Pseudonyms will also be used and you can choose one for yourself. All efforts will be made to remove any information to identify you, however, because the sample size is small, complete anonymity cannot be guaranteed. Your interview data will be stored securely at the University of Adelaide for five years. Only the researchers listed here will have access to your data.

Results including your de-identified data will be used in [REDACTED] thesis and may also be used in journal articles or presentations.

You will not be identifiable in any of these publications. Only the researchers will have access to your interview data, and data will be stored for 7 years on a secure University drive (storage system).

Who do I contact if I have questions about the project?

If you have any questions about the project you can contact [REDACTED]

What if I have a complaint or any concerns?

The study has been approved by the Human Research Ethics School of Psychology Sub-Committee at the University of Adelaide (approval number 23/56). This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). If you have questions or problems associated with the practical aspects of your participation

in the project, or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. You can also contact Professor [REDACTED] ([REDACTED]@adelaide.edu.au) from the School of Psychology's Human Research Ethics Sub-Committee if you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant.

If I want to participate, what do I do?

If you wish to participate, please email [REDACTED]
[REDACTED]

Yours sincerely,

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Appendix 2: Semi-Structured Interview Questions

Reminder about breaks and voluntary participation

[Demographics] Can you tell me a bit about yourself?

- Name
- Pronouns
- Work
- Age
- Born in Australia

1. Can you tell me how you got involved in music?

- What instruments do you play?
- How long have you played them for?

2. Can you tell me about the MG you're a part of?

- Is it one or multiple?
- How long have you been part of it?
- genre
- # of members
- Do members come and go?
- How long have members been part of the group?
- Would you describe it as professional/ serious or social?
- Cost involved?

3. What does your MG do? [State separately if more than 1 MG]

- How often do you practice?
- What does a typical practice look like?
- What goals do you work towards: performances, having fun/ building community/ etc.

4. Do you ever meet or see your MG members outside of scheduled practices?

5. What motivated you to join or be part of your MG? [State separately if more than 1 MG]

- Social?
- Musical development?

6. What does wellbeing mean to you?

- Physical
- Mental
- Social

7. If you feel comfortable, can you describe what a good wellbeing day or a time where you felt high on your wellbeing looks like?

8. If you feel comfortable, can you tell me a bit about the persistent pain you experience?

9. Did this pain start before or after you joined your MG?

10. Does being in a MG impact your pain in any way?

- Positive
- Negative

[Screen for Chronic Pain Grade Scale Here] & check in and offer a break.

11. What are your favourite things about being part of your MG? Why?

- Social benefits
- Improving at music
- Feeling distracted

12. What do you least like about being in your MG?

- Location?
- Expectations?
- Tension between members?
- Pain exacerbation?
- Accessibility?

13. What benefits do you experience from being in your MG? pause.... Do any of these influence your pain?

- Physical
- Social
- Mental

14. What challenges do you experience from being in your MG Pause... Do any of these influence your pain?

- Physical
- Social
- Mental

15. If you could make any changes to your music group [to be more accommodating of your pain] what would you suggest?

- Breaks?
- More warm ups?
- Standing/ Seating options?
- Accessible spaces?
- Modifications to the technology or instruments used?

16. While being in your MG have you noticed changes in other areas of your life [that could be influenced by being part of your MG]?

- Positive
- Negative
- Neutral

17. [If yes] What parts of your MG do you think have influenced these changes?

- Social/ community
- Confidence (Self-efficacy)
- Routine
- Physical sensations/ feelings

18. If you want to comment- is there anything relevant to your wellbeing or pain experiences that you'd like to talk about?

19. What's your proudest moment or achievement from being in your MG?

(Thank participant for their time & outline next steps)