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Understanding music therapy better

Imogen N. Clark

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Welcome to AJMT Volume 29, 2018. While there was no theme set for this year, it seems that our authors and researchers are interested in gaining a better understanding of music therapy through evaluations with participants, consumers, other disciplines, and registered music therapists. We are excited to bring you 5 excellent articles authored by experienced and emerging researchers.

The mechanisms of referral to music therapy has a large impact on the success of our practices. Cherry Hense surveys clinicians working in youth mental health to explore how their perceptions of music therapy influence referral decisions. She explains the gatekeeper role of other clinicians and suggests strategies including promotion of strength-based approaches to music therapy in alignment with recovery models, and supporting other clinicians to engage young people in discussions about music. The National Disability Insurance Scheme (NDIS) has also had a significant impact on community-based referrals to music therapy in the disability sector. Juyoung Lee, Kate Teggelove, Jeanette Tamplin,

Grace Thompson, Melissa Murphy and Katrina McFerran examine perceived access to music therapy in interviews with NDIS employees, NDIS consumers, and RMTs. Findings indicate considerable confusion impacting access to music therapy among all interested parties. The authors recommend that RMTs take more responsibility for educating NDIS staff and consumers about music therapy. These articles will be of particular interest to RMTs wishing to gain a better understanding of how our services are perceived by others.

We welcome articles from two recent Masters of Music Therapy graduates, Tom McGrath and Napak Pakdeesatitwara. Tom joins forces with Dr Grace Thompson to report on findings from a survey exploring differences in experiences between Masters of Music Therapy students learning via the on campus and blended learning modes. Results suggest that professional identity formation is comparable across the different student cohorts. These findings are encouraging given the recent growth and interest for blended learning in Australia and internationally. Napak

and Dr Jeanette Tamplin report on results from an international survey examining the scope of music therapy in neurorehabilitation contexts. The survey suggests that many music therapists are informed by Neurologic Music Therapy approaches, and that they draw on these in interdisciplinary therapy for diverse populations. It is interesting to read about preferences for singing-based methods. I am sure you will enjoy reading these contributions to music therapy research.

Finally, Tanya Silveira, Jeanette Tamplin, Simon Dorsch and Anna Barlow describe a retrospective case study with a 74-year old retired pianist who was admitted for rehabilitation following stroke. A collaboration between music therapy and occupational therapy resulted in therapy involving the use of Functional Electrical Stimulation (FES) in combination with an iPad app, *ThumbJam*, to support upper limb rehabilitation. The promising findings from this case study have motivated Tanya to explore *ThumbJam* and FES for upper limb rehabilitation in her PhD studies. We look forward to reading further results from this innovative research.

This year, we introduced “AJMT Advanced Online Articles”, a repository for publishing our very latest articles ahead of full indexing. We hope that readers and authors have enjoyed this new service. My sincere thanks to Dr. Kate Williams (Associate Editor) and Dr. Elizabeth McLean (Copy Editor) for your continued service and support. We are pleased to bring you this bumper AJMT Edition – please enjoy!



Dr. Imogen Clark
Editor, AJMT





Let's Improvise! iPad-based music therapy with functional electrical stimulation for upper limb stroke rehabilitation

Silveira, T.M., Tamplin, J., Dorsch, S., & Barlow, A.

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In plain language:

In the western world, stroke has been identified as the leading cause of disability in adults. Impairment to the arm/hand and depressive symptoms seem to be among the most frequent resultants of stroke. This article describes a collaborative occupational therapy and music therapy intervention for post-stroke arm/hand recovery. The intervention itself combines principles of music therapy with tablet technology and functional electrical stimulation. The implementation of this novel intervention, described in this clinical case report, has implications for benefits to physical and motivational aspects of rehabilitation. Recommendations for further research of this intervention are also discussed.

Clinical case report

Let's Improvise! iPad-based music therapy with functional electrical stimulation for upper limb stroke rehabilitation

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Abstract

This retrospective clinical case report will examine the implementation of a novel intervention combining a Functional Electrical Stimulation (FES) protocol with an iPad application. A 74-year-old female retired pianist and Professor of Music was admitted to a rehabilitation hospital following a left pontine stroke. On assessment, she was unable to use her right upper limb functionally. Conventional occupational therapy commenced soon after admission and consisted of functional retraining, including FES to the wrist and finger extensors. At week 4, the Registered Music Therapist (RMT) and Occupational Therapist (OT) collaborated to commence a trial of forearm FES in combination with an iPad-based music making application; *ThumbJam*. This application was used to encourage the patient to participate in touch sensitive musical improvisation using the affected hand in an attempt to promote engagement in complex motor patterns and non-verbal expression. Within 3 weeks, the patient was able to use *ThumbJam* without the FES, progressed to the keyboard in 4 weeks and has since commenced independent scales on the piano at home (21 weeks), as well as successful use of the upper limb in Activities of Daily Living (ADLs). On follow up (7 months), the patient reflected on the motivating elements of the intervention that helped her to achieve a functional outcome in her upper limb. This retrospective clinical case report will review the evidence with regard to FES and music therapy, outline the treatment protocol used and make recommendations for future research of “FES+*ThumbJam*” in upper limb stroke rehabilitation.

Keywords: music therapy, stroke, upper limb impairment, collaboration, functional electrical stimulation

Literature Review

Background

In the western world, stroke has been

identified as the leading cause of disability in adults (Australian Institute of Health and Welfare, 2016). The number of new and recurrent strokes in Australia was estimated to be more than 56,000 in 2017 alone (Deloitte Access Economics, 2017). Further to this, the estimated total number of people living with

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the effects of stroke in Australia in 2017 was 475,000 and is set to increase to 1 million by 2050 (Deloitte Access Economics, 2017).

The stroke rehabilitation guidelines recommend a multidisciplinary approach to rehabilitation (Winstein et al, 2016), ideally commencing within 48 hours of stroke onset (Pollack & Disler, 2002). When the stroke survivor is discharged from hospital, they may need to reconsider their career and living situation due to changes in their mobility, which can be emotionally confronting and difficult to process (Pallesen, 2013). Compounding this, the cost of ensuring access to appropriate outpatient rehabilitation and care post discharge from an inpatient hospital rehabilitation service often places a financial burden on the individual and their family (Das et al., 2010).

Stroke

A stroke occurs when there is a disruption of blood supply in the brain (Stroke Foundation Australia, 2018), presenting as either a blood clot (ischemic stroke) or burst vessel (haemorrhagic stroke). As blood contains oxygen and specific nutrients necessary for the functioning of brain cells, this disruption of blood supply results in the death of brain cells at stroke onset (Stroke Foundation Australia, 2018). Depending on the site of stroke onset, there is potential for one or more areas of the brain to be impacted, leading to deficits in emotional regulation, communication, cognition and/or physicality of movement.

The most common consequence of stroke is motor impairment in the form of hemiparesis to the lower limb, upper limb and/or lower face. The term hemiparesis originates from the words “hemi”, meaning “one side”, and “paresis” meaning “weakness”; it is the resultant weakness of one side of the body.

This one-sided weakness results from the site of stroke occurring in the opposite hemisphere of the brain; i.e. if the stroke occurred in the left side of the brain, the survivor would have hemiparesis to the right side of the body. As hemiparesis affects 80% of stroke survivors, the rehabilitation of motor function is vital (Thaut, Kenyon, Hurt, McIntosh, & Hoemberg, 2002). Further to this, 50% of stroke survivors with hemiparesis have chronic loss of arm function (Intercollegiate Working Stroke Party, 2016).

When commencing rehabilitation, it is essential to focus upon improving the stroke survivor's ability to partake in basic ADLs (Legg et al., 2007). Some basic ADLs include bathing/showering, personal hygiene/grooming, dressing, toilet hygiene, functional mobility and self-feeding (Prakoso, Vitriana & Ong, 2016); all of which require the use of the upper limb. The upper limb has a wide range of motion at the joints and is able to co-ordinate movement across many joints, thus promoting the multiple movement patterns required for successful ADL task completion (Gates, Walters, Cowley, Wilken, & Resnik, 2015).

Post-stroke depression has also been identified as a significant and frequent consequence of stroke and is experienced by approximately one-third of stroke survivors (Hackett & Pickles, 2014). Not only is post-stroke depression emotionally debilitating, but it can adversely influence the mortality rate, quality of life and functional recovery of the individual (Paolucci, 2017).

Music therapy in stroke rehabilitation

At present, the main approach to the rehabilitation of the upper limb involves conventional physiotherapy and occupational therapy treatments. Although music therapy is recognised as an allied health profession in

Australia, it is not generally included in standard treatment for stroke rehabilitation. Traditionally, music therapy approaches encourage the individual to access affective and motivational systems in the brain through non-verbal emotional expression (Galińska, 2015). Further to this, when the individual engages in creating music, the immediate auditory feedback may also motivate repetitive engagement with the musical stimulus (La Gasse & Thaut, 2012).

Baker and Tamplin (2006) highlight the role of music therapy in neurorehabilitation by describing specific music therapy interventions relevant to impairments within the rehabilitation setting. Though stroke-specific interventions are not explicitly identified in this resource, Baker and Tamplin (2006) extensively outline intervention protocols for general motor rehabilitation, which can also be implemented in stroke rehabilitation. Thaut & McIntosh (2014) identify two main neurologic music therapy techniques relevant for upper limb stroke rehabilitation: 1) therapeutic instrumental music performance; and 2) patterned sensory enhancement. Therapeutic instrumental music performance draws upon functional movement patterns using musical instruments to encourage the individual to engage in repetitive, cyclic movement of the paretic limb, with musical support (Thaut, 2005). Patterned sensory enhancement utilises musical components such as rhythm, melody, harmony and dynamics to provide temporal, spatial and force cues (Thaut, 2005), in order to drive functional movement exercises and ADL movement practice.

In identifying the purpose of music therapy in the rehabilitation of physical impairment, recent literature identifies that instrument playing encourages repetitive practice and engagement for stroke survivors with upper

limb impairment (van Wijck, et al., 2011). Using rhythm and tone as the driving force to engage the paretic upper limb offers the individual an alternative way to modify their motor output. Therefore, when the individual engages in playing the instrument, the auditory feedback produced by the paretic upper limb may result in continued engagement. Evidence-based research suggests the potential of musical instrument playing in creating neural pathways in the brain by increasing the connectivity between the auditory and premotor cortices, also referred to as “audio-motor coupling” (Rodriguez-Fornells et al., 2012, p. 283).

Music therapy has a unique role in upper limb stroke rehabilitation through its ability to address multiple goals simultaneously. Not only does musical engagement promote repeated practice of the upper limb, it also gives the individual the opportunity to engage in non-verbal processing (Erkkilä et al., 2011). As recent literature identifies a global challenge faced by stroke survivors is the restoration of self (Raghavan, 2016), it can be inferred that by engaging the upper limb in instrument playing through improvisation may also foster non-verbal expression. That is; engaging the stroke survivor in instrument playing through free improvisation has the potential to provide a platform for functional recovery of the hand (addressing physical impairment) and non-verbal expression (addressing sense of self), simultaneously.

Music supported therapy in upper limb stroke rehabilitation

Music-supported therapy (MST) is an approach to upper limb stroke rehabilitation, distinct from music therapy. In MST, musical instruments are utilised for gross upper limb rehabilitation by health professionals other than music therapists. Through transmagnetic

stimulation and magnetic resonance imaging, music-supported therapy has been shown to induce profound neural changes in the contralateral sensorimotor cortex of survivors of chronic stroke (Rojo et al., 2011). It has been further postulated that increased connectivity between the auditory and premotor cortices, or “audio-motor coupling” (Rodriguez-Fornells et al., 2012, p. 283), may contribute to neuroplastic changes, resulting in improvements of motor function following music-supported therapy (Grau-Sánchez et al., 2013). Giving stroke survivors an alternative mechanism to modify their motor output by receiving immediate auditory feedback (i.e. music) allows them to potentially overcome sensory and proprioceptive deficits (Schneider, Schönle, Altenmüller, & Münte, 2007).

Functional electrical stimulation

Functional electrical stimulation (FES) is a well-established intervention for motor rehabilitation post stroke (Eraifej, Clark, France, Desando, & Moore, 2017). This intervention uses electrical currents to produce contractions in muscle fibres to assist the stroke survivor to engage repetitively in functional tasks, such as opening the hand to grasp an object (Kutlu, Freeman, Hallewell, Hughes & Laila, 2016). When used appropriately, it is suggested that electrical stimulation may also contribute to the promotion of neuroplasticity (Stinear & Hubbard, 2012). With particular reference to the upper limb, research has shown FES to be particularly beneficial for those with weakness in the affected hand (Cuesta-Gómez et al., 2017). There is strong evidence to suggest that FES treatment improves overall upper limb function in acute stroke (Howlett, Lannin & Ada, 2015).

Tablet technology in stroke rehabilitation

The main challenge for health care practitioners working with stroke survivors is to provide the appropriate and required amount of practice and feedback during the individual’s rehabilitation (Wijck, Dodds, Cassidy, Alexander & McDonald, 2011). Tablet technology is an emerging avenue for upper limb stroke rehabilitation as it offers an accessible means for repetitive, intensive and task-specific training of the paretic upper limb, which has been shown to influence neuroplastic changes in the brain (Hubbard et al., 2009). This interactive avenue for rehabilitation may provide a less labour-intensive option than conventional treatment (Saposnik, 2014). As tablet technology becomes more accessible, the use of tablet technology in rehabilitation may prove to be a viable option for stroke survivors to independently maintain task-specific upper limb retraining post discharge.

The need for research

Drawing upon the individual benefits of FES, music therapy, and tablet technology for upper limb stroke rehabilitation identified within the literature, this case study sought to examine the effect of combining these three approaches through the FES+*ThumbJam* music therapy protocol. The theoretical framework informing this protocol was based on the benefits of non-verbal emotional expression (Galińska, 2015) and audio-motor coupling (Grau-Sánchez et al., 2013; Rodriguez-Fornells et al., 2012).

Previous research suggests that stroke survivors referred to music therapy for upper limb rehabilitation must have some level of functional activity in order to participate in instrument playing (Scholz et al., 2016; Chouhan & Kumar, 2012; Raglio et al., 2017; Thaut, Hoemberg, Hurt, & Kenyon, 1998;

Yakupov, Nalbat, Semenova, & Tlegenova, 2017). Therefore, these studies typically exclude stroke survivors with limited to no functional movement in the paretic upper limb. As neural plasticity is influenced by repetitive task practice, it is important to find a way in which to include stroke survivors with limited to no movement. At present, there does not seem to be any studies combining FES with a music therapy intervention for the purpose of upper limb stroke rehabilitation. The unique approach of combining FES with an iPad-based instrument promotes the opportunity to engage stroke survivors, with little or no function, in upper limb rehabilitation through music making.

Case Description

Snave, a 74-year-old female, was initially admitted to an acute hospital following a left pontine stroke. Snave was then transferred to a rehabilitation hospital within a week (6 days) following stroke onset. On admission to the rehabilitation hospital, Snave presented with right-sided hemiparesis including her lower limb, upper limb and lower face, resulting in difficulty with independent movement and speech. No cognitive impairments had been identified on admission. Soon after admission it became known that Snave was a retired pianist and Professor of Music.

On arrival to the hospital, Snave required a hoist for transfers as well as maximal assistance for personal care, including ADLs. Though she had no hand function in her paretic right upper limb, flickers of activity were observed in her finger flexors. Sensation and proprioception of the paretic upper limb were intact. Snave also had a pre-morbid history of right wrist pain, which was aggravated by instrument playing prior to the stroke. She had previously managed such pain with a resting splint and sling.

In the rehabilitation setting, the treating team often encourage the patient and their family to collaboratively engage in goal setting. The process of collaborative goal setting ensures that the purpose of different activities and therapies are made explicit to the patient and the treating team (Wade, 2009). Literature suggests that collaborative goal setting has a multitude of benefits, including motivation for achievement, co-ordination of engagement in prescribed therapy, and identification of all necessary goals (Wade, 2009). As with the case of Snave, her collaborative goals included: the ability to independently eat an apple (short-term goal), and play the piano again (long-term goal).

Snave's primary referral to music therapy was in regard to her difficulties in verbal communication due to hemiparesis to the lower mouth. Snave's initial music therapy treatment plan was centred on therapeutic techniques to strengthen the mouth muscles to enhance clarity of speech. During these sessions, Snave engaged in familiar song singing, musical discussion and analysis. The music therapist played live music as selected by Snave, including popular music and baroque flute music. This was to encourage Snave to not only engage in singing, but to also draw upon her skills as a Professor of Music. This further encouraged Snave to exercise the mouth muscles by analysing and discussing music in a context similar to her life prior to stroke onset.

It can often be difficult for the individual to control and/or verbally articulate their feelings associated with the resultant impairment/s of a stroke (Hart & Cicerone, 2018). For some, this may be as a result of communication or cognitive impairments, disrupting the pathways required to verbalise and/or organise thought patterns (Sudin et al., 2017). For others, this may be a result of the lack of

insight or reluctance to accept their resultant impairment/s (Bruno et al., 2017). As Snave was a professional pianist with significant weakness in her upper limb, it seemed important to give her an appropriate outlet to work through this. When the goals for music therapy started to focus more on the rehabilitation of the upper limb, based on Snave's preference, the music therapist encouraged and supported Snave to engage in concurrent free musical improvisation as a means of non-verbal expression.

It is important to acknowledge that written (signed) consent has been obtained for the purpose of research and the write up of this clinical case report. A pseudonym ("Snave") has been used to ensure de-identification of the patient.

Method

This clinical case report was conducted at a 37-bed rehabilitation hospital in metropolitan Sydney, Australia, where music therapy is available one day a week. Referrals to music therapy are made through a standardised referral book and screened by the Stroke and Neurological Coordinator to identify priority patients and their relevance for group or individual therapy. Music therapy interventions are based on the individualised patient goals of physical rehabilitation, cognitive rehabilitation, speech and communication rehabilitation and psychological support.

As part of the hospital treatment plan, Snave engaged in occupational therapy and physiotherapy for the upper limb; receiving myriad interventions for strengthening and functional retraining. During the second and third week of admission, the OT provided standard electrical stimulation, via *Verity Neurotrac*, to Snave's wrist and finger extensors (50Hz, 200µ intensity from; 30secs

on/5secs off; 1-2x daily up to 60 minutes). Whilst the machine was active, Snave engaged in a functional task (opening her hand to grasp a cup). This method was identified as FES. During FES, the muscle/s are electrically stimulated at a specific moment, when the patient is to engage in a specific activity (de Kroon, Lee, IJzerman & Lankhorst, 2002). The purpose of FES is to improve the performance of a specific activity. The machine was programmed to have 'on' and 'off' periods of electrical stimulation; the 'on' periods of electrical stimulation delivered a continuous contraction to the targeted muscles, while the 'off' periods ceased electrical stimulation.

Being aware of Snave's musical background when observing her engage in FES, the music therapist proposed that a musical task could potentially be more motivating. As Snave only had flickers of activity in the right finger flexors, the music therapist suggested an iPad-based instrument using the application *ThumbJam*. This application is touch sensitive and can be programmed to the individual's preference for instrument sound and scale. Prior to the commencement of this intervention (henceforth "FES+*ThumbJam*"), incorporating musical instrument playing with FES had not been previously suggested.

In week 4 of Snave's admission, the FES+*ThumbJam* intervention was trialled in a collaborative music therapy and occupational therapy session. The OT set up the *Verity Neurotrac* electrical stimulation device on the wrist extensor muscles prior to the session. A flute sound was programmed into the *ThumbJam* application as flute had been used by the music therapist in previous sessions and also had a more obvious sustain in comparison to other *ThumbJam* instrument options. Snave selected a scale to be programmed, and then

engaged in exploring the instrument. The music therapist provided wrist support to encourage Snavé to actively raise her wrist during electrical stimulation of wrist extension, and to avoid any compensatory shoulder movement that could provoke shoulder pain.

Snavé was encouraged to engage in playing the iPad instrument (*ThumbJam*) during the 'on' periods of electrical stimulation. The target movement of the initial session was wrist extension. As electrical stimulation initiated the movement of wrist extension, Snavé was then directed to engage in finger movement (improvisation) on *ThumbJam* during 'on' periods of electrical stimulation. Even though Snavé had limited strength and activity in her fingers, she was able to produce sound on the iPad instrument, as it was touch-sensitive. It was for this quality that the iPad instrument was used over standard acoustic instruments. The iPad instrument was also able to pick up even the subtlest of movements, offering both auditory and visual feedback to Snavé.

For the majority of this initial session, Snavé actively engaged in wrist extension with some finger movement when creating music with *ThumbJam*. Snavé verbally reflected enjoyment in creating music with FES+*ThumbJam* and noted that the pace of the session felt faster than usual. On completion of this initial session, Snavé requested further ongoing sessions. These sessions were weekly, due to the availability of the music therapy program at the facility.

Week 5 of Snavé's admission replicated the trialled FES+*ThumbJam* intervention of week 4. In week 6, Snavé engaged in directed improvisation, focusing on individual finger use and by week 7, she no longer required wrist support from the music therapist. In week 8, the music therapist encouraged Snavé

to play a known song ("Twinkle Twinkle") requiring a span of 6 notes on the iPad. After successfully executing this on the iPad with FES, Snavé was then able to transfer this skill to a standard touch-sensitive keyboard (with FES). The music therapist accompanied Snavé on the keyboard both to encourage increased engagement in the intervention and provide non-verbal support. At week 9, Snavé was able to engage in independent keyboard practice without the FES. A timeline of the protocol can be found below in Figure 1.

The implementation of the FES+*ThumbJam* intervention was initially centred on physical rehabilitation goals due to the referral and pre-determined 'on' and 'off' periods of electrical stimulation. As moments of improvisation were implemented throughout the 'on' periods of electrical stimulation, Snavé was encouraged to explore the instrument as much as she could, through free improvisation. It was after these moments, that Snavé would verbally reflect upon her changes in motor movement as well as her feelings associated with these new changes. Therefore, non-verbal expression through free improvisation playing seemed to be a by-product of the intervention.

Figure 1. *The FES+ThumbJam protocol*

WEEK 2-3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9
FES	FES+ <i>ThumbJam</i>	FES+ <i>ThumbJam</i>	FES+ <i>ThumbJam</i>	FES+ <i>ThumbJam</i>	FES & Keyboard	Keyboard
Wrist/finger extensors; 30-60 mins 1-2x per weekday	Selected scale; 1 x 45 -minute session with Registered Music Therapist (RMT)	Wrist support + free improvisation; 1 x 45-minute session with RMT	Wrist support + directed improvisation (finger focus); 1 x 45-minute session with RMT	Improvisation (NO WRIST SUPPORT); 1 x 45-minute session with RMT	1 x 45-minute session with RMT	Independent practice with keyboard at bedside

Table 1. *Ongoing upper limb assessment*

Right Upper Limb	Initial Assessment	Week 8	Discharge Week 10	7- Month Follow Up
9 Hole Peg Test	Unable	1 min, 19 sec	54.08 sec	43.57 sec
Pinch Dynamometer (kg/F)	Unable	2	3.66	4
Grip Dynamometer (kg/F)	Unable	6.3	4.16 (lower due to shoulder pain)	8.33
Functional Use	Nil	Could drink from a cup independently	Using utensils for mealtimes	Can tie shoe laces
Musical Function	Nil	Could play scales on the keyboard with the FES once set up by therapists	Keyboard – independent scales practice	Bach on the piano

Results

As per the standard protocol at the hospital, data from the *9 Hole Peg Test* (9HPT) and tests of dynamometry were collected to determine Snavé's progress throughout her admission. The results of these standard tests, functional use and musical function over Snavé's admission period (initial assessment, at 8 weeks and at 10 weeks) and 7 months follow up are indicated above in Table 1.

When asked about her experience of the FES+*ThumbJam* intervention, Snavé particularly highlighted the motivational aspects of this mode of therapy. Table 2 lists three quotes from Snavé at the 7-month follow up.

Table 2. *Snavé's feedback*

7-month follow up feedback
<ul style="list-style-type: none"> • "Once the FES [and iPad-instrument <i>ThumbJam</i>] started, I had an impetus to get things started." • "I got some feedback... the sound I made and the feeling that I could move in a small increment was better than nothing and got better over time." • "Getting the brain unstuck and getting it to remember what it used to do."

Discussion

The outcomes of this retrospective clinical case report demonstrate that FES+*ThumbJam*, a novel therapeutic intervention, may have had a positive impact on the rehabilitation of the paretic upper limb in this stroke survivor.

This potential positive impact was predominantly identified through qualitative feedback and quantitative progression. As musical function was a long-term goal for Snavé, this was an important area to be trained and examined during admission and at follow up. Initially, Snavé engaged in music therapy for upper limb rehabilitation using FES and the touch sensitive iPad instrument. Her progression to using the keyboard with FES exemplifies her improvement in strength. Her progression to keyboard only (without FES) and ability to resume playing a known piece bilaterally at 7 months post discharge indicates her improvement in co-ordination and strength. Though this was further exemplified by her improvement in the 9HPT and the tests of dynamometry at the 7-month follow up, there is insufficient data to conclude that the FES+*ThumbJam* intervention made a quantifiable contribution to Snavé's progress. However, this clinical case report does suggest the feasibility of FES+*ThumbJam* in upper limb stroke rehabilitation. Qualitative data further suggests that FES+*ThumbJam* was motivating for Snavé.

Snavé did not have her own iPad during her inpatient admission and was unable to practice between sessions. However, when Snavé progressed to using the standard keyboard, she was able to access a standard keyboard for daily practice. As this case study is written in retrospect, the number of keyboard practice sessions between music therapy sessions is absent. Upon discharge, Snavé reflected practicing piano up to 3 hours a day, consisting of technical work (e.g. scale practice) and repertoire (e.g. Bach's Prelude in C).

The music therapist's directions encouraged Snavé to focus on a specific goal each session (e.g. free improvisation, finger

focus or song focus), determined by her progress. This aspect of the intervention allowed for task-specific training, which has been shown to generate neuroplastic changes in the brain (Hubbard, Parsons, Neilson, & Carey, 2009). Even though FES+*ThumbJam* met the essential criteria to promote motor re-learning and neural plasticity, we cannot conclude that any significant functional improvement resulted from the intervention (due to its limited application). However, there may have been potential for the establishment of new neural pathways through audio-motor coupling (Grau-Sánchez et al., 2013) and the fact that the intervention was repetitive in nature and allowed task progression with a high intensity of practice. Incorporating both visual and auditory feedback to subtle movements also made this intervention sensory rich. And, as the task related to her long-term goal, Snave remained engaged throughout.

Engaging in free improvisation gave Snave the opportunity to explore sound in the moment, encouraging non-verbal expression. Further to this, and as indicated in Table 2, Snave reported feeling motivated by the auditory feedback of the music she created using *ThumbJam*. Further engaging in playing a known song ("Twinkle Twinkle") gave Snave a framework with a set outcome which was continued post discharge (as she relearned Bach's Prelude in C). The fact that Snave felt motivated to engage in self-directed practice post discharge was significant, resulting in the set outcome of re-learning a piece of music from her past.

It is important to acknowledge the fact that Snave's background as a professional pianist could have been a contributing factor to her progress. Furthermore, as this is a retrospective clinical case report, care should be taken in generalising the outcomes of this

case to other stroke survivors, including those who are also musicians. As no measures were taken immediately pre and immediately post each music therapy session, there is no evidence to support the notion that a single session of music therapy per week, had an isolated impact on Snave's upper limb functioning.

It is also worth noting that for other musician stroke survivors, this intervention may be too confronting or even frustrating to engage in due to their prior experience with playing music. Even though the outcome of this clinical case report is certainly related to Snave's musical background and intrinsic motivation, the authors have since trialled this intervention in non-musicians with some success. With set up assistance from therapists, the FES+*ThumbJam* protocol could allow stroke survivors, with a very weak upper limb, the opportunity to engage in continued self-directed practice of the paretic upper limb. Therefore, the primary contribution of this clinical case to the current literature is to include stroke survivors with limited function of their upper limb in musical engagement. The combination of FES and music therapy interventions supported the functional rehabilitation of extremely limited upper limb movement for this patient. This seems contrary to existing literature stating that traditional music therapy for upper limb rehabilitation requires an initially greater level of functional movement.

Future Research

Snave reported an increase in motivation for upper limb rehabilitation due to the musical nature of the intervention. The resultant auditory feedback encouraged the repetitive practice of functional upper limb movement patterns (La Gasse & Thaut, 2012). Audio-motor coupling may have had the

potential to influence neuroplastic changes (Grau-Sánchez et al., 2013) through the alternative mechanism to modify Snavé's upper limb movement (Schneider et al., 2007) provided by the FES+*ThumbJam* intervention. From initially being unable to complete the assessment tasks at all, Snavé demonstrated improvements in all areas of assessment at discharge, which had continued to improve at 7 months post discharge.

As this was a single retrospective clinical case report, there is not enough evidence to suggest a strong case for the routine inclusion of this music therapy protocol in upper limb rehabilitation. Further research is required to determine the effectiveness of this intervention on quantitative aspects of upper limb stroke rehabilitation, as well as to examine more specific qualitative aspects on the individual (for example; motivation and wellbeing).

Future research could examine the efficacy of the FES+*ThumbJam* intervention, specifically its influence on the overall recovery rate of upper limb function for stroke survivors, in comparison to standard treatments alone. In comparing the addition of FES+*ThumbJam* to standard treatment versus standard treatment alone, there is potential to see an impact on both qualitative and quantitative parameters. Using specific music therapy interventions with individualised task progression according to the upper limb function of the individual may provide a more consistent and structured approach to music therapy in upper limb stroke rehabilitation. To extend the FES+*ThumbJam* protocol, 'free improvisation', 'directed improvisation' and 'song learning' could be incorporated into each session, with task progression of each area dictated by a decision tree. When assessing the upper limb, measures of function and standardised manual muscle tests should

also be conducted to measure outcomes. In order to establish the effectiveness of this intervention in upper limb stroke rehabilitation, the implementation of a clinical trial is recommended.

Finally, tablet technology and applications such as *ThumbJam* provide a low-cost option for upper limb retraining that stroke survivors can continue to use at home. Music therapists can instruct stroke survivors on appropriate ways to engage with the application as they are nearing discharge. This may lead to more independent task practice and repetition, and thus greater potential for audio-motor coupling, neuroplastic changes, increase in hand function and non-verbal emotional expression.

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Exploring the influence of interdisciplinary clinicians' perceptions of music therapy on referrals in a youth mental health service

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In plain language:

Music therapy provides an age-appropriate way to support young people with mental health problems but establishing and maintaining music therapy programmes in youth mental health services is challenging. This study sought to understand how clinicians' perceptions of music therapy in a youth mental health service may impact referrals and what strategies can be used to promote music therapy. Clinicians were invited to complete an online survey. Findings show that clinicians are more likely to refer when they perceive music therapy to align with the framework of the service or are willing to include music as a topic in their own meetings with young people. Strategies for promoting music therapy should include aligning music therapy with the service framework as well as upskilling clinicians on the role of music in young people's mental health and how to include discussion of music in their own work.

Exploratory study

Exploring the influence of interdisciplinary clinicians' perceptions of music therapy on referrals in a youth mental health service

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Abstract

Music therapy is ideally positioned to meet the age appropriate and stigma-free approach of youth mental health services, yet programmes are distinctly lacking. Music therapists report challenges in establishing and maintaining programmes that rely on referrals from interdisciplinary teams, and clinicians' perceptions of music therapy may be key to understanding these barriers.

The aim of this study was to explore how clinicians' perceptions of music therapy in a youth mental health service may impact referrals, and whether specific strategies for promoting music therapy could be identified. A survey was distributed to clinicians at a youth mental health service with an established music therapy programme, and data were analysed using inductive methods informed by grounded theory. Findings illustrate how strengths-based views of music therapy and a willingness to discuss music in relation to mental health with young people was linked to higher rates of referral to the music therapy service. Clinicians acted as gate keepers by introducing or failing to raise discussion of music and music therapy options in young people's care.

Promoting a strength-based view of music therapy that aligns with recovery approaches in mental health care may support the implementation of music therapy programmes. Highlighting clinicians' role as gatekeepers and supporting their capacity to engage young people in initial discussions of music may increase referrals, raise awareness about the role of music in young people's mental health and facilitate key engagement processes.

Keywords: youth mental health, music therapy, referrals, perceptions, gatekeepers, inductive, grounded theory, interdisciplinary

Background

Mental health problems are common during youth, with one in 10 young people experiencing depression and anxiety (AIHW, 2007), and over 50% of bi polar and psychotic

disorders appearing before the age of 25 (Jablencey et al., 2000). Austrian youth mental health services have an international reputation for innovation in integrating recovery philosophy with early intervention principles that specifically aim to engage young people as early as possible (Harkin, 2014; NAMI, 2013; Ramon, Healy, & Renouf, 2007). This approach is focused on

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youth friendly forms of care that offer age appropriate and stigma free engagement for young people aged 12-25 years (McGorry, Bates, & Birchwood, 2013).

Music is highly relevant to young people's everyday health management. Recent Australian statistics indicate that young people listen to music for an average of 18 hours per week (Papinczak, Dingle, Stoyanov, Hides, & Zelenko, 2015) and many identify music as their preferred activity (North, Hargreaves, & O'Neil, 2000). Research details how much of young people's music engagement is linked to unconscious everyday health maintenance, where young people manage their mood by listening to particular songs that alter, enhance or sustain emotional states (Dillman Carpentier et al., 2008; Saarikallio & Erkkila, 2007). Although researchers have pursued the idea that particular genres might be problematic in causing mental health problems, findings consistently illustrate how the user's existing relationship with songs provides the emotional agent, not the style of music itself (Jiang, Rickson, & Jiang, 2016; North & Hargreaves, 2006). In fact, for many young people, commitment to particular genres or styles of music can offer means for social connection by sharing and uniting around preferences and their associated styles, values and lifestyle choices (Rentfrow, McDonald, & Oldmeadow, 2009). These processes can contribute to healthy development as young people form a sense of identity and belonging to peer groups (North et al., 2000).

Experiences of mental illness can interfere with critical processes of mood regulation (Leibenluft, 2011), social connection (MacDonald et al., 2004; Macdonad, Sauer, Howie, & Albiston, 2005), and identity construction (Carless, 2008). For many young people, music provides an important resource

for tackling these challenges, and this may explain why music use often peaks during times of mental health problems (Thomson, Reece, & Di Benedetto, 2014). For others, mental distress can impact the ability to use music to effectively manage their wellbeing (McFerran & Saarikallio, 2014). Research illustrates how music can become part of unhelpful illness behaviours such as rumination or self-harm (Cheong-Clinch, 2013), evoke painful memories (Bibb & McFerran, 2018), or feed into social isolation when seen as an alternative to friendships (Hense, McFerran, & McGorry, 2014). However, these same studies highlight that when engaged in music encounters carefully facilitated by professionals, young people can reconnect with the health promoting aspects of music.

Music therapy has a strong clinical history (Eyre, 2013; Rolvsjord, 2010; Wigram & Jos de Backer, 1999) and research base in mental health care (Gold, Voracek, & Wigram, 2004; Grocke, Bloch, & Castle, 2009; Maratos, Gold, Wang, & Crawford, 2009; Mossler, Chan, Helder, & Gold, 2005). In 2016, 37% of Australian Registered Music Therapists reported working in mental health care and 48% with young people (Jack et al., 2016). In youth mental health specifically, music therapists describe how otherwise isolated young people can connect and build a sense of belonging through a shared interest in music (McFerran, 2010). Sessions can be used to explore self-concept, where building music skills or engaging in shared music making can foster health-based identities and meaningful social participation (Hense & McFerran, 2017; Solli, 2014). Young people can also use music therapy to explore the relationship between music and their mental health (Cheong-Clinch, 2013), re-establish healthy relationships with music (Bibb, 2016), and

build capacities for everyday music uses beyond therapy (Hense, 2014). These processes often focus on, and nurture young people's strengths and personal interests, and music therapists are increasingly articulating the relevance of these processes to recovery principles in mental health care (Grocke, Bloch, & Castle, 2008; McCaffrey, Edwards, Fannon, 2011; Solli, Rolvsjord, & Borg, 2013).

Music appears highly relevant to youth mental health care yet establishing and maintaining music therapy programmes in existing mental health systems can be challenging. Some music therapists report resistance from other staff when working in interprofessional contexts, leading to experiences of isolation (Bybee, 2017) and role ambiguity (O'Neill & Pavlicevic, 2003). This can impact the ongoing success of music therapy programmes that rely on referrals from other clinicians (Ledger, Edwards, & Morley, 2013). Although literature in this area has primarily focused on music therapists' experiences of working within multidisciplinary contexts, research in adult populations does suggest that other clinicians' views of music therapy depend upon their discipline and degree of exposure to music therapy (Choi, 1997; Purvis, 2010). These findings suggest that in order to move past interdisciplinary barriers, music therapists may benefit from further investigating what other clinicians know about their work and how they feel about their services.

Little research has been conducted exploring clinicians' perceptions of music therapy within youth mental health services, or the ways in which music therapy may best be promoted to support programmes in this context. To address this gap, an exploratory study was designed at a service with an existing music therapy programme;

examining how clinicians' perceptions of music therapy may impact referrals, and whether specific strategies for promoting music therapy could be identified. The study aimed to address the following question: How do clinicians' perceptions of music therapy influence referrals to the music therapy programme at a youth mental health service? A set of research intentions guided the method of inquiry.

- What factors influence clinicians' decisions to refer a young person to music therapy?
- What patterns can be interpreted between rates of referral and other factors in responses? (such as profession or contact with the music therapist).
- What strategies would be helpful for supporting referrals to music therapy?

Method

Context.

The study took place in a youth mental health service that cares for approximately 800 young people annually. This was also the work place of the author. The service includes a 12-bed in-patient unit for short stays of approximately 10 days, as well as an extensive out-patient service offering care for up to two years across two different sites. Young people access the service for support with mood disorders, psychosis, personality disorders, as well as co-occurring substance use disorders.

The music therapy programme, including both individual and group-based sessions, has been offered one day per week for over 10 years. The music therapist is a member of the psychosocial team which includes social workers, occupational therapists, an art therapist, and teachers, offering a variety of social, vocational, and creative interventions. She has been a practising Registered Music

Therapist for the last eight years, offering both individual and group-based sessions. Her approach is influenced by resource-oriented music therapy (Rolvjord, 2010) as well as community music therapy principles (Stige & Aaro, 2012) that align with the strength-based and collaborative philosophy of the service. Young people can be referred to music therapy from all sites of the service. Anecdotally, despite the large number of staff involved, referrals tend to come from the same relatively small collection of clinicians. Past strategies used by the music therapist to inform staff about music therapy and the programme at the service included; small in-service offerings to different teams, presentations at clinical review meetings, posters, flyers, musical performances, and emails. The nature of the facility means that many staff work part time or across different sites, making it difficult for the music therapist to access everyone in her one day per week role.

Design.

During the development of this project, advice from the service's research advisory panel was that data collection processes needed to be brief and easily accessible for the busy clinical staff. So, the initial plan to engage staff in qualitative interviews was abandoned in place of an online survey designed to solicit feedback from as many clinicians of the youth mental health service as possible. The service's research advisory panel also provided specific feedback about the subsequent development of the survey. Ethical approval was obtained through the governing Human Research Ethics Review Board as a quality assurance project with permission for publication of the findings (QA2016038).

Participants and recruitment.

The study was open to all clinicians working across the three sites of the youth mental health service and included mental health nurses, occupational therapists, psychiatrists, psychologists, an art therapist, and social workers, totalling 137 staff. Participation was voluntary and anonymous. An invitation and link to the survey was emailed to staff by a third party, three times across a four-week period.

Data.

Qualitative and quantitative data were collected from both open and closed survey questions. Open ended questions were used to solicit clinicians' perspectives and ideas, and closed questions were used to assess the frequency with which clinicians engage with particular processes relating to referral to music therapy.

Analysis.

An inductive analysis was used, informed by grounded theory (influenced primarily by Charmaz, 2014a). Inductive analysis involves generating codes or categories from raw data rather than testing data according to hypotheses. The purpose of this approach is to allow findings to emerge from the data without the imposition of pre-existing assumptions (Thomas, 2006). Although often used as an approach on its own, inductive analysis also forms the basis of many qualitative analytic methods that extend into more specific strategies depending on the purpose of the research or philosophical orientation.

Grounded theory (Charmaz, 2014a) uses inductive analysis with the purpose of building rather than testing theory. The analytic strategies can also be applied for generating theoretical categories or statements

as the final results in what is often termed 'modified' grounded theory (Charmaz, 2014b). Where other forms of qualitative analysis focus on description and distillation of the data, grounded theory permits a greater degree of interpretation involving abstraction and constant comparison of data against data (Sandelowski & Barroso, 2003). Although the approach is most commonly used with in-depth interviews, the techniques can be applied to many forms of qualitative and quantitative data (Charmaz, 1996). Grounded theory strategies were chosen for this study because they enabled analysis of patterns in the data, as well as the forming of conceptual interpretations about the relationship between perceptions of music therapy and referrals.

Grounded theory typically involves a process of theoretical sampling, where the researcher returns to collect new data to test and develop the emerging theory (Morse, 2007). The small survey design of this study did not allow for theoretical sampling in this traditional sense, and so the data was re-examined using multiple questions in order to challenge initial ideas and concepts. This lack of theoretical sampling was also seen as adequate for the research purpose of forming a set of responses to the research questions, rather than generating a theory.

Data were loaded into an Excel spreadsheet with one row of responses per participant and loaded into NVivo software program for categorisation and comparison. The initial analysis involved coding each open-ended question and grouping common or recurrent codes to form categories. Data were systematically grouped according to each question and any trends in corresponding data were noted. Through this initial process, potential patterns that related to several of the survey questions were identified. It then seemed appropriate to develop emergent

research sub-questions to respond to this first wave of analysis and guide a more in-depth analysis of these areas in the data. These questions included:

- 1) What patterns can be interpreted between clinicians' descriptions of music therapy and the number of referrals?
- 2) What patterns can be interpreted between clinicians' frequency of discussion of music and the number of referrals?
- 3) What patterns can be interpreted between clinicians' descriptions of why they refer to music therapy and how often they discuss music with young people?

To investigate the relationship between participants' descriptions of music therapy and their number of referrals, data were broken down by rates of referrals (0, 1-5, 6-10, more than 10) and each group's corresponding key themes from their descriptions of music therapy.

A subsequent analysis was conducted to look for any patterns between how often clinicians discuss music with young people and how many young people they have referred to music therapy. Data were grouped according to the frequency of discussion of music (*often, sometimes, never*), and compared to the corresponding frequency of referrals in each group (0, 1-5, 6-10, more than 10).

A final analysis involved searching for patterns between clinicians' description of why they would refer to music therapy and how often they discuss music with young people at the service. Here, data were broken into groups based on frequency of discussion of music (*never, sometimes, often*) and the corresponding themes from descriptions about

why clinicians would refer to music therapy were analysed.

The findings were presented to an experienced supervising researcher for feedback at several points across the analytic procedure. This process challenged the author's interpretations of the material at times and although the nature of the survey meant that the responses in the data were short, depth was achieved through the degree of analytic processing involved.

Results

Twenty six out of 119 staff responded, resulting in a response rate of 21.8%. Two of these indicated they were not in clinical positions and therefore left some irrelevant questions blank. See Table 1 below for a breakdown of participants' profession.

For the purpose of this paper, results will be presented in a way that addresses the research questions rather than reporting on each survey question individually. Results from the initial round of analysis indicated patterns in only several areas of the data, as detailed in the analysis above. These areas of the findings will now will be presented in

response to the emergent research sub-questions. Words in single quotations represent codes from qualitative analysis.

In response to emergent research sub-question 1: *What patterns can be interpreted between clinicians' descriptions of music therapy and the number of referrals?* Five people indicated that they had referred more than 10 people to music therapy. This was the only group to describe music therapy as strengths-based, using references to building or using 'strengths', in the pursuit of 'wellbeing' rather than treatment of illnesses. This was contrasted by descriptions from the eight people who reported never referring to music therapy, who described it as a 'therapeutic tool' or made reference to the use of music in health 'processes'. This group's descriptions generally appeared more medicalised, with less emphasis on the benefits and more on therapeutic terminology. The remaining 12 participants indicated having referred 1-5 people. Their descriptions of music therapy focused on how music could be used as a 'strategy in facilitating recovery' with descriptions of both the process and role of music in dealing with illness. See Table 2.

Table 1.

Breakdown of participant profession

Profession	Number of participants	Percentage of total
Psychologist	5	19.23%
Psychiatrist	4	15.38%
Occupational therapist	7	26.92%
Social worker	4	15.38%
Mental health nurse	2	7.96%
Other	4	15.38%
Total	26	

Table 2.

Descriptions of music therapy according to number of referrals

Number of referrals	Number of participants	Description of music therapy (Codes underlined. Quotes from raw data)*
0	8	<p><u>Music as a therapeutic tool:</u> “A therapeutic approach involving music as vehicle for expressing and understanding emotional experiences” “Music therapy is using music as a therapeutic tool” “The therapeutic use of music in the pursuit of people’s recovery goals” “The use of music for therapeutic outcomes” “Use of music as a therapeutic tool, providing an additional means for expression, self-soothing and relaxation”</p> <p><u>Music in health processes:</u> “use of music to express feelings, and as an aid to engagement in groups, improving self-esteem” “Using music to re-circuit the brain to unlock physical/mental constraints”</p>
1-5	12	<p><u>Strategy for recovery:</u> “develop client’s skills in using music as part of their recovery” “sometimes to process their experiences in a different medium, using body and music-based approaches to feel better” “Supporting someone to reconnect with music, and / or their emotions through music”. “to aid in treatment and recovery of mental health difficulties” “to explore such things as mood” “to explore underlying psychological issues and facilitate personal growth” “It can also be used as a coping mechanism” “Also using music in a targeted way” “Utilising music to support patients with overcoming physical or emotional illness”</p>
6-10	0	
More than 10	5	<p><u>Strengths-based aspects:</u> “develop skills and strengths, strengthen identity” “used to build on strengths”</p> <p><u>Promote wellbeing:</u> “promote recovery/wellbeing” “emotional wellbeing”</p>

* Not all participants contributed to each theme and therefore total number of quotes may vary from number of participants.

Results for emergent research sub-questions 2: *What patterns can be interpreted*

between clinicians’ frequency of discussion of music and the number of referrals? And 3:

What patterns can be interpreted between clinicians' descriptions of why they refer to music therapy and how often they discuss music with young people? have been combined to help build a more meaningful interpretation of the data. See Tables 3 and 4. Five people indicated that they always discuss music with young people, and of these, two had more than 10 referrals and the remaining three had 1-5 referrals. Their reasons for referring indicated having 'witnessed outcomes' from music therapy previously or having an 'understanding' of how music therapy could support the young person. These answers were the longest and most descriptive of all groups.

Sixteen people indicated that they sometimes discuss music with young people. Five of these had 0 referrals, seven had 1-5, one had 6-10, and 3 had more than 10. All but three of these respondents indicated that at least part of the reason for referral would be if they, the young person or family identified the young person has 'an interest in music'.

Three out of the four people who indicated that they never speak about music with young people indicated 0 referrals, with the remaining one respondent indicating 1-5 referrals. This group's reasons for referring appeared limited and beyond this brevity, did not appear to contain any common theme.

Table 3.

Frequency of discussion of music and number of referrals

Discussion of music in relation to mental health	Number of participants	Number of referrals	Number of participants
Never	4	0	3
		1-5	1
		6-10	0
		More than 10	0
Sometimes	16	0	5
		1-5	7
		6-10	1
		More than 10	3
Always	5	0	0
		1-5	3
		6-10	0
		More than 10	2

Table 4.

Reasons for referral according to frequency of discussion of music

Discussion of music in relation to mental health	Number of participants	Reason for referral (Codes <u>underlined</u> . Quotes from raw data)*
Never	4	<u>Limited full answers:</u> "for the reasons in q2" "Specific interest identified". "Yes, I would"
Sometimes	16	<u>Identify music as an interest:</u> "because they may indicate an interest" "demonstrated a preference for music in their daily life"

		"If they are interested in music in particular" "If they are interested in using music to learn other ways of coping with difficulties" "If they had an interest" "If they have a specific interest" "If they have an existing interest in music" "Interested in music" "Previous Hx of interest in music but not currently engaged in it, passion or interest in music" "Young person, family or I recognise role of music appreciation, creation or performance in promoting recovery" "They identify music as coping strategy"
Always	5	<u>Witnessed outcomes:</u> "I have seen that music therapy can be very effective" "Some young people respond well to music for distraction, creativity or other benefits" <u>Idea of how it could help:</u> "To help me engage young people who are reluctant to talk to mental health professionals" "helping them manage difficult mental health symptoms and explore a new interest in music".

* Not all participants contributed to each theme and therefore total number of quotes may vary from number of participants.

Clinicians were also asked whether or not they would be interested in attending professional development sessions about music and young people's mental health. One hundred percent of participants indicated they would like to attend these sessions. Table 5

shows a breakdown of the preference between attending an information session about music therapy and the programme available at the service and/or learning how to integrate music into their own clinical work with young people.

Table 5.

Breakdown of interest in attending professional development seminars about music and young people's mental health

Options available (participants could select one or both)	Number of participants	Percentage
Music therapy and what the music therapy service offers young people at (name of service)	17	65.38%
How to better understand and address music se for mental	18	69.23%

health, for application in your own sessions with young people		
Total	26	

Discussion

The purpose of this study was to explore how clinicians' perceptions of music therapy influence referrals to the music therapy programme at a youth mental health service. The emergent findings showed patterns between clinicians' descriptions of music therapy and the number of referrals, patterns between clinicians' frequency of discussion of music and the number of referrals, and patterns between clinicians' descriptions of why they refer to music therapy and how often they discuss music with young people. These findings will now be discussed.

The relevance of music therapy as a strength-based approach.

Results demonstrate a trend towards higher rates of referrals when the clinician perceives music therapy as a strength-based practice, or as an adjunct in working towards common recovery goals of the service. It is possible that those with an existing strength-based orientation (and vocabulary) may be more amenable to adjunct therapies such as music therapy, or that those who have a greater understanding of how music therapy can support these strength-based recovery goals are more inclined to refer. This finding illustrates clinicians' support for strengths-based approaches that align with the recovery ethos of the service. Yet the relatively low number of referrals suggests that more clinician's need to be made aware of the relevance. This finding is congruent with other music therapists' experiences of lack of understanding of the profession and a constant need to educate their non-music therapy co-

workers (Bybee, 2017; Hills, Norman, & Forster, 2000; Ledger et al., 2013).

In an international study investigating music therapists' experiences of establishing new positions, Ledger et al., (2013) reported that music therapists felt more accepted by other team members when they explicitly aligned their work to the service's priorities, as well as to other clinicians' ideas about what music therapy could contribute. There has been growing discourse about the suitability of music therapy to recovery-based mental health services (McCaffrey, Carr, Solli, & Hense, 2018). Research investigating service users' experiences of music therapy has highlighted the congruence to recovery principles in supporting strengths and identity outside the illness role (Solli, Rolvsjord, & Borg, 2013). Music therapists have also articulated how the practice can contribute to recovery-based services by enacting core principles of collaboration and mutuality (McCaffrey, Edwards, & Fannon, 2011), as well as the fostering of personal meaning and resources (Grocke, Bloch, & Castle, 2009; Rolvsjord, 2010). However, these arguments have primarily been targeted toward the music therapy audience and it may be time to place greater emphasis on educating neighbouring professions. Some music therapists also believe that advertising or 'marketing' music therapy within services assists in building existing programmes (Jack et al., 2016). Whilst the benefits of an overall greater understanding of music therapy appears clear, the constant need for music therapists to educate and advertise has been critiqued as a process of workplace oppression where music therapists are marginalised into subordinate

roles (Bybee, 2017). Targeting interdisciplinary publications and liaising with workplace systems to take some responsibility for disseminating information to all new staff might be a more empowered approach.

Clinicians as gatekeepers to accessing music therapy.

Based on the findings, referrals to music therapy appear most dependent upon the clinician's engagement in discussing music with the young person. Those with the highest referrals to music therapy were more likely to discuss music with young people. Their answers suggested a greater understanding of how music might benefit young people's mental health. Those who only spoke about music 'sometimes', indicated a more passive approach to referral by waiting to see if the young person demonstrated some existing interest in music. Whilst structuring a young person's care around their individual interests aligns with a recovery approach (Davidson, Tandora, O'Connell, & Lawless, 2009), the inconsistent raising of music with young people suggests the potential role of music in their mental health is often overlooked. These clinicians may be serving as gate keepers by not raising music with young people, denying them the opportunity to demonstrate their interest.

The concept of 'gatekeeper' has been frequently applied in studies exploring young people's access to mental health support (Hunt & Eisenberg, 2010; Rickwood, Deane, Wilson, & Ciarrochi, 2005). In these contexts, gatekeepers are positioned as facilitators in young people's pathways to care, and can include carers, teachers, and even peers (Kelly, Jorm, & Wright, 2007; Villagrana, 2010). Music therapists are frequently in positions where the success of their

programme relies heavily on other clinicians, and so the concept of gatekeeper is more often explored in relation to accessing music therapy within a service. This literature illustrates how music therapists often work to appeal to managers and those in positions of power to support their programme (Ledger et al., 2013), whilst constantly demonstrating the value of their contribution to the team (Choi, 1997; Jack et al., 2017). Edwards (2015) has discussed this approach through a critical feminist lens in which music therapists can be seen as pre-occupied with gaining acceptance to the majority patriarchal view. However, she also acknowledged the reality that, to enable people's access to music, music therapists must in part at least, conform to systems that demand professional credibility. Within the field of youth mental health particularly, although the concept of 'getting in' with a recovery system that espouses egalitarian principles seems paradoxical, gaining recognition with other clinicians and managers can be seen as vital in order to foster young people's access to music. And so, music therapists may choose to consciously pursue this approach.

Strategies for increasing young people's access to music therapy.

In this context, young people's access to music therapy relies heavily on the judgement of other mental health clinicians. Findings from this study illustrate clinicians inconsistent raising of music with young people may impact whether or not music therapy is considered as an option. Whilst it is unlikely that every young person would choose to participate in music therapy, best practice would mean making them aware that this option is available to them. The lack of complete and consistent information sharing suggested in these findings appears consistent

with other studies, where young people have been found to request greater access to information about interventions and services available, particularly alternative options (Simmons, Hetrick, & Jorm, 2011; Wisdom, Clarke, & Green, 2006). One strategy going forward would be to advocate for greater sharing of information with young people about all services available to them.

‘Information sharing’ is a familiar concept in youth mental health, where shared decision making between the young person (and family) and clinicians is a core feature of recovery-oriented care (Simmons & Hetrick, 2012). Increasing clinician’s awareness of the need to discuss music in each young person’s care would address young people’s desire for greater access to information, as well as increase exposure to the option of music therapy. Demonstrating the value of including discussions of music into early sessions may facilitate this process.

Young people seeking mental health support have reported concerns about over medicalisation of their experiences and expressed desires for normalcy (Wisdom et al., 2006). Music presents an everyday normal engagement for young people that is central to youth culture (Bennett, 2000). From clinicians’ perspective, actually engaging young people in the service presents one of the major challenges to supporting young people’s mental health recovery (Simmons et al., 2012). It has been detailed how improving rapport in early sessions may facilitate engagement (French, Reardon, & Smith, 2003), and young people report that experiences of connection and commonalities with clinicians can facilitate this rapport building (Wisdom et al., 2006). Assisting clinicians to see how music offers a normalising option for engaging young people in discussions about preferences and interests,

but in ways that carry relevance to mental health, could facilitate their willingness to include this topic in early clinical sessions.

The response from participants in this study indicating their interest in attending professional development sessions on music and young people’s mental health is encouraging. Those with the highest referrals to music therapy were more likely to indicate that they would prefer a session on how to use music in their own work with young people, compared to those with lower referrals who tended to prefer information sessions about music therapy itself. These findings suggest that initially increasing referrals may rely most heavily on disseminating information about music therapy to clinicians, whereas increasing young people’s access to the health benefits of music more broadly would be possible through training already interested clinicians in how to use music in their practice.

In-services are frequently used as a means of educating staff cohorts about interdisciplinary services available in workplaces. A study of music therapists working in mental health care in the United States found that 64.8% provided in-services to promote their programmes (Silverman, 2007). Gallagher, Huston, Nelson, Walsh and Steele (2001) examined the process of establishing a new music therapy programme in a palliative care hospital and proposed that in order to build referrals, all new staff participate in music therapy in-services when commencing their employment. Although in-services had been provided in this youth mental health facility, these had been infrequent and not systematically embedded in new staff inductions. Collaborating with managers to establish a regular music therapy in-service for all new clinicians could be beneficial and should include information

about music therapy and indications for referral. Periodical workshops could be held to assist clinicians in understanding the relationship between young people and their mental health, and provide strategies for incorporating discussions of music into their own clinical work.

Limitations of the study.

This study offers an initial exploration into interdisciplinary clinicians' perceptions of music therapy, and as such, cannot be seen to represent generalisable findings. Furthermore, the interpretivist approach taken for this study means that the findings are not intended to be generalisable or replicable. They do, however, offer insights that may be useful for clinicians who are attempting to build a practice in similar settings.

Although the small response rate to the survey is within the typical range for survey participation, it does mean that the findings are likely to represent a particular group of clinicians at the service rather than the complete staff profile. It may be that these clinicians are more interested in or supportive of music therapy, which could explain the very high interest in attending professional development seminars on the topic.

Recommendations for future research.

Future studies should focus on exploring this topic in more depth with clinicians at mental health services. This would be possible through open-ended interviews that allow for emergent conversation and topics. An interview design would also allow for greater exploration of clinicians' perceptions of music therapy in relation to their own philosophical approach to mental health care and how they feel music therapy might benefit the young people they work with.

Implications for music therapy clinicians.

The findings from this study suggest that in order to have a flourishing programme, music therapists working in mental health contexts need to not only possess all the relevant clinical skills for the job, but also equip themselves with skills required to educate other clinicians about their profession, advertise what they offer, and advocate for support at more systematic levels. Offering in-services to provide information about music therapy programmes as well as more in-depth workshops to build clinicians' skills in integrating music into their work might best address the issue of referrals as well as young people's access to music.

This study also shows that, in this service at least, interdisciplinary clinicians appear interested in learning more about music and young people's mental health. Although sharing information about music therapy might be the fastest way to increase referrals, for some clinicians taking a broader view and supporting them to integrate music into their own work may actually best support young people's access to music as a mental health resource.

Conclusion

This study highlights the central role that clinicians play in young people's access to music therapy, and the success of a music therapy service. Findings suggest that increasing clinicians' understanding about the strength-based aspects of music therapy and how the practice aligns with recovery goals of the service, may increase young people's opportunities to access music therapy if they choose.

Clinicians may not always overlook music when failing to raise the topic with young people but might instead feel ill-equipped to

discuss music in a way that seems meaningful to mental health. Running professional development sessions to upskill clinicians about the relationship between music and mental health, and how to identify those young people who may be indicated for referral to music therapy, could support greater information sharing about the role of music in youth mental health services. Supporting clinicians to integrate music into their discussions with young people would not only serve to increase potential referrals to music therapy but may also increase young people's awareness of the positive potentials of music in managing mental health, as well as offer several engagement benefits outside of music itself. Although there has been critique of music therapists engaging in these educative processes at the ground level, establishing formal avenues through which this can occur for all new staff, might facilitate more sustainable awareness of music therapy programmes, whilst making services accountable for upskilling their staff about all services available.

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The impact of blended learning on professional identity formation for post-graduate music therapy students

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In plain language:

Despite the growing presence of Blended Learning in music therapy education, there is limited research which investigates blended learning's impact on professional identity formation for music therapy graduates. This comparative study reports on the differences between the experiences of blended learning and traditional on-campus Master of Music Therapy graduates at the University of Melbourne. Forty-two music therapy graduates completed a survey examining the impact of their study experiences on early professional identity formation. Results indicated no statistically significant differences between blended learning and on campus graduates in the formation of professional identity. Recommendations for researchers and educators are provided regarding areas of focus in the professional identity formation in the blended learning mode for music therapy students.

Original research

The impact of blended learning on professional identity formation for post-graduate music therapy students

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Abstract

The expansion of technology use in higher education creates new opportunities to access music therapy training for people living in the vast country of Australia. The emergence of the blended learning (BL) study modality (an integration of online digital media and intensive face-to-face teaching) at the University of Melbourne offers the Master of Music Therapy course to students living in rural and interstate locations. While BL study has existed in healthcare training and education for several years, there is a scarcity of literature exploring the benefits and challenges of this mode of training for music therapy. This study aimed to identify and examine the impact of the BL program on professional identity formation of new music therapy graduates. A comparative study design exploring differences between the experiences of BL and traditional on-campus (OC) alumni was conducted. Forty-two music therapy graduates from the University of Melbourne completed a survey examining the impact of their study experiences on early professional identity formation. Survey results indicate no statistically significant differences between BL and OC graduates in the formation of early professional identity. Recommendations for researchers and educators are provided regarding areas of focus in professional identity formation in the BL mode for music therapy students.

Keywords: Blended learning, professional identity, music therapy, higher education

Background

The expansion of technology use in higher education has the potential to attract greater diversity in student cohorts, more variety in learning tasks, and autonomy for both teacher and students within the learning process (Biggs & Tang, 2011). The emergence of

technology has therefore also created new opportunities for the training of music therapists. Blended learning (BL) in higher education refers to a combination of traditional face-to-face teaching and technology-mediated teaching. It is sometimes referred to by related terms such as “hybrid” and “mixed-mode” learning (Graham, 2006). The BL program at the University of Melbourne was established in 2010 and offers the Master of Music Therapy

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course to students across Australia, thus providing better access to training to those people in geographically diverse locations. BL goes beyond using modern standard technology-based teaching tools. The BL program aims to foster supportive teacher and peer relationships delivered in both intensive face-to-face teaching seminars and via online learning tasks (details of the coursework content and structure has been previously published in Clark & Thompson, 2016). However, the BL approach has also created new concerns to the music therapy profession. Traditional approaches to music therapy education consider interpersonal skills and experiences as integral to the process of healthy professional identity formation (O'Brien & Goldstein, 1985). Therefore, the impact that the BL study mode has on professional identity formation requires investigation.

Healthy professional identity has been described as integral to the future success of an individual's professional career (Caza & Creary, 2016; Dutton, Roberts, & Bednar, 2010; Siebert & Siebert, 2005; Warren & Rickson, 2016). Healthy professional identity formation is crucial for individuals who work in human service fields, as they are required to closely interact with other human beings (Nelson & Jackson, 2003). Professional identity is grounded in the personal beliefs, values, goals and experiences relative to a person's chosen profession (Ibarra, 1999). The framework of a profession serves as a reference point for individuals as they establish their position, make executive decisions in relation to their work and engage in professional development (Brott & Myers, 1999). Given the inherent link to personal identity, professional identity can also be used as a framework for supporting positive self-concept (Caza & Creary, 2016).

Receiving feedback during training serves as a vital contributor to the formation of professional identity. O'Brien and Goldstein (1985) originally described external feedback and validation as a crucial component of professional identity formation within the education stage and early experiences of being a music therapist. Receiving constructive feedback from experienced clinicians can lead to feelings of competency and confidence in the novice therapist (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006; Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005). Within the music therapy community, educators have previously voiced concerns about whether online learning provides adequate opportunity for teachers to offer timely and personalised feedback to learners (Vega & Keith, 2012). This concern is not surprising given that training aligned with psychotherapy approaches traditionally privileging group discussions, experiential learning, constructivist learning tasks, and reflexivity (Murphy, 2007).

Connection to the community of a profession is also crucial to the process of professional identity formation. Within a creative-arts therapy community, individuals can demonstrate and share skills exclusive to their profession to strengthen the identity of their profession in the work place (Feen-Calligan, 2012). This community activity provides a strong sense of professional frames and articulates the area of expertise for individuals (Caza & Creary, 2016). The understanding that individual contributions can impact the holistic identity of the profession may strengthen the sense of belongingness within the profession. Within the music therapy profession, a strong sense of professional identity may also contribute to music therapists' commitment to the

profession on a systemic level (Edwards, 2015).

Fostering an adequate sense of community in online classrooms is a concern for many educators (Biggs & Tang, 2011), and this perhaps explains some of the hesitation of music therapy educators to embrace online pedagogy (Story, 2014). In face-to-face classes, music therapy educators are skilled in creating flexible learning tasks that foster connectedness and a sense of community between students and teachers (Story, 2014). In contrast, Allan and Lewis (2006) contend that online learning communities can positively impact individuals beyond the formal education period, since these communities can successfully provide opportunities for ongoing professional development and sustainable professional relationships.

Another important aspect of professional identity formation is the professional's level of confidence in the theoretical and practical application of their skills. The ability to translate theory into practice enables individuals to develop flexibility and respond with contextually appropriate practice (Rodgers, 2012). According to Clements-Cortes (2015), many music therapy students worry that they won't be able to translate theory into practice and need direct support from teachers and peers to develop their skills. A robust sense of self-belief has been described as an important component of training for music therapy students, since professional identity formation is likely to be hindered without a feeling of competence (Baker & Krout, 2011). Online learning aims to provide opportunities for case-based group work via technologies which promote social interaction and critical thinking for music therapy students (Clark & Thompson, 2016). However, it is unknown whether these online

activities foster similar levels of confidence in the students compared to face-to-face experiences. Insights from research conducted with other healthcare professionals such as physicians, nurses, and allied health staff, indicate that online learning can be as effective as face-to-face learning in providing active learning tasks and promoting the acquisition of clinical skills (Cook et al, 2010).

The absence of a healthy professional identity formation can result in a multitude of negative implications for an individual's career. Languishing professional identity can lead to feelings of confusion concerning work roles, unclear boundaries, and low self-efficacy (Alves & Gazzola, 2011). Additionally, the transition from student to music therapist is a challenging process with complex changes in identity. Beyond the early career phase, music therapists may also experience a lack motivation to engage in professional development due to an absence of professional identity (Smyth & Edwards, 2009).

In music therapy training, clinical placements are considered fundamental for the development of professional identity (Clements-Cortes, 2015; Wheeler, 2002). These experiences offer insight into the professional identity that students wish to develop within the profession as they develop confidence in self-concept guided by an experienced supervisor (McKenzie & Murray, 2010). Clements-Cortes (2015) suggests that clinical placement supervisors and educators provide opportunities for music therapy students to work on their perceived weaknesses within their training and clinical placements. The BL program allows students to reside in their local context and avoid relocation. This flexibility enables students to develop supportive networks close to where

they may potentially practice music therapy in their local community (Clark & Thompson, 2016).

The literature identifies the importance of developing a healthy professional identity in order to sustain therapists in their careers and foster a sense of belonging to a professional community. Professional identity formation begins during training, and requires quality feedback experiences, validation of skill development, a thriving sense of community, a sense of confidence in theoretical and practical application of skills, and positive clinical training experiences. With limited research conducted in this area, the following exploratory research question was posed, along with four sub questions: Is there a difference in the formation of professional identity between on-campus (OC) graduates and blended learning (BL) graduates of the Master of Music Therapy course at the University of Melbourne, in terms of: a) perceived quality of feedback/validation throughout training; b) perceived sense of community throughout training; c) quality of experiences during clinical training practicum, and d) perceived confidence in ability to apply theoretical knowledge to practice as new graduates.

Method

This study aimed to investigate the impact of BL study on the professional identity formation of new graduates from the University of Melbourne. This study is a mixed-methods comparative study exploring differences in survey responses to both quantitative and qualitative questions designed to address the research questions.

Participants and inclusion criteria.

The BL program at The University of Melbourne commenced in 2010, with small

cohorts ranging from 4 - 9 students per year since commencement ($M = 6.2$, $SD = 2.58$). We therefore anticipated a pool of 25 BL students in the period from 2010 up until the time of recruitment. In order to focus on the comparative experience of new BL and OC graduates, participants meeting the following inclusion criteria were invited to complete the survey: 1) graduated from The University of Melbourne during the period 2012-2016; and 2) currently registered with the Australian Music Therapy Association (AMTA) and practicing music therapy in Australia. Participants were excluded from the study where they had not trained full time or wholly in one modality.

Recruitment.

Participants were invited to participate in the survey via the AMTA's weekly newsletter, emailed to the member database. In addition, snowball sampling was permitted, where Registered Music Therapists (RMTs) could forward the research invitation to other AMTA members. A follow-up reminder was sent two weeks after the initial advertisement via the weekly newsletter.

Given the unequal numbers of BL and OC new graduates in this time period, the first 20 responses to the survey from the OC cohort were included in order to create equal groups for statistical analysis. Ethics approval was provided by The University of Melbourne (ID number: 1238647.3). The survey was conducted via the online platform, Survey Monkey™. Participants indicated their consent by clicking "I agree" on the opening screen and progressing to the first survey question. All responses remained anonymous. The concept of professional identity was defined in an introductory paragraph of the recruitment email to ensure the concept was clear.

The online survey.

A survey design with closed ended questions was developed to explore the participants' perception of their professional identity formation. The survey contained 19 items devised by the authors and based on existing literature that identifies various factors likely to contribute to healthy professional identity formation (See Appendix A). The items were then organised into four themes as follows: feedback and validation (O'Brien & Goldstein 1985; Warren & Rickson 2016); sense of community (Caza & Creary, 2016; Feen-Calligan, 2012; Story, 2014); positive clinical training experiences (Clark & Thompson, 2016; Clements-Cortes, 2015; McKenzie & Murray, 2010; Wheeler, 2002); and confidence in theoretical and practical application of skills (Baker & Krout, 2011; Clements-Cortes, 2015; Rodgers, 2012).

Participants were first asked to provide deidentified demographic information such as gender, age and residing state while studying music therapy. Other demographic information included year of graduation, mode of study (OC or BL) and any previous professional roles before training to be a music therapist. Participants then responded to statements regarding clinical, pedagogical and personal experiences throughout their training to determine differences and similarities in each learning mode. Of note is that clinical placements for both cohorts are supervised by an on-site Registered Music Therapist, and also supported by tutorials at the university. BL students accessed the university tutorials both online and during intensive study weeks, with no difference in the mode of on-site supervision (for more details, see Clarke & Thompson, 2016). Participants were required to rate their responses using a five-point Likert scale. A

final free-text option was included for participants to add further comments and reflections on professional identity formation.

Data analysis.

The survey was designed as an initial exploration of this topic in order to capture objective data from as many BL students as possible. The BL group was therefore treated as the experimental group and the OC group as the control. This study aimed to identify the differential experiences between the two groups, and therefore aligns with a post-positivist epistemology (Curtis, 2016). While the first author was a current BL student at the time of the study, and the second author was a university staff member, the researchers remained blind to the participant identities. The quantitative data was not inspected prior to statistical analysis.

Quantitative analysis. Survey responses were analysed according to the four themes constructed by the authors: Feedback/Validation, Sense of Community, Clinical Experiences and Confidence in Theoretical and Practical Application. The scores for each question within a theme were added together, and then an average score per person per theme was calculated. Mean differences in BL and OC survey ratings for each theme were analysed using two-sample *t*-tests to determine statistical significance using XLSTAT software for Microsoft Excel.

Qualitative analysis. Participants were invited to provide free-text responses to the last question of the survey. These statements were analysed using a 6-phase qualitative thematic analysis indicated by Braun and Clarke (2006): 1) Familiarisation with the data, which includes immersion, re-reading and active reading of the data. 2) Generating

initial codes, producing codes which identify a feature of the data that appears meaningful and interesting. 3) Searching for themes, which involves organising the codes into overarching themes. 4) Reviewing themes, which includes re-reading and refining the themes. 5) Defining and naming themes, which identifies the essence of each theme and if there are sub-themes. 6) Producing the report, which involves the final analysis of the report.

Results

Demographic information.

A total of 44 participants completed the online survey. However, two respondents were omitted as they did not complete the full survey. Both BL ($n = 20$) and OC ($n = 22$) graduates were recruited. Participants graduated from the Master of Music Therapy course at the University of Melbourne from the years 2012 to 2016. The majority of respondents were female ($n = 39$), and the modal age-bracket of respondents was 26 – 30-years-old. Previous professions of respondents included students ($n = 14$), musicians ($n = 12$), music educators ($n = 7$) and other human service fields ($n = 7$).

The results of the statistical analyses are presented in Tables 2-5. The results are sorted into the four identified themes of professional identity formation: (1) Feedback and Validation; (2) Sense of Community; (3) Clinical Experiences; and (4) Confidence in Theoretical and Practical Application.

Quantitative results

The t -tests indicated there was no statistically significant difference between OC and BL mean scores on professional identity formation across any of the four themes, either at the item or theme level.

Table 1

Survey respondents' demographics.

	BL	OC
Gender		
Male	2	3
Female	18	19
Residing State		
NSW	6	0
NT	1	0
QL	3	0
SA	4	0
TAS	1	0
VIC	3	22
WA	3	0
Age		
21-25	4	2
26-30	8	12
31-35	6	3
36-40	0	2
41-45	2	2
46-50	0	1
Graduating Year		
2013	5	3
2014	2	3
2015	6	6
2016	7	7
Profession Before Training		
Student	6	8
Music Educator	4	3
Musician	6	4
Health Professional	1	0
Other	3	7

Theme 1: Feedback and validation

Analysis revealed no statistically significant difference between BL ($MD = 3.44$, $SD = 0.02$) and OC ($MD = 3.29$, $SD = 0.20$) students survey scores on Feedback and Validation at the theme level ($t(4) = 1.03$, $p =$

0.35) or at the item level (see Table 2). Overall, scores in this theme revealed generally small differences between BL and OC responses (< 0.20). The largest reported difference between BL and OC in this theme was related to Question 18: effective communication with other team members and its impact on professional identity. While the difference was not significant, the BL students scored higher on this question. Previous qualitative research highlights that music therapy students value learning effective ways to communicate with other healthcare staff whilst on clinical placements (Clements-Cortes, 2015). Perhaps the fact that BL students have fewer opportunities to network

face-to-face with lecturers and peers encouraged them to make the most of these interactions on placement.

Theme 2: Sense of community. Analysis revealed no statistically significant difference between BL ($MD=3.12$, $SD = 0.32$) and OC ($MD = 3.30$, $SD = 0.64$) survey scores on Sense of Community at the theme level ($t(4) = -1.5$, $p = 0.19$) or at the item level (see Table 3). Scores in this theme revealed generally small differences between BL and OC responses (< 0.20), with the exception of Question 10 focused on professional

Table 2

Two sample t-test for theme 1: Feedback and validation.

	BL Mean	SD	OC Mean	SD	p-value
Question 8. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.60	0.49	3.68	0.47	0.08
Question 9. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.60	0.49	3.50	0.72	0.10
Question 14. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.40	0.58	3.24	0.76	0.16
Question 17. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.40	0.58	3.50	0.72	0.10
Question 18. During my clinical placements, I felt I could communicate effectively with other team members (allied health, medical staff etc.) which helped me develop a strong sense of professional identity	3.20	0.75	2.55	0.99	0.65

Scale: 1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neutral, 4 = Somewhat Agree, 5 = Strongly Agree.

relationships with RMTs beyond their supervisor. While not statistically significant, survey scores revealed that BL respondents did not generally form strong professional relationships with RMTs in the broader community ($M = 1.70$, $SD = 1.45$). This is congruent with previously identified

educators' concern for the limitations of online learning for creating meaningful relationships (Biggs & Tang, 2011), since BL students were not present for classes with guest lecturers where informal discussions with RMTs beyond the teaching staff might occur.

Table 3

Two sample t-test for theme 2: Sense of community.

	BL Mean	SD	OC Mean	SD	p-value
Question 8. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.60	0.49	3.68	0.47	0.08
Question 9. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.60	0.49	3.50	0.72	0.10
Question 10. During my training, I formed strong professional relationships with registered music therapists in the community (who weren't my supervisors) that helped me develop a strong sense of professional identity	1.70	1.45	2.32	1.10	0.62
Question 11. During my training, being a part of the student community (Blended Learning, On Campus or both) helped me develop a strong sense of professional identity	3.30	0.64	3.50	0.50	0.20
Question 16. During my clinical placements, I formed strong professional relationships with my music therapy supervisors that helped me develop a strong sense of professional identity	3.45	0.80	3.55	0.72	0.10

Scale: 1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neutral, 4 = Somewhat Agree, 5 = Strongly Agree.

Theme 3: Clinical experiences. Analysis revealed no statistically significant difference between BL ($MD = 3.37$, $SD = 0.01$) and OC ($MD = 3.27$, $SD = 0.26$) survey scores on Positive Clinical Experiences at the theme

level ($t(3) = 0.5$, $p = 0.60$) or at the item level (see Table 4). Again, scores on items in this theme revealed generally small differences between BL and OC responses (< 0.20). Of importance to this theme is Question 15 which

relates to the development of meaningful relationships with clients on clinical placement as a source of professional identity. Mean scores for both cohorts revealed that all participating graduates generally agreed that this was a consistent positive experience for

them during their course. These results are reminiscent of previous qualitative results indicating the importance of therapist-client interactions and relationships on identity (Wheeler, 2002).

Table 4

Two sample t-test for theme 3: Clinical experiences.

	BL Mean	SD	OC Mean	SD	<i>p</i> -value
Question 15. During my clinical placements, I experienced deeply meaningful relationships with many clients which helped me develop a strong sense of professional identity	3.55	0.80	3.64	0.57	0.09
Question 16. During my clinical placements, I formed strong professional relationships with my music therapy supervisors that helped me develop a strong sense of professional identity	3.45	0.80	3.55	0.72	0.10
Question 17. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.40	0.58	3.50	0.72	0.10
Question 18. During my clinical placements, I felt I could communicate effectively with other team members (allied health, medical staff etc.) which helped me develop a strong sense of professional identity.	3.20	0.75	2.55	0.99	0.65

Scale: 1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neutral, 4 = Somewhat Agree, 5 = Strongly Agree.

Theme 4: Confidence in theoretical and practical application. Analysis revealed no statistically significant difference between BL ($MD = 3.48$, $SD = 0.04$) and OC ($MD = 3.33$, $SD = 0.21$) survey scores on Confidence in Theoretical and Practical Application at the theme level ($t(5) = 1.14$, $p=0.30$) or item level (see Table 5). Survey scores in this theme revealed a higher variance in differences between both cohorts, albeit not statistically significant. BL scores on Question 13

revealed the highest ratings in the cohort's responses ($MD = 3.85$, $SD = 0.36$), indicating the relatively high prevalence of course-based learning tasks that supported personal development and professional identity. This is mirrored in previous findings where music therapy students felt that online learning provided transformative learning unique to each student's needs (Story, 2014). Additionally, music therapy students have previously highlighted the importance of the

integration of online learning activities to support the development of various practical skills (Clark & Thompson, 2016).

Qualitative results.

Feedback and validation. There were several free-text responses indicating feedback and validation were valued throughout training. OC-Respondent-2 highlighted the importance of communication

Table 5

Two sample t-test theme 4: Confidence with theoretical and practical application.

	BL Mean	SD	OC Mean	SD	p-value
Question 8. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.60	0.49	3.68	0.47	0.08
Question 9. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity	3.60	0.49	3.50	0.72	0.10
Question 12. Overall, the Music Therapy course provided relevant case-based learning activities (either online or on campus) that helped me develop a strong sense of professional identity	3.30	0.90	3.55	0.50	0.15
Question 13. Overall, the Music Therapy course provided useful learning tasks that helped me reflect constructively on my personal development towards becoming a therapist	3.85	0.36	3.68	0.55	0.17
Question 14. Overall within course subjects, I felt that my teachers provided me with valuable feedback about my progress towards developing therapeutic competencies that helped me acquire a strong sense of professional identity	3.40	0.58	3.14	0.76	0.26
Question 18. During my clinical placements, I felt I could communicate effectively with other team members (allied health, medical staff etc.) which helped me develop a strong sense of professional identity.	3.20	0.75	2.55	0.99	0.65

Scale: 1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neutral, 4 = Somewhat Agree, 5 = Strongly Agree

with other RMTs to assist in identifying their individual strengths to reconcile a feeling of division in professional identity formation:

“During my third clinical placement in an unfamiliar setting, I developed a very strong sense of professional identity, however in my final clinical placement, which was in the area in which I worked prior to my music therapy study, I found it difficult to hold on to my fledgling professional identity. I ended up creating two different identities in the same body, which was complicated. Personally, and also through discussions with other music therapists in similar situations, I have worked towards reconciling the two, because I am only one person, and I try to utilise the strengths that come from having expertise in both music therapy and my previous work, in a complementary and positive way”.

In addition, OC-Respondent-7 commented how feedback from supervisors on clinical placement was important for their professional identity development and the course supported development of self-awareness as a foundation for professional identity to form once commencing work after training.

Sense of community. Four free-text responses emphasised the importance of connecting with the larger community of music therapists to provide support for professional identity formation. OC respondents highlighted the importance of connectedness within both student and music therapist communities. OC-Respondent-1 indicated the strong sense of community which was established with both BL and OC as a holistic community, was a key contributor to professional identity formation. OC-

Respondent-6 identified active agents within the music therapy community that supported healthy professional identity development, stating:

“For me, being able to be involved in AMTA events such as the conference, symposiums and state committee (and PD [professional development] events available to student members of AMTA) also helped me to network and feel involved in the profession, thus helping the formation of my professional identity”.

OC-Respondent-10 acknowledged that the long-term relationships established through study continue to contribute to ongoing professional identity development. However, BL-Respondent-2 suggested there are difficulties for those living in remote areas in relation to experiencing a sense of community, consequently hindering healthy professional identity formation:

“I feel that distance from metropolitan areas (where the majority of music therapists are living and working) hinders the development of a strong sense of professional identity. Whilst I am actively involved in the AMTA Facebook groups and attend the national conference each year, it is my clinical placement supervisors that I have been able to form the strongest relationships with, and who continue to impact most strongly upon the development of my professional identity”.

Clinical experiences. This theme received the highest number of comments across both BL and OC participants. Several respondents acknowledged the impact of clinical placement supervisors on professional identity formation. BL-Respondent-5 described how being the expert in the work

environment supported healthy professional identity formation: *“Although the Masters course played a role in developing my professional identity as a music therapist, my experience working as an RMT [on placement] has had a more significant impact. I believe that only with time and experience comes a strong professional identity”* (BL-Respondent 5). In contrast, OC-respondent-9 emphasised the impact of the therapeutic relationships established with clients on professional identity formation over relationships with colleagues: *“Feels like gaining a strong sense of identity in therapeutic relationship rather than in the allied health team”* (OC-Respondent 9).

Confidence in theoretical and practical application. Several participants commented on the impact of their confidence in theoretical and practical application of knowledge on professional identity formation. Two sub-themes emerged in this theme.

Importance of class discussions. Two BL respondents indicated that they valued face-to-face class discussions, and considered that they made an important contribution to developing their sense of professional identity. In contrast to on-line learning tasks, face-to-face class discussions that took place during intensive study weeks on campus provided students with opportunities to articulate their ideas and understand how theory may be translated into practical application *“I found course discussions held on campus most useful and relevant to my professional identity formation and are what have stayed with me more-so that any work undertaken online”* (BL-Respondent 1).

Translation into clinical application. BL-Respondent-3 and OC-Respondent-7 contend

that healthy professional identity formation predominantly relies on clinical experience in the subsequent years after graduation. Both respondents posit that music therapy training acts as a forum for personal identity development and understanding theoretical concepts. They indicate this theoretical knowledge acts as a foundation for professional identity formation, allowing graduates to focus more on practical application once commencing practice as a RMT.

“I found that professional identity formation occurred primarily in the first few years after graduation. Feedback from lecturers, teachers on therapeutic skill development I felt was minimal as the focus was more on academic skill due to the course structure. There were many more opportunities to get this feedback from supervisors and I was lucky enough to have a couple of brilliant supervision experiences. I would say though that the course did a brilliant job of teaching me a lot about myself as a person, my values and beliefs which then created a solid grounding for me then to develop my professional identity once I had entered the workplace” (OC-Respondent-7).

Discussion

From both the quantitative and qualitative data, the experience of students in both BL and OC programs are similar in terms of post-graduate professional identity formation. Results of this study indicate that the BL mode offered at the University of Melbourne offers similar opportunities for healthy professional identity formation to those provided in the traditional on-campus modality. Importantly, the BL mode of study does not appear to hinder professional identity formation for music therapy graduates.

Both BL and OC cohorts reported that feedback and validation played an important role in professional identity formation. Feedback and validation from a variety of people was valued, including university teachers, clinical placement supervisors, peers and other professionals encountered during placement. Participants reported that feedback supported the development of their critical thinking, a crucial component of professional identity development noted by the literature (Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005). These results reinforce the qualitative findings of Clark and Thompson (2016) where students also identified feedback and validation as an important element of the BL process. Regarding online learning activities, constructive feedback delivered in a timely manner is identified as a vital component for higher education students (Hattie & Timperley, 2007). In addition, feedback and validation has been recognised as a core component of professional identity for music therapists in personal, professional and collective domains (Warren & Rickson, 2016).

Similar to the findings of Allan and Lewis (2006), the quantitative survey results indicate that the BL mode can successfully foster a sense of community. While not statistically significant, one small point of difference in the responses was that BL participants reported having weaker relationships with RMTs in the local community during their training. Further investigation is needed to better understand the placement experiences of BL students; however, it may be that BL students place higher importance on sustaining relationships with student communities via technology as they are geographically dispersed. Online forums provide a space where students can establish meaningful, long-term professional

relationships with peers and teachers (Clark & Thompson, 2016). In addition, the qualitative data suggests that online communities can be inclusive rather than exclusive to either BL or OC cohorts. Strong peer-peer and peer-teacher relationships have been recognised as a crucial component to the online learning process, as students provide support, engage in collaborative thinking and motivate one another (Biggs & Tang, 2011). A sense of belonging to a community has also been highlighted in the music therapy literature, with on-campus students describing the importance of support from their student community to overcome challenges related to their training (Smyth & Edwards, 2009). Considering there is a higher risk of isolation for BL students (Partridge, Ponting, & McCay, 2011), a sense of community is an important component not only for developing professional identity, but also for the development of the music therapy profession on a systemic level and how it may be perceived in the broader healthcare system (Edwards, 2015).

The quantitative and qualitative data from both cohorts indicated that positive experiences during clinical placement were crucial to the formation of a healthy professional identity. In particular, the qualitative results revealed that clinical placement supervisors played an important role in this process. This finding is congruent with previous studies that have identified the importance of supervisor feedback on the development of clinical practice skills (Wheeler, 2002). Further, it is important for students to gain clinical experience that is relevant to their local community as this provides contextual knowledge around how music therapy fits within the broader system (Edwards, 2015). As the music therapy profession continues to evolve in a variety of

clinical areas, music therapists are required to demonstrate adaptability (Warren & Rickson, 2016). An advantage of BL study is that students can stay in their local area and therefore receive feedback and validation relevant to their context. This contextual knowledge may help BL students to more clearly understand local professional issues and develop a robust professional identity. This initiative encourages newly graduated music therapists to practice in a more contextually relevant way and establish a clear professional identity in their work place.

Both BL and OC graduates indicated that their level of confidence in applying theory to practice helped support healthy professional identity formation. While the challenge of putting theory into practice has been previously expressed as a prominent fear for students (Clements-Cortes, 2015; Baker & Krout, 2011), the ability to successfully translate theoretical concepts into practice allows for transformative learning to take place (Story, 2014). Transformative learning theory emphasises that experiential learning and autonomy supports students to increase their knowledge by engaging with their environment and trying-out concepts introduced in training. While the mere acquisition of skills does not wholly support healthy professional identity formation (Francescato, Mebane, Porcelli, Attanasio, & Pulino, 2007), successfully putting theory into practice in scaffolded activities allows students to take on the role of the professional in the clinical situation (Hramiak, Boulton, & Irwin, 2009). Online learning activities are another way to provide transformative learning experiences. For example, students can assess videos of clients and develop a music therapy program for a hypothetical situation. In this way, the online activities also support students to put theory into practice

knowing that there will not be any repercussions on 'real' clients. The results from this study indicate that BL graduates developed similar levels of confidence in the application of theory to practice as OC graduates, and these positive experiences are likely to have had an impact on professional identity formation (McKenzie & Murray, 2010).

While the online learning activities were viewed positively, it is important to highlight that the BL graduates also valued the opportunities for face-to-face learning during intensive on-campus seminars and clinical placements. Technology is recommended as a supporting tool rather than the focus of education (Goodyear & Ellis, 2008). Therefore, these results suggest that a wholly online music therapy course may not meet the needs of learners, since face-to-face interaction and problem-based learning are both core considerations in the BL program (Clark & Thompson, 2016).

Implications for training and research

This study highlights that further research is needed to better understand the experiences and needs of students who engage in different modes of study in practice-based professions such as music therapy. Considering the unique and personal nature of professional identity formation, in-depth interviews may reveal more about how different learning experiences prepare students for the work force. A deeper understanding of the challenges of BL study, such as isolation, limited face-to-face instruction, and meaningfulness of online learning tasks, may help educators and supervisors to better support student learning.

While this study has focused on student perspectives, further research may aim to explore the quality of teacher engagement in

BL programs. Both BL and OC graduates reported that feedback and validation from teachers and supervisors was important in developing their professional identity. However, research exploring online learning experiences have found that students often take a more surface-level approach to assessment tasks if they perceive that will be sufficient (Goodyear & Ellis, 2008). Teacher expectations, the depth of students' engagement with course materials, and meaningful social interactions, are integral to the quality of learning that takes place in either online or on-campus study (Ellis, Ginns, & Piggot, 2009). Further, perceived online challenges may be exaggerated due to traditional face-to-face pedagogy being over-romanticised. Therefore, it could be valuable to further explore both teacher and student perspectives of the BL programs to support continued curriculum innovations in higher education.

Limitations

The data collected from this study reflects the impact of BL on professional identity formation from the perspective of graduates from the Master of Music Therapy at The University of Melbourne and therefore do not necessarily represent student's experiences of BL or online learning in music therapy in other cities or countries. While the sample size of this study is small, the response rate of the BL population was high at 75%. Considering the ongoing development of BL pedagogy at The University of Melbourne, recent graduates may be more likely to report on the positive impact that BL had on professional identity formation. In addition, factors such as teacher/facilitator differences between the cohorts, learners' prior experience with online learning, and the specifics of the teaching technologies were not captured in the survey

data. Future studies should aim to better delineate these factors, since it is possible that any differences in professional identity formation may be attributable to circumstances beyond the mode of study.

Conclusion

This study aimed to identify and examine the impact of a specific BL program on professional identity formation of new music therapy graduates. A comparative study design revealed no statistical difference between BL and OC cohort's survey scores on the impact of training on healthy professional identity formation. Key findings of this study reinforce previous research in this area indicating that BL fosters similar outcomes for professional identity formation compared to traditional OC learning. Further research is needed to develop a better understanding of the experiences and needs of students who engage in different modes of study in music therapy.

Therefore, this study indicates that music therapy graduates who have studied the Master of Music Therapy course at The University of Melbourne through the BL program experience similar challenges as their on-campus peers in terms of professional identity formation. Technology in higher education pedagogy continues to expand, and so it is necessary to consider the impact of different modes of study for students training to become music therapists. Participants in this study reported that BL leads to similar outcomes compared to traditional on-campus learning in the development of professional identity. While further research is needed, the results from this pilot study indicate that BL programs in music therapy should be further explored in order to provide greater access to music therapy study for learners who face

challenges accessing more traditional on-campus course delivery options.

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Appendix A

Music Therapy Graduates Survey

Note: For this report, the format of the survey has been changed.

Demographic Questions

1. What is your gender?
 - a. Male
 - b. Female
 - c. Rather not say
 - d. Other (please specify)
2. What is your age?
 - a. 21-25
 - b. 26-30
 - c. 31-35
 - d. 36-40
 - e. 41-45
 - f. 46-50
 - g. 50+
3. Where did you attend Music Therapy training?
 - a. University of Melbourne
 - b. University of Queensland
 - c. University of Technology Sydney
 - d. University of Western Sydney
 - e. I did not attend a University Level Music Therapy course
4. Which state/territory did you live in during your Music Therapy studies?
 - a. Australian Capital Territory
 - b. New South Wales
 - c. Northern Territory
 - d. Queensland
 - e. South Australia
 - f. Victoria
 - g. Western Australia
5. What year did you graduate from the Music Therapy course?
 - a. Before 2012
 - b. 2012
 - c. 2013
 - d. 2014
 - e. 2015
 - f. 2016
6. Which modality did you study?
 - a. Blended Learning

- b. On Campus
- 7. What was your profession before training to be a Music Therapist?
 - a. Student
 - b. Music Educator
 - c. Musician
 - d. Health Professional
 - e. Other (please specify)

Professional Identity Formation Statements

Unless otherwise stated, statements under the Professional Identity Formation section were answered using Likert scale ranging from 1 to 5, with responses defined as: 1 – Strongly Disagree, 2 – Somewhat Disagree, 3 – Neutral, 4 – Somewhat Agree, 5 – Strongly Agree.

- 8. During my training, I participated in thoughtful discussions (online or in person) with my classmates about professional topics that helped me develop a strong sense of professional identity.
- 9. During my training, I participated in thoughtful discussions (online or in person) with my lecturers/teachers about clinical practice that helped me develop a strong sense of professional identity.
- 10. During my training, I formed strong professional relationships with registered music therapists in the community (who weren't my supervisors) that helped me develop a strong sense of professional identity.
- 11. During my training, being a part of the student community (Blended Learning, On Campus or both) helped me develop a strong sense of professional identity.
- 12. Overall, the Music Therapy course provided relevant case-based learning activities (either online or on campus) that helped me develop a strong sense of professional identity.
- 13. Overall, the Music Therapy course provided useful learning tasks that helped me reflect constructively on my personal development towards becoming a therapist.
- 14. Overall within course subjects, I felt that my teachers provided me with valuable feedback about my progress towards developing therapeutic competencies that helped me acquire a strong sense of professional identity.
- 15. During my clinical placements, I experienced deeply meaningful relationships with many clients which helped me develop a strong sense of professional identity.
- 16. During my clinical placements, I formed strong professional relationships with my music therapy supervisors that helped me develop a strong sense of professional identity.
- 17. During my clinical placements, I felt my supervisors provided valuable feedback about my strengths and areas needing development that helped me acquire a strong sense of professional identity.
- 18. During my clinical placements, I felt I could communicate effectively with other team members (allied health, medical staff etc.) which helped me develop a strong sense of professional identity.

Free Text Responses

19. Are there any other further comments would you like to add about professional identity formation? Please take care to de-identify yourself as these answers will be used in research.

Appendix B

Free Text Responses and Thematic Analysis

Blended Learning Respondents	Themes
I found course discussions held on campus most useful and relevant to my professional identity formation and are what have stayed with me more-so than any work undertaken online.	3. Theoretical and Practical Application
I feel that distance from metropolitan areas (where the majority of music therapists are living and working) hinders the development of a strong sense of professional identity. Whilst I am actively involved in the AMTA Facebook groups and attend the national conference each year, it is my clinical placement supervisors that I have been able to form the strongest relationships with, and who continue to impact most strongly upon the development of my professional identity.	2. Sense of Connectedness 4. Positive Clinical Experiences
Although the Masters course played a role in developing my professional identity as a music therapist, my experience working as an RMT has had a more significant impact. I believe that only with time and experience comes a strong professional identity	4. Positive Clinical Experiences
I feel the many conversations we had in class, and the experiences on my clinical placements greatly contributed to my professional identity formation.	3. Theoretical and Practical Application 4. Positive Clinical Experiences
I think the final placement helped me build the most confidence as a professional. I was able to gain a sense of professional identity through working in an environment where I was the Music Therapy expert and was responsible for educating my colleagues.	1. Feedback and Validation 4. Positive Clinical Experiences

On Campus Respondents	Themes
<p>The strong sense of community and connection I felt to both on campus and blended learning students were key in shaping my professional identity.</p>	<p>2. Sense of connectedness</p>
<p>During my third clinical placement in an unfamiliar setting, I developed a very strong sense of professional identity, however in my final clinical placement, which was in the area in which I worked prior to my music therapy study, I found it difficult to hold on to my fledgling professional identity. I ended up creating two different identities in the same body, which was complicated. Personally, and also through discussions with other music therapists in similar situations, I have worked towards reconciling the two, because I am only one person, and I try to utilise the strengths that come from having expertise in both music therapy and my previous work, in a complementary and positive way.</p>	<p>1. Feedback and Validation 4. Positive Clinical Experiences</p>
<p>I do not remember identity being directly discussed</p>	<p>N/A</p>
<p>I think greater knowledge about other disciplines allied health and other would help students and young graduates know where they are the same and where they differ and I think this contextual knowledge would greatly assist in professional identity. Also, the more widespread use of graduate programs.</p>	<p>3. Theoretical Confidence</p>
<p>I feel clinical placements played a significant role in forming my professional identity.</p>	<p>4. Positive Clinical Experiences</p>

On Campus Respondents Continued	Themes
I feel clinical placements played a significant role in forming my professional identity.	4. Positive Clinical Experiences
For me, being able to be involved in AMTA events such as the conference, symposiums and state committee (and PD events available to student members of AMTA) also helped me to network and feel involved in the profession, thus helping the formation of my professional identity. Also significant was being able to be involved in MT research projects with experienced RMT researchers (and researchers in other fields) for my minor thesis helped to contribute to my sense of professional identity.	1. Feedback and Validation 2. Sense of Connectedness
I found that professional identity formation occurred primarily in the first few years after graduation. Feedback from lecturers, teachers on therapeutic skill development I felt was minimal as the focus was more on academic skill due to the course structure. There were many more opportunities to get this feedback from supervisors and I was lucky enough to have a couple of brilliant supervision experiences. I would say though that the course did a brilliant job of teaching me a lot about myself as a person, my values and beliefs which then created a solid grounding for me then to develop my professional identity once I had entered the workplace.	1. Feedback and Validation
I believe I came in to the course with a strong pre-existing reflexive process which ultimately contributed to my professional identity formation.	N/A
Feels like gaining a strong sense of identity in therapeutic relationship rather than in the allied health team.	4. Positive Clinical Experiences
Still close friends with many people I studied with and this is beneficial for professional discussion/ insight	2. Sense of connectedness



Music therapy services in neurorehabilitation: An international survey

Pakdeesatitwara, N. & Tamplin, J.

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In plain language:

Neurorehabilitation is an extensive field of music therapy practice serving diverse clinical populations and addressing complex clinical needs. Since music therapy research and practice have developed over time and shown benefits for people undergoing neurorehabilitation, it is important to explore the current state of music therapy services being offered in this field.

This article presents the results of an international survey examining the scope and prevalence of populations served in neurorehabilitation, goals formulated, and approaches and interventions being used by credentialed music therapists. The discussion suggests pathways for developing future research and training curriculum in response to the current practice of music therapy in neurorehabilitation.

Original research

Music therapy services in neurorehabilitation: An international survey

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Abstract

For decades music therapy has increasingly shown benefits in addressing the complex needs of people undergoing neurorehabilitation. To the best of our knowledge, no study has yet examined the real-world situation of music therapy services in the extensive field of neurorehabilitation.

This study aimed to explore the scope and prevalence of the populations served, goals formulated, as well as approaches and interventions being used in music therapy services in neurorehabilitation. A 25-item online survey was distributed using snowball sampling method. The participants were credentialed professional music therapists around the world with experience working in neurorehabilitation. Outcomes indicated an extensive scope of music therapy services currently being provided in neurorehabilitation. The most prevalent clinical population served by survey participants was acquired brain injury. Attention was the most frequently addressed clinical goal. The majority of the participants applied a Neurologic Music Therapy approach and frequently used singing-based interventions when working in neurorehabilitation. This study suggests that music therapy services in neurorehabilitation were extensive in both populations served and goals addressed. Future research should focus on the most prevalent music therapy goals and interventions currently offered in clinical practice.

Keywords: Music therapy, neurorehabilitation, neurological rehabilitation, survey

Background

The World Health Organisation (2017a) defines rehabilitation as “a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment” (p. 1). Neurorehabilitation is a subset of rehabilitation specific to individuals with

neurological disorders (Dimyan, Dobkin, & Cohen, 2008; Polgar et al., 1997). Those with neurological disorders demonstrate a variety of sequelae including physical, cognitive, behavioral, and communication impairments, which can lead to psychosocial and daily living difficulties (WHO, 2006). With the broad definition of rehabilitation and the complexity of sequelae in people with neurological disorders, the goals to be addressed in neurorehabilitation are extensive.

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Music therapy research in neurorehabilitation has steadily grown since the 1980s and demonstrated potential to address the sequelae of neurological disorders (Baker & Tamplin, 2006). For physical impairments, Weller and Baker (2011) report a number of studies that showed consistent positive and significant outcomes of music therapy interventions (e.g. auditory stimulation, movement to music, active music making) for physical rehabilitation of people with neurological disorders. Music therapy studies have been conducted with people of all ages across a wide range of neurological disorders including stroke, cerebral palsy, Erb's palsy, Parkinson's disease, and Rett syndrome (Freedland et al., 2002; Howe, Lövgreen, Cody, Ashton, & Oldham, 2003; Jeong & Kim, 2007; Kwak, 2007; Luft et al., 2004; Pacchetti et al., 2000; Rahlin, Cech, Rheault, & Stoecker, 2007; Rochester et al., 2005; Schauer & Mauritz, 2003; Schneider, Schonle, Altenmüller, & Munte, 2007; Thaut et al., 2007; Whittall, McCombe, Waller, Silver, & Macko, 2000; Yasuhara & Suyiyama, 2001). These studies show the diversity of populations with whom physical rehabilitation is addressed across both acquired and degenerative neurological disorders. In particular, there are various dimensions of physical rehabilitation which music therapy can benefit, such as different movement types (e.g. gait, fine and gross motor movements in both upper and lower extremities), and movement qualities (e.g. balance, strength, dexterity, mobility, coordination, range of motion, functional uses) (Magee, Clark, Tamplin, & Bradt, 2017; Tamplin, 2006; Weller & Baker, 2011).

According to the Cochrane review by Magee et al. (2017), studies using music interventions to target cognitive impairments, including memory, attention, executive

functioning, and orientation rehabilitation for people with acquired brain injury (ABI) were examined (Pool, 2013; Särkämö et al., 2008; Mueller, 2013; Baker, 2001). The review shows that orientation was the only outcome that had significant improvements in response to live music listening (Baker, 2001; Magee et al., 2017). In people with disorders of consciousness due to ABI, music therapy has been shown to be effective in stimulating behavioural responses, such as facial expression, blink, and respiratory rate (Fernandes et al., 2014; O'Kelly, 2013). For behavioural problems, music therapy has demonstrated effectiveness in reducing agitation and other challenging behaviours in people with brain injury (Baker, 2001; Hitchen, Magee, & Soeterik, 2010).

For communication impairments, Tamplin (2008) found that singing and vocal exercise improved normative speech production, including speech intelligibility and naturalness, in people with acquired dysarthria. Music therapy has also been reported to improve speech repetition, naming, reading, and verbal fluency in people with acquired aphasia (Jungblut, 2004; Särkämö et al., 2008; van der Meulen, van de Sandt-Koenderman, Heijenbrok-Kal, Visch-Brink, & Ribbers, 2014). Music therapy thus has potential to address both speech and language aspects of communication impairments.

Music therapy also offers great benefits for emotional and social domains in neurorehabilitation. Participating in group music therapy can enhance mood, confidence, motivation, social engagement, peer support, as well as reduce psychological distress for people with acquired neurological injury. (Tamplin, Baker, Grocke, & Berlowitz, 2014; Tamplin, Baker, Jones, Way, & Lee, 2013).

Although the existing studies demonstrate many benefits of music therapy to address neurorehabilitation goals, there is limited literature on the prevalence of music therapy services that are actually provided in clinical practice. Tamplin (2006) examined the reason for referral for 88 patients (aged 18-82 years) from a rehabilitation hospital in Australia between 2004 to 2005. Most patients were referred to music therapy to address social and emotional goals. Relaxation, physical rehabilitation, communication rehabilitation, cognitive rehabilitation, pain management, motivation, and sensory stimulation were also common reasons for referral to music therapy. Although this study reports on the scope of music therapy services provided in a real-world situation, it was based only on one rehabilitation hospital in Australia and was published over a decade ago.

Despite limited research on the real-world situation of music therapy services in neurorehabilitation specifically, survey studies have indicated a general growth of the music therapy profession worldwide, with an increasing number of music therapists working in neurorehabilitation (Jack et al., 2016; Kern & Tague, 2017). Kern and Tague (2017) surveyed music therapists ($N = 2,495$) via the World Federation of Music Therapy about the status of music therapy practice and trends worldwide. Based on respondent answers to the question about work settings ($n = 2,331$), 5.2% described their work setting as rehabilitation in general, 19.6% of respondents worked with neurological disorders, 12.4% worked in traumatic brain injury (TBI), 12.2% in stroke rehabilitation (12.2%), and 10.6% worked with Parkinson's disease (PD) (Kern & Tague, 2017). These clinical populations are consistently represented in the music therapy neurorehabilitation literature (Baker &

Tamplin, 2006; Gilbertson, 2005; Thaut et al., 1996; Weller & Baker, 2011). However, Kern and Tague (2017) did not clarify the context of work where the music therapy services were provided to these populations, except for the stroke rehabilitation population. Also, as participants were able to provide multiple responses, there could be some overlap among these populations. For example, brain injury (e.g. stroke, TBI) could be categorised under acquired neurological disorders, while PD could be categorised under degenerative neurological disorders (Tamplin, 2015). Kern and Tague (2017) separated these populations rather than listing stroke, TBI, and PD as subcategories of neurological disorders. As a result, it is not possible to determine the exact proportion of music therapists working in neurorehabilitation around the world.

With the extensiveness and complexity of music therapy practice in neurorehabilitation shown in the existing literature, it is important to know the real-world situation of current music therapy services provision in this field. Such knowledge may suggest pathways for developing research and training curriculum that respond to clinical need. Despite the growth of music therapy as a profession (Kern & Tague, 2017), to our knowledge no study has yet examined the extent of music therapy services provision specifically in neurorehabilitation. Therefore, we conducted an international survey aiming to gather descriptive data on the scope and prevalence of music therapy services in neurorehabilitation. Specifically, in terms of populations served and goals addressed, as well as music therapy approaches and interventions utilised. Additionally, we conducted a qualitative content analysis to determine the opinions of music therapists on training for future music therapists in neurorehabilitation and general feedback.

This study received ethics approval from Human Research Ethics Committee at the University of Melbourne.

Methods

Participants

The participants in this study were active professional music therapists credentialed from a regulating music therapy organisation. The participants needed to have experience working in neurorehabilitation. A snowball sampling method was used to purposively recruit the participants who met these inclusion criteria.

Participants were recruited in two ways. Firstly, an invitation, plain language statement, and hyperlink to the online survey were emailed to music therapy organisations then forwarded to their members. These organisations included: The World Federation of Music Therapy, Australian Music Therapy Association (AMTA), and academy of Neurologic Music Therapy (NMT). Secondly, the recruitment package was sent to 74 registered music therapists (RMT) who identified their expertise as neurological, rehabilitation, and/or NMT trained on the website of AMTA (<http://www.austmta.org.au>).

Instrument design

We developed a 25-item online survey based on the existing literature on music therapy in neurorehabilitation (See Appendix). The first two items were for identifying eligibility and for the participants to provide consent. The remainder of the survey was divided into six parts according to the areas of investigation including:

1. Participant demographics
2. Professional background information
3. Populations served in neurorehabilitation

4. Goals of music therapy services in neurorehabilitation

5. Music therapy approaches and interventions used in neurorehabilitation

6. Feedback on music therapy training in neurorehabilitation and other feedback (optional)

The survey consisted of closed-ended multiple-choices, questions with single and multiple answers, closed-ended questions with text answers, Likert scale questions (i.e. never, rarely, sometimes, often, or always), and open-ended questions. The option “Other” was provided throughout the survey in case participants had other answers which were unlisted. The draft survey was reviewed and then piloted with two music therapy researchers at the University of Melbourne. The finalised survey took approximately eight minutes to complete.

Data collection procedure

After deciding to take part in the study, participants clicked on a hyperlink leading to the first page of the online survey on Google Forms®, where they had to first confirm their eligibility before they could proceed to the plain language statement and consent form. Participation in this study was completely voluntary. The participants were allowed to withdraw from the study at any time as well as skip any questions they did not wish to answer.

The survey was opened for four weeks, and a reminder email was sent to the organisations, institution, and music therapists in the second week. Additionally, the participants were encouraged to forward the survey to other music therapists with experience working in neurorehabilitation. All submitted survey responses were kept in the password-protected database of Google

Forms® and were completely anonymous in order to protect participant confidentiality.

Data analysis

We used descriptive statistics and qualitative content analysis to analyse the data. For the closed-ended questions, we used frequency distribution and converted the data into percentages. For Likert scale questions, we calculated the mean (M) of the responses in each question. Then, we used the class interval to create five categories including *almost never*, *rarely*, *sometimes*, *often*, and *almost always* in order to define the calculated mean of each question. The calculated class interval size was 0.8. Therefore, the means were defined as following:

1. The mean from 1.00 to 1.79 was defined as 'almost never'.
2. The mean from 1.80 to 2.59 was defined as 'rarely'.
3. The mean from 2.60 to 3.39 was defined as 'sometimes'.
4. The mean from 3.40 to 4.19 was defined as 'often'.
5. The mean from 4.20 to 5.00 was defined as 'almost always'.

For the opened-ended questions, we followed the procedure of qualitative content analysis by (a) reading and re-reading the responses, (b) identifying meaning units, (c) condensing the meaning units, (d) formulating codes for the condensed meaning units, and (e) categorising the codes into categories and sub-categories (Erlingsson & Brysiewicz, 2017; Ghetti & Keith, 2016). Both authors discussed the coding and categorisation process. The first author conducted the first round of coding, and the second author conducted the second round of coding. Inter-coder reliability was then calculated.

Results

The survey received 75 responses from people who identified themselves as music therapists with professional experience working in neurorehabilitation. Seven were excluded as they did not identify any music therapy credential from a professional music therapy organisation. Another three were excluded because they were inactive and retired. Therefore, 65 survey responses were analysed in this study ($N = 65$). We could not calculate the response rate because the snowball sampling method used in this study did not allow us to record the number of people who received an invitation to participate. As not every participant responded to all questions, the number of participants who responded to each question is provided.

Demographics and Professional Background

Demographic and professional background information is presented in detail in Table 1. The majority of the participants were female (84.6%) and represented all age ranges. Most participants were aged between 30-39 years (35.4%) and were practicing music therapy in Australia (36.9%) or the USA (33.9%). Other countries represented (29.2%) included Finland, Germany, Hong Kong, Canada, Japan, Poland, Argentina, China, Netherland, and Russia with approximately 1-3 responses from each country.

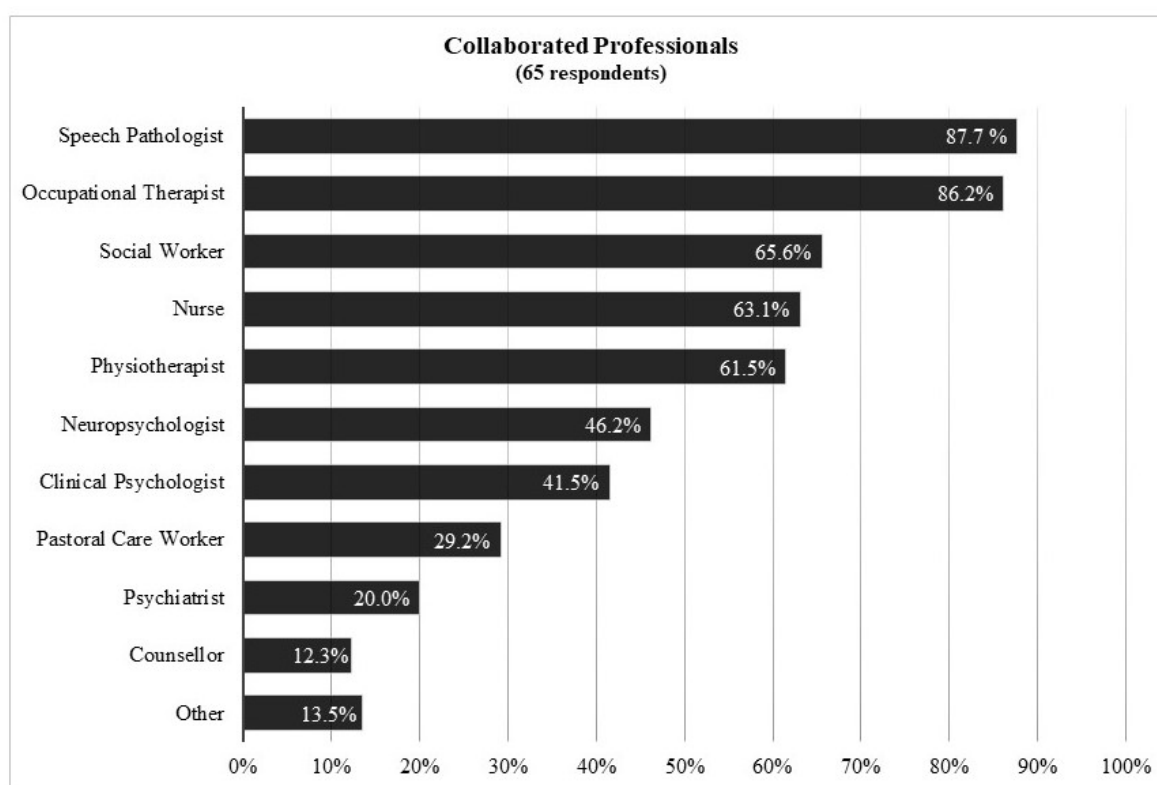
Most participants held the credential of MT-BC (50.8%) following with the credential of RMT (47.7%) and had been working for 1-5 years in neurorehabilitation (49.2%). Few participants (9.1%) reported other credentials

(e.g. CMT, DMtG, LPMT, MTA)¹. The majority of participants held a Master's degree (49.2%) and provided neurorehabilitation music therapy services in hospitals (52.3%). Others worked in a private business setting (33.8%), private venue (e.g. home) (30.8%), or aged care organisation (23.1%). Other settings (23.1%) included community organisation, university, rehabilitation-specialised institution, kindergarten, and non-profit clinic.

A great majority of participants had completed additional training in NMT (80%), 7.7% for GIM training, and another 7.7% for NICU-MT training. Other training (10.8%) included Author Hull Drum Circle, RBL, MTACB, MATADOC, MTE, Hypnomusictherapy, EBQ instrument, sound massage, and functional music therapy².

Every participant reported inter-professional collaboration when working in neurorehabilitation with incidence of collaboration by discipline shown in Figure 1.

Figure 1. *Collaborated professionals in music therapy services in neurorehabilitation*



Note. Multiple responses were allowed. Other professional collaborations included child life therapists, recreational therapists, medical practitioners, special education resource teachers, neurologists, pulmonologists, art therapists, early intervention keyworkers, and nutritionists.

¹ The credentials included Music Therapist – Board Certified (MT-BC), Registered Music Therapist (RMT), Certified Music Therapist (CMT), Deutsche Musiktherapeutische Gesellschaft (DMtG), Licensed Professional Music Therapist (LPMT), and Music Therapist Accredited (MTA).

² The acronymic additional trainings included Neurologic Music Therapy (NMT), Guided Imagery and Music (GIM), Neonatal Intensive Care Unit – Music Therapy (NICU-MT), Rhythm, Breath, Lullaby (RBL), Music Therapy-Assisted Childbirth (MTACB), Music Therapy Assessment Tool for Awareness in Disorders of Consciousness (MATADOC), and Music Therapy Entrainment (MTE).

Table 1. *Demographics and professional background*

Gender	Female	Male			
	55 (84.6%)	10 (15.4%)			
Age Range	20-29	30-39	40-49	50-59	Over 60
	17 (26.2%)	23 (35.4%)	13 (20%)	10 (15.4%)	2 (3.1%)
Country of Practice	Australia	USA	Other		
	24 (36.9%)	22 (33.9%)	19 (29.2%)		
Credential	MT-BC	RMT	Other		
	33 (50.8%)	31 (47.7%)	6 (9.1%)		
Year of Experience	Less than 1	1-5	6-10	Over 10	
	2 (3.1%)	32 (49.2%)	16 (24.6%)	15 (23.1%)	
Qualification	Bachelor's	Master's	Doctoral	Other	
	18 (27.7%)	32 (49.2%)	9 (13.9%)	6 (9.2%)	
Work Setting	Hospital	Private Business	Private Venue	Aged Care Organisation	Other
	34 (52.3%)	22 (33.8%)	20 (30.8%)	15 (23.1%)	15 (23.1%)
Role Title	Music Therapist	Other			
	61 (93.8%)	22 (33.8%)			
Additional Training	NMT	GIM	NICU-MT	Other	None
	52 (80.0%)	5 (7.7%)	5 (7.7%)	7 (10.8%)	10 (15.4%)

Note. All 65 respondents answered the demographics and professional background questions. Some participants reported multiple credentials, work settings, role titles, and additional training

Populations served

The populations served by music therapy services in neurorehabilitation represented all age groups. The participants mostly worked

with ABI ($M = 3.89$). Clinical symptoms addressed by respondents are also presented in Table 2.

Table 2. *Populations served in music therapy services in neurorehabilitation*

Population	Number of Responses ($N = 65$)	Mean	Definition
Age Range			
Infant	53	2.04	Rarely
Preschooler	54	2.39	Rarely
Children	58	2.62	Sometimes
Adolescent	60	2.77	Sometimes
Adult	63	3.89	Often
Older Adult	58	3.81	Often
Clinical Population			
ABI	64	3.89	Often
SCI	56	2.59	Rarely
PD	55	2.82	Sometimes
Huntington's Disease	54	2.00	Rarely
Multiple Sclerosis	54	2.39	Rarely
Dementia	57	3.39	Sometimes
Other ³	30	2.60	Sometimes
Clinical Symptom			
Altered States of Consciousness	61	2.79	Sometimes
Post-Traumatic Amnesia	61	2.41	Rarely
Motor Impairments	64	4.17	Often
Speech Impairments	63	4.18	Often
Language Impairments	64	4.09	Often
Cognitive Impairments	64	4.16	Often
Challenging Behaviours	60	3.38	Sometimes
Social Difficulties	63	3.43	Often
Emotional Difficulties	64	3.72	Often
Loss of Identity	63	3.25	Sometimes
Psychological Trauma	63	2.92	Sometimes
Pain	62	3.16	Sometimes
Other ⁴	17	1.35	Almost Never

Note. Participants were not required to answer all questions. Abbreviations: ABI - Acquired Brain Injury, SCI - Spinal Cord Injury, PD - Parkinson's Disease

³ Other clinical populations included muscular dystrophy, autism, Guillain-Barre syndrome, cerebral palsy, Rett syndrome, cancer, blood disorders, developmental disorders, brain tumor, brain cancer, motor neuron disease, transverse myelitis, lupus, post-neurosurgery, profound intellectual and multiple disabilities, intracranial pressure, genetic disorders (e.g. Down syndrome), epilepsy, Chiari malformation.

⁴ Other clinical symptoms included seizure and sensory impairments.

Goals of music therapy

The music therapy goals in neurorehabilitation addressed by respondents were divided into six categories as presented

in Table 3. Attention ($M = 4.25$) was the most prevalent goal.

Table 3. *Goals of music therapy services in neurorehabilitation*

Goal	Number of Responses ($N = 65$)	Mean	Definition
Cognitive			
Orientation	63	3.44	Often
Response Stimulation	62	3.68	Often
Spatial Exploration	62	3.24	Sometimes
Memory	64	3.91	Often
Attention	63	4.25	Almost Always
Executive Functioning	63	3.98	Often
Skill Learning	64	3.34	Sometimes
Instruction Following	63	3.62	Often
Other	18	1.17	Almost Never
Emotional			
Exploring Self-Concept	63	3.33	Sometimes
Mood Management	64	3.69	Often
Identifying and Expressing Emotional Difficulties	64	3.72	Often
Improving Self- Confidence	64	3.95	Often
Improving Self-Esteem	64	3.95	Often
Other	18	1.44	Almost Never
Communication			
Respiratory Function, Strength, and Control	62	3.65	Often
Speech Rate Control	62	3.61	Often
Intelligibility	63	3.71	Often
Speech Naturalness	63	3.40	Often
Speech Repetition	59	3.36	Sometimes
Naming	60	3.20	Sometimes
Responsive Speech	60	3.53	Often
Articulation	61	3.82	Often
Prosody	62	3.57	Often
Verbal Fluency	63	3.62	Often
Speech Comprehension	60	3.42	Often
Written Language	62	2.39	Rarely
Other	19	1.74	Almost Never
Physical			
Upper Extremity Gross Motor Movement	64	3.63	Often
Upper extremity Fine Motor Movement	62	3.47	Often
Lower Extremity Gross	62	3.48	Often

Motor Movement			
Lower Extremity Fine	63	3.03	Sometimes
Motor Movement			
Gait Rehabilitation	63	3.19	Sometimes
Balance and Posture	62	3.31	Sometimes
Range of Movement	62	3.63	Often
Strength	61	3.39	Sometimes
Endurance	62	3.55	Often
Motor Coordination	63	3.89	Often
Relaxation	62	3.44	Often
Pain Management	62	2.92	Sometimes
Dexterity	61	3.05	Sometimes
ADLs	62	3.03	Sometimes
Other	17	1.29	Almost Never
Social			
Encouraging Interactions	64	3.80	Often
Providing Environment	64	3.63	Often
Social Skills	62	3.32	Sometimes
Other	19	1.53	Almost Never
Behavioural			
Managing Agitation	62	3.23	Sometimes
Managing Perseveration	63	3.13	Sometimes
Managing Impulsivity	62	3.24	Sometimes
Other	20	1.65	Almost Never

Note. Participants were not required to answer all questions

Music therapy approaches and interventions

The participants reported a variety of music therapy approaches being applied when working in neurorehabilitation. NMT (87.7%) was the most prevalent as presented in Figure 2.

The prevalence of music therapy interventions used in neurorehabilitation by respondents are presented in Table 4. Singing ($M = 4.44$) was the most commonly used intervention.

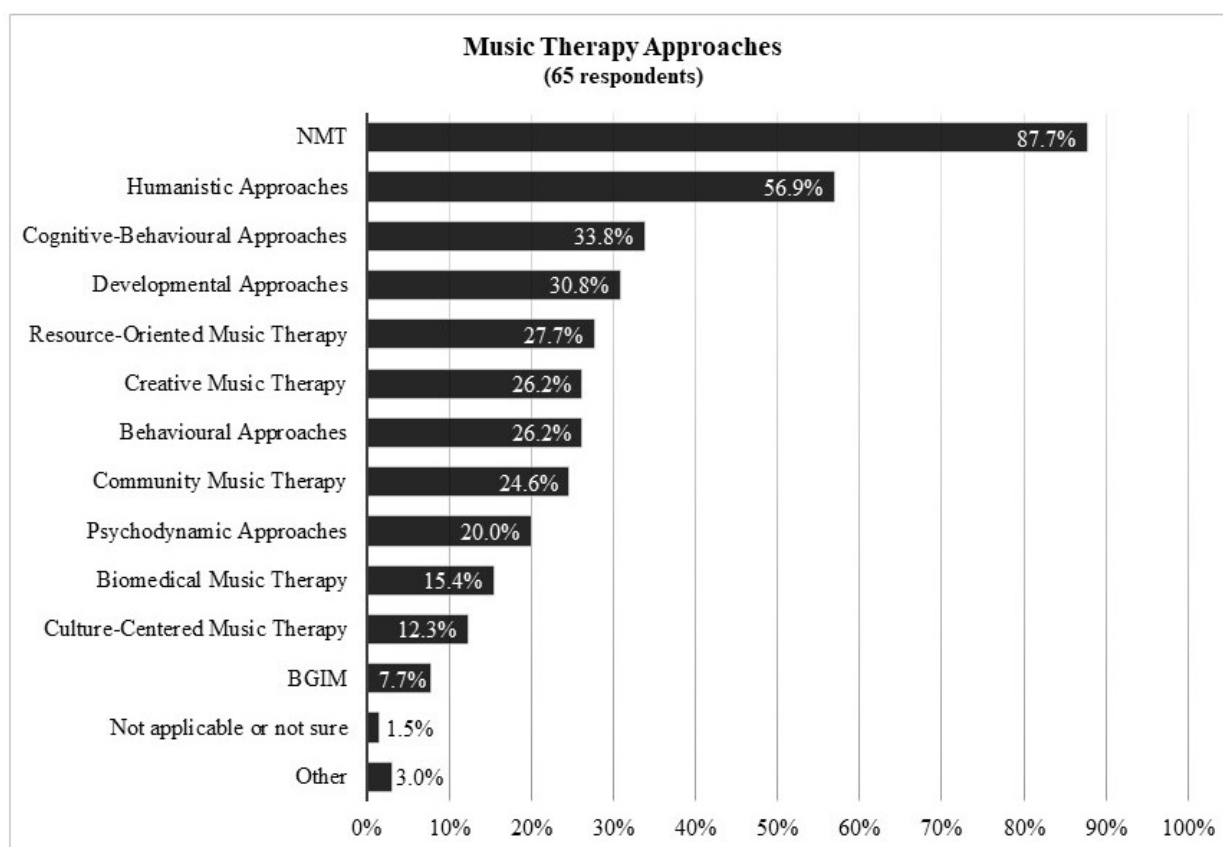
Table 4. *Interventions used in music therapy services in neurorehabilitation*

Music Therapy Intervention	Number of Responses ($N = 65$)	Mean	Definition
RAS	62	3.53	Often
Movement to Music	59	3.95	Often
Making Music on a Music Instrument	60	4.05	Often
Music as a Mnemonic Device	60	3.25	Sometimes
Music-Based Attention Training	59	3.86	Often
Instructional Song	58	3.00	Sometimes
Song Story	58	2.66	Sometimes
Song Reminiscence	59	3.36	Sometimes
Music Listening	60	3.57	Often
Improvisation	60	3.55	Often

Singing	61	4.44	Almost Always
Oral Motor Exercise or Vocal Exercise	61	3.92	Often
Music-Based Speech & Language Activities	59	4.00	Often
Songwriting	61	3.33	Sometimes
Song Discussion	60	3.37	Sometimes
Group Music Making	59	3.48	Often
Community Group Music Making	58	2.72	Sometimes
Music and Imagery	58	2.35	Rarely
GIM	58	1.50	Almost Never
Traditional Oriental Music Therapy	56	1.25	Almost Never
Other	18	1.78	Almost Never

Note. As the participants were allowed to skip the question they did not wish to answer, some participants did not answer to some questions.

Figure 2. *Approaches for music therapy services in neurorehabilitation*



Note. Multiple responses were allowed. Other approaches included family-centered, patient-centered, existential-integrative, and solution-focused approaches.

Qualitative content analysis

Forty-seven participants provided suggestions for the development of music therapy training for preparing future music therapists to work in the field of

neurorehabilitation. These are listed in Table 5. The inter-coder reliability of this question was .92.

Table 5. *Suggestions for the future development of music therapy training*

Category and Subcategory	Number of Responses (<i>n</i> = 47)	Percentage	Example
Theoretical Approaches	17	36.2%	
NMT	15	31.9%	
Resource-Oriented MT	1	2.1%	
Integrated Approaches	2	4.3%	
Inter-Professional Collaboration	8	17.0%	Collaborative work and professional communication.
Therapeutic Skills	3	6.4%	Interpersonal skills.
Neurological Foundations	11	23.4%	Neuroscience, neurology, and body-mind connection.
Music Foundations	3	6.4%	Music skills and knowledge.
Practical Opportunities	4	8.5%	
MT Interventions	3	6.4%	Songwriting and improvisation.
Anatomy	2	4.3%	
Ethics	1	2.1%	Human rights.
MT Teaching	3	6.4%	Smaller class size and standardisation of training.
Neurological Aspects of Music Participation	7	14.9%	
Clinical Knowledge	4	8.5%	
Music Psychology	2	4.3%	
Up-to-Date Research	2	4.3%	
Clinical Process	8	17.0%	
Holistic Assessment	2	4.3%	
Appropriate Goals	4	8.5%	
Appropriate Use/Modification of Interventions	4	8.5%	
Evaluation of Progress	1	2.1%	

Notes. 47 participants responded to this question. Some responses covered multiple categories.

Eleven participants provided general feedback covering multiple topics as

presented in Table 6. The inter-coder reliability of this question was .85.

Table 6. *General feedback*

Category	Number of Responses (<i>n</i> = 11)	Percentage	Example
Feedback on the Study	3	27.3%	This is an extensive survey.
Feedback on Professional Needs	1	9.1%	Need more network opportunities and support.
Comments on the survey	2	18.2%	Neurorehabilitation should be defined.
Reflections on MT Practice in Neurorehabilitation	4	36.4%	Great step forward to promote rehabilitation of brain functions through MT.

Suggestions for MT Practice in Neurorehabilitation	3	27.3%	I find that a combination of approaches is most useful and helpful.
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Notes. Only 11 participants responded to this question. Some responses covered multiple categories

Discussion

Importance of inter-professional collaboration

The results from this survey showed that all participants reported collaboration with other professionals when working in neurorehabilitation. This can be supported by the nature of practice in neurorehabilitation where inter-professional collaboration is promoted and considered as the key strategy to successful rehabilitation (Tamplin, 2006; WHO, 2006; Wirz & Rutz-Lapitz, 2015). A perceived need for more training in music therapy courses on inter-professional collaboration in neurorehabilitation was presented in the qualitative content analysis. Speech pathology and occupational therapy collaboration strategies could be prioritised as these were most frequently reported.

The scope of clinical populations served

Music therapy services provided in the context of neurorehabilitation cover a vast range of clinical populations. Our survey results showed that the respondents worked with clients who had neurological disorders ranging from acquired conditions, degenerative conditions, congenital disorders, and post-neurosurgery conditions. The range of clinical populations found in the survey may not fit within some definitions of rehabilitation. In some literature sources, rehabilitation is defined as the process of restoration to the optimal state of functioning after acquiring conditions that cause the loss of capabilities and/or debilitation such as illness, injury, or trauma (Bruscia, 2014;

Dirckx, 2012; Loewy, 2013; Martin, 2015). Although this definition focuses on people with acquired neurological conditions, music therapy interventions used in this context may also benefit people with congenital and degenerative neurological disorders (Baker & Tamplin, 2006; Wade, 2015). On the other hand, the World Health Organisation (2017a) defined rehabilitation as “a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment” (p. 1). Health conditions in this context were defined as acute or chronic disease, disorder, injury, trauma, and other conditions related to congenital anomaly, and genetic predisposition (WHO, 2017b). In line with this, rehabilitation-focused music therapy has been described with people who had degenerative and congenital neurological disorders (e.g. PD, dementia, cerebral palsy, Erb’s palsy, Rett syndrome) (Alves-Pinto, Turova, Blumenstien, & Lampe, 2016; Staum, 2000; Wang et al., 2013; Weller & Baker, 2011).

Some participants reported non-neurological disorders under the “Other” choice in clinical populations. However, non-neurological disorders including lupus and hematological disorders may have an impact on the nervous system (Muscal & Brey, 2010; Sussman & Davies-Jones, 2014). Some participants also responded to the “Other” choice in clinical population question using categories such as developmental disorders, cancer, and genetic disorders which are umbrella terms that may cover neurological

disorders, disorders that may impact the nervous system, and disorders that may spread to the nervous system. Several participants reported that music therapy services were provided to clients with autism in a neurorehabilitation unit. Grob (1998) suggested that the music therapy services with clients on the autism spectrum may fall into the rehabilitation category if the clients are responsive to facilitated communication and show a degree of abstractive ability because it could be considered as restoring or gaining access towards an untapped ability. Although autism is usually categorised as a developmental disorder, it involves neurological or neurophysiological factors (American Psychiatric Association, 1994).

Our results indicate that music therapists working in neurorehabilitation predominantly work with patients living with ABI. Other clinical populations served include other acquired neurological conditions, degenerative neurological conditions, congenital neurological conditions, post-neurosurgery conditions, and other conditions that relate to and/or have an impact on neurological impairments. These findings challenge several existing definitions of rehabilitation because the clinical populations served by music therapists who responded to this survey were not limited to acquired neurological conditions. It is possible that participants lost track of the scope of the survey and provided responses based on their experience outside the neurorehabilitation context, however the questions contained a reminder of the scope of the study throughout the survey.

The prevalence of clinical symptoms and goals vs. the existing literature

A recent Cochrane review of music interventions for ABI (Magee et al. 2017),

revealed moderate quality evidence for music interventions for gait velocity and length rehabilitation; low quality evidence towards other aspects of gait rehabilitation and quality of life; very low-quality evidence towards arm movement and overall communication; and no strong evidence on cognitive rehabilitation for people with ABI. However, our survey found that speech, motor, and cognitive impairments were all highly prevalent clinical symptoms addressed by respondents.

The prevalence of speech and cognitive impairments in neurological populations, and the limited evidence of studies on music therapy interventions in these areas indicates the need for further research. However, Magee et al. (2017) reviewed only clinical trials in ABI, whilst our survey gathered data on the overall practice of music therapy in neurorehabilitation. Although we found that ABI was the most prevalent clinical population served, our results on the clinical symptoms and goals may have related to other clinical populations served. Therefore, future studies could also survey music therapy services provided to the ABI population specifically and/or use other statistical methods.

The prevalence of Neurologic Music Therapy (NMT)

Neurologic music therapy (NMT) was the most frequently reported music therapy approach that participants drew upon and was a frequently reported suggestion for future music therapy training. The majority of survey participants were NMT-trained. However, as the survey was distributed via the academy of NMT, the results were likely to favor NMT approaches and training. Some NMT techniques, especially Rhythmic Auditory Stimulation, are very well supported by neurorehabilitation research (Altenmüller &

Schlaug, 2013; Magee et al., 2017; Weller & Baker, 2011). This evidence base may explain the prevalence of NMT techniques used by respondents. A small number of non-NMT-trained participants reported that they still drew upon the NMT approach (as presented in Table 1 and Figure 2). Therefore, NMT clearly has a strong influence on music therapy practice in neurorehabilitation.

Limitations

Although this study received responses from participants that represented all regions of the world, the global representativeness is questionable due to the high representation from the USA and Australia. The international survey by Kern and Tague (2017) gathered information on music therapy practice status and trends from over 18 countries around the world. This present study gathered responses from only 12 countries using a snowball sampling method. It is possible that music therapy in neurorehabilitation is more frequently practiced in the countries represented in our survey, however, it may just be that our sampling method did not adequately reach a representative sample of countries. Future surveys could be circulated via all national music therapy organisations and/or via the World Federation of Music Therapy in order to achieve a wider distribution.

Using a pre-defined definition of neurorehabilitation from the literature may help participants focus on a particular aspect of their clinical experience. As this study aimed to survey current clinical practice, we avoided providing any pre-defined definition of neurorehabilitation so as not to influence participant contributions. However, this meant that neurorehabilitation may have been interpreted quite differently by participants. Finally, as the survey was only distributed in

English, this limited international participation and likely situates the research findings within specific cultural contexts.

Conclusions

In conclusion, this international study explored the current scope and prevalence of music therapy services in neurorehabilitation. We used the survey method to gather information from the real-world practices of the participating music therapists. The survey outcomes suggest that inter-professional collaboration, especially with speech pathologists and occupational therapists, is vital in the work of music therapists working in neurorehabilitation. Moreover, music therapists can expect to see an extensive range of clinical populations with neurological impairments when working in this field. Further research on music therapy for cognitive and communication rehabilitation is highly recommended in order to respond to the prevalence of the clinical symptoms found and goals formulated in this context. Also, the survey outcomes suggest that NMT is frequently applied by the participating music therapists and recommended by some participants for future music therapy training. Furthermore, future research and training could focus on therapeutic singing techniques which were the most prevalent techniques being used by our participants in their neurorehabilitation work. Finally, the results of this study should be considered by academic teachers in building the curriculum for the future music therapy students and by music therapy researchers in providing research to respond to the needs in the practice.

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Appendix: The Online Survey Questionnaire

Music Therapy Services in Neurorehabilitation Study

This study is part of the Master of Music Therapy program at the University of Melbourne.

* Required

Are you a music therapist with experience working in neurorehabilitation? *

Mark only one oval.

- ☐ Yes (Please continue)
- ☐ No (Do not continue with survey - please leave the survey now, Thank you)

Welcome to My Survey

Music therapy has potential in addressing various needs in neurorehabilitation. Besides, the music therapy profession has grown recently according to the increasing numbers of graduates, referrals, and positions opened. A large number of music therapists registered with Australian Music Therapy Association are working with a vast range of neurological patients. Therefore, it is possible that music therapy services in neurorehabilitation may have expanded

This study aims to survey the music therapists working in neurorehabilitation and collect data regarding to music therapy services from a larger number of registered music therapists who work in different settings with different populations. The outcomes will provide data regarding the current scope of work and prevalence of music therapy services in neurorehabilitation. The outcomes can be applied to music therapy training and to the research area of music therapy in neurorehabilitation.

If you agree to participate, you will be asked to complete an online survey that will take approximately 8 minutes. The questions will be about the populations served, music therapy goals, music therapy techniques, and your music therapy approaches in neurorehabilitation according to your experience.

*None of this will impact on your relationship with the University of Melbourne, and your participation in this study is completely voluntary. Your answers will be completely anonymous, and the Human Research Ethics Committee has approved this project.

Should you require any further information, or have any concerns, please do not hesitate to contact the Chief Researcher (Prof Katrina McFerran) on the numbers provided below. Should you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, on ph: +61 3 8344 2073.

If you would like to participate, please show that you have read and understood this information by ticking the box below. If you have any questions, please feel free to ask, either now, or at any time during the process.

By submitting this online survey, you are giving consent for your responses to be used in this study.

Thank you for your participation and your contribution to the training of music therapy students at the University of Melbourne.

The survey will be closed on 30th September 2017 at 11.59pm (AEST – Australian Eastern Standard Time UTC +10)

Sincerely,

Prof Katrina Skewes McFerran
(Supervisor and Coordinator of Minor Thesis in Music Therapy)
Melbourne Conservatorium of Music
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Dr Jeanette Tamplin
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Mark only one oval.

- ☐ Yes, I have read and understood the plain language statement, and I agree to participate.
- ☐ No, I do not (Do not continue with the survey - please leave the survey now, Thank you)

Demographics**What is your gender?***Mark only one oval.*

- ☐ Male
☐ Female
☐ Decline to state
☐ Other:

What is your age?*Mark only one oval.*

- ☐ 20-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ 60+

What is your country of practice?**Professional background information****Please indicate your music therapy license type.***Check all that apply.*

- ☐ MT-BC
☐ RMT
☐ ACMT
☐ CMT
☐ Inactive
☐ Retired
☐ Other:

How many years have you been working as a music therapist in the field of neurorehabilitation?**What is the highest level music therapy qualification you have?***Mark only one oval.*

- ☐ Bachelor's
☐ Post Graduate Diploma
☐ Master's (coursework)
☐ Master's (research)
☐ PhD or Doctorate
☐ Other:

What is the type of the facility in which you provide music therapy services in neurorehabilitation? (multiple answers possible)

Check all that apply.

- ☐ Hospital
- ☐ School
- ☐ Aged care organization
- ☐ Community organization
- ☐ Private home/venue
- ☐ Private business
- ☐ University
- ☐ Corporate business
- ☐ Not applicable
- ☐ Other:

What is your role title? (multiple answers possible)

Check all that apply.

- ☐ Music therapist
- ☐ Educator
- ☐ Researcher
- ☐ Administrator
- ☐ Not applicable
- ☐ Other:

Do you have any additional training in music therapy? (multiple answers possible)

Check all that apply.

- ☐ Neurologic Music Therapy (NMT)
- ☐ Guided Imagery and Music (GIM)
- ☐ No additional training
- ☐ Other:

Which of these professionals do you have experience working in collaboration with? (multiple answers possible)

Check all that apply.

- ☐ Physiotherapist
- ☐ Occupational therapist
- ☐ Speech pathologist
- ☐ Social worker
- ☐ Pastoral care worker
- ☐ Nurse
- ☐ Clinical psychologist
- ☐ Neuropsychologist
- ☐ Counsellor
- ☐ Psychiatrist
- ☐ Not applicable
- ☐ Other:

Populations served

Please rate the prevalence of the age groups of your clients in neurorehabilitation.

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Infants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preschoolers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adolescents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adults	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Older adults	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the prevalence of the conditions you work with in the field of neurorehabilitation.

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Acquired Brain Injury (ABI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spinal Cord Injury (SCI)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parkinson's disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Huntington's disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multiple sclerosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dementia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working with other conditions in neurorehabilitation, please specify.

Please rate the prevalence of the clinical symptoms you work with in the field of neurorehabilitation.

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Altered states of consciousness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Post-traumatic amnesia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motor impairments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech impairments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Language impairments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cognitive impairments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Challenging behaviors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loss of identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Psychological trauma	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working with other symptoms in neurorehabilitation, please specify.

Goals of music therapy

Please rate the prevalence of the music therapy goals you work towards in neurorehabilitation:

Goals for physical rehabilitation*Mark only one oval per row.*

	Never	Rarely	Sometimes	Often	Always
Upper extremity gross motor movement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upper extremity fine motor movement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower extremity gross motor movement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower extremity fine motor movement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gait rehabilitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance and posture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Range of movement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strength	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Endurance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dexterity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Activities of Daily Living (ADLs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working towards other physical rehabilitation goals, please specify.

Goals for cognitive rehabilitation*Mark only one oval per row.*

	Never	Rarely	Sometimes	Often	Always
Orientation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stimulating response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spatial exploration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Memory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Executive functioning (mental flexibility)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skills learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Following instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working towards other cognitive rehabilitation goals, please specify.

Goals for behavioral management*Mark only one oval per row.*

	Never	Rarely	Sometimes	Often	Always
Managing agitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing perseveration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing impulsivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working towards other behavioral goals, please specify.

Goals for communication rehabilitation*Mark only one oval per row.*

	Never	Rarely	Sometimes	Often	Always
Respiratory function/strength/control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech rate control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intelligibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech naturalness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech repetition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Naming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbal responses to questions (Responsive speech)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Articulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prosody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbal fluency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speech comprehension	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Written language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working towards other communication rehabilitation goals, please specify.

Goals for emotional adjustment*Mark only one oval per row.*

	Never	Rarely	Sometimes	Often	Always
Exploring self-concept	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mood management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identifying and expressing emotional difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving self-confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving self-esteem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working towards other emotional goals, please specify.

Social goals*Mark only one oval per row.*

	Never	Rarely	Sometimes	Often	Always
Encouraging patients to socially interact with others (e.g. relatives, peers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offering appropriate environment for social interactions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitating social skills learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience working towards other social goals, please specify.

Music therapy approaches and techniques

Which of these theoretical approaches do you align yourself with? (multiple answers possible)

Check all that apply.

- ☐ Psychodynamic Approaches
- ☐ Humanistic Approaches
- ☐ Behavioral Approaches
- ☐ Cognitive-Behavioral Approaches
- ☐ Developmental Approaches
- ☐ Creative Music Therapy
- ☐ Bonny Method of Guided Imagery and Music
- ☐ Neurologic Music Therapy
- ☐ Community Music Therapy
- ☐ Biomedical Music Therapy
- ☐ Resource-Orientated Music Therapy
- ☐ Culture-Centered Music Therapy
- ☐ Not applicable or not sure
- ☐ Other:

Please rate the prevalence of the music therapy techniques you use.

Mark only one oval per row.

	Never	Rarely	Sometimes	Often	Always
Rhythmic Auditory Stimulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Movement to music	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music making on a musical instrument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music as a mnemonic device	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music-based attention training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instructional song	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Song story	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Song reminiscence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music listening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Singing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oral motor exercise or vocal exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music-based speech and language activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Songwriting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Song discussion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group music making (either vocal or instrumental)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community group music making (e.g. community choir)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music and imagery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guided Imagery and Music (GIM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traditional Oriental Music Therapy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have experience using other techniques, please specify.

For future music therapists

This is the last section of the online survey. By submitting this online survey, you are giving consent for this data to be used in this study.

Additionally, the following questions are optional, but your opinion will be greatly valuable to the future music therapy training as well as to the music therapy students.

In your opinion, what should the music therapy training focus on in order to prepare the future music therapists for the field of neurorehabilitation? (optional)

Please provide any other comments you have about music therapy services in neurorehabilitation, or any feedback you have about this survey (optional)



Whose choice? Exploring multiple perspectives on music therapy access under the National Disability Insurance Scheme

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In plain language:

This research study investigates how different stakeholders perceived access to music therapy under the National Disability Insurance Scheme (NDIS) in the trial sites between 2013 and 2015. Nine people who had the lived experience of the matter such as NDIS planners, Registered Music Therapists (RMTs) and a parent of a boy with a disability were individually interviewed. Interpretative Phenomenological Analysis reveals that everyone believed that music therapy was not fully understood or received well by everyone, and RMTs need to take more active roles in educating and promoting music therapy to staff in the National Disability Insurance Agency (NDIA), allied health professionals, as well as parents of people with disabilities.

Exploratory study

Whose choice? Exploring multiple perspectives on music therapy access under the National Disability Insurance Scheme

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Abstract

The National Disability Insurance Scheme (NDIS) is a new national funding system for people with disabilities in Australia, which has been tested in some trial sites since 2013 and is now instigated across the Nation. Whilst music therapy and other music services are included on the list of recognised providers, inclusion of these services within individual case plans has been questioned at times by those with authority within NDIS trial sites. This research project aimed to build a collaborative relationship between the University of Melbourne, Australian Music Therapy Association (AMTA), and the National Disability Insurance Agency (NDIA) to better understand the needs and capacity for contribution of each organisation involved in the access of people to music therapy. To this end, interviews were conducted with three NDIA employees, five Registered Music Therapists (RMTs) who had experiences providing music therapy services as NDIS providers, and one parent of an eight-year old participant in the scheme who had accessed music therapy. Interpretative Phenomenological Analysis was used to identify gaps in knowledge and awareness between the different stakeholders. Fourteen emergent themes and three final themes revealed different perspectives on the matter, but all agreed that it is a significant time to promote music therapy and educate the NDIS planners, allied health professionals, the participants of the scheme and their families.

Key Words: National Disability Insurance Scheme (NDIS), National Disability Insurance Agency (NDIA), music therapy, Interpretative Phenomenological Analysis (IPA), interviews

Introduction

Prior to 2012, approximately 410,000 Australian people had been supported through “traditional block-funded service approaches” (Dowse, Wiese, Dew, Smith, Collings, & Didi, 2016, p. 81), where large organisations

or institutions received a block funding to manage a large number of people with a range of different needs. In this previous welfare system, some stakeholders argued that understanding and supporting each individual’s unique needs was difficult, and a major reform of disability funding mechanisms was considered necessary by what was then Rudd’s Labour Party (Buckmaster, 2012). After an extensive investigation, the Productivity Commission (2011) concluded that the previous disability

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support system was “underfunded, unfair, fragmented, and inefficient, and gives people with a disability little choice and no certainty of access to appropriate supports” (p. 2). The Commission further emphasised the fundamental changes that the new National Funding system should provide to the people such as:

- entitlements to individually tailored supports based on the same assessment process,
- certainty of funding based on need,
- genuine choice over how needs are met (including choice of provider), and
- local area coordinators and disability support organisations to provide grass roots support and a long-term approach to care with a strong incentive to fund cost effective early interventions (Productivity Commission, 2011, p. 2).

Consequently, the government announced a funding plan called the National Disability Insurance Scheme (NDIS). Commonwealth, state and territory governments, who used to manage the disability funding system, were re-established as a single agency called the National Disability Insurance Agency (NDIA) in 2012 (Buckmaster, 2012). In July 2013, the NDIA launched trials across a number of regional sites nationwide including the Barwon region in Victoria and the Australian Capital Territory, and since July 2016, the service has been instigated across Australia.

The NDIS places a strong emphasis on increased choice for people with disabilities, tailoring support packages to the individual needs identified by participants and allowing participants to prioritise the services they wish to access and to select their own providers. However, in the first two years of NDIS trials at various sites, some participants reported their choices to access certain services, such as

music therapy, had been denied by authorities in the NDIA (McFerran, 2016; McFerran, Tamplin, Thompson, Lee, Murphy, & Teggelove, 2016). For example, several service users’ requests to include music therapy in their NDIS plans were rejected in the trial region of New South Wales, and participants were advised to seek a speech therapist who is musical or told that music therapy is just like instrumental lessons (McFerran, 2016). Paradoxically, some music teachers who specialise in providing services for people with disabilities have been told that only music therapy services can be funded. To understand this phenomenon a group of researchers from the National Music Therapy Research Unit (NaMTRU) at the University of Melbourne conducted a qualitative study by collecting various reports of those involved, such as the NDIA, and the Australian Music Therapy Association (AMTA), as well as selected participants of the scheme or families of the participants. The study aimed to: (a) better understand the needs and capacity for contribution of each stakeholder involved, and (b) generate knowledge for each stakeholder regarding requirements and objectives of both the scheme and music therapy access options.

Literature Review

The practice of music therapy in the field of disability has a long and contested history that has been documented since the 1940s (Aigen, 2014). Literature exploring the therapeutic application of music for people with disability has typically been focused on person-centred goals that are identified by professionals to address perceived needs of the service recipients. Recent research in this area clearly supports the effectiveness of music therapy in school and institutional contexts and documents outcomes in social (Darrow, 2014; Pienaar, 2012), physical (Dieringer, Porretta,

& Gumm, 2013; Klaphajone et al., 2013; Wang et al., 2013), communicative (Dunning, Martens, & Jungers, 2015; Krikeli, Michailidis, & Klavdianou, 2010; Pienaar, 2012; Stevenson, 2003), psychological (Krikeli et al., 2010) and wellbeing or quality of life domains (Curtis & Mercado, 2004; Shiloh & Lagasse, 2014). Whilst music therapy services have been used for decades to support and facilitate expert-determined goal attainment for people with disabilities, there is currently limited understanding of the ways in which music therapy can address the self-identified needs of people with disability in the community. This distinction is key to the ideology underpinning the NDIS which is built on the social, rather than medical model of disability.

Within a medical model of disability, having a disability is considered to be an individual's problem that requires medical attention by an expert. Within a social model of disability, having a physical, intellectual, or mental disability is understood as being part of the diversity of human experiences and a responsibility of the society to allow for the active participation of all citizens (Carson, 2009). The social model that originated from Scandinavian countries in the late 1970's initiated a deinstitutionalisation movement across the world, and people with disabilities whose lives had been managed in large institutions and organisations were moved back into the community, often in sheltered housing. Values such as community participation and social inclusion were critical in this movement. This paradigm shift visibly influenced the field of music therapy in the 21st century (Ansdell, 2002), with the emergence of contemporary music therapy models such as community music therapy (Stige & Aarø, 2011) and resource oriented music therapy (Rolvsjord, 2010) also

emanating from Scandinavia. Other equity oriented approaches such as feminist music therapy (Hadley, 2006) and anti-oppressive music therapy (Baines, 2013) have shaped contemporary music therapy practices and research worldwide (Aigen, 2014; Kenny & Stige, 2002).

Community music therapy research and theory has been most clearly aligned with the disability rights movement worldwide (Stige & Aarø, 2011; Stige, Ansdell, Elefant, & Pavlicevic, 2010), endorsing a focus on empowerment and community participation that is aligned with the rhetoric of the NDIS on choice and control. Congruently, action research projects in this field have shown how people with the most profound disabilities can make choices within and about music therapy (Warner, 2005), participate in community music therapy groups, such as choirs (Elefant, 2010), as well as music festivals (Stige, 2010). More critical approaches have also been emerging around the globe, with a focus on ableism, neurodiversity and broad questioning of assumptions about what people with disabilities want from music therapists as captured in the journal VOICES special edition on music therapy and disability studies (Hadley, 2014). Local scholars in the Asia Pacific region have been prominent in this discourse, including Daphne Rickson (2014), Hiroko Miyake (2014) and Melissa Murphy (2018), whose recent PhD presented a critical analysis of young people's access to music as they transitioned from child to adult disability services. While promoting these consumer-driven forms of practice, the NDIA appears to apply principles from the medical model when funding therapeutic services, which demands a focus on measurable, evidence-based practices rather than participants' rights and choice to access music in many forms (Cameron, 2017; McFerran, 2016). This

inconsistency has caused confusion for people with disabilities, their families, and service providers, as well as those involved in the planning process, including the NDIA staff (McFerran, 2016).

Music therapy practices in Australia have also been changing slowly to embrace the social model of disability. Although Registered Music Therapists (RMTs) often embrace humanistic approaches in the field, medical model practices such as neurologic music therapy (NMT)¹ have also become popular in a range of fields including the disability sector. This treatment model emphasis may serve as a point of distinction between the work of RMTs and community musicians in the same sector and is surprisingly well matched to the demands of the NDIS, who often seek evidence whilst also promoting choice.

To better understand the relationship between different service providers, McFerran (2008) conducted a mixed methods research project to compare the practices of RMTs and community musicians in one adult disability service. Some distinctions between the programs were apparent, with the community music program being described as “being about energy and expression” and seemed more targeted towards those with mild and moderate disabilities, while the music therapist was seen as facilitating “meaningful interactions and self-expression at a personalised level” (p.22) better suited to people with severe and profound intellectual disability. Despite differences between the programs that were readily identified to the researchers, many of the carers felt that both programs offered participants an opportunity to transcend their disability and connect with

others joyously, socially and musically. This matches closely with Stige’s (2009) description of practice in the disability field when visiting Australia, when he said “music as a social phenomenon is both a very common thing and a very special thing.” The role of music therapy can therefore be understood as the provision of professional and qualified services that address agreed psycho-social-emotional goals, whilst it is important to note that this occurs within a landscape of other music services that serve musical outcomes.

One recommendation arising from the comparative study (McFerran, 2008) was to consider more bridging options into community. However, a decade later, Murphy and McFerran’s (2016) critical analysis of 27 articles describing music programs in the disability sector showed that the majority of programs were still conducted in closed groups for people with disabilities. Once again, the emphasis was on social encounters and music therapists focused on building connections between group members within expert driven models. For example, Lee’s research (Lee & McFerran, 2012) revealed a similar emphasis on expert models, with findings of improvements in communication being fostered through the provision of consistent song-choice opportunities for individuals with Profound Intellectual and Multiple Disabilities (PIMD). However, Lee’s (2014) subsequent research, involving interviews with five RMTs who worked with individuals with PIMD on a long-term basis, moved towards the social model by acknowledging that the improvements were not just in the skills of the RMTs, but also in the increasing depth of the relationship

¹ NMT involves “the therapeutic application of music to cognitive, sensory, and motor dysfunctions due to

neurologic disease of the human nervous system” (Thaut & Volker, 2014, p.2).

between therapist and client, which also allowed the therapist to better understand the client's communication.

This emphasis on building relationships within long-term therapy was also reported by Cameron (2017), who described an array of benefits for four adults she had worked with over many years in areas such as: communication and self-expression, choice and control, social contact and ameliorating deterioration, and development of skills. She explained how these benefits were achieved through careful and sophisticated therapeutic facilitation at critical moments, and explored the importance of qualified professionals providing music therapy services under the NDIS scheme.

In summary, it is evident that service provision in the disability field is changing ideologically, although this change is inconsistent and diversely understood, both around the globe and locally. A bio-psycho-social model is adopted by the World Health Organisation's International Classification of Functioning, Disability and Health (ICF) (2001) to encompass elements of biological, social and individual perspectives of health and to integrate both the medical and social models of disability. This model may be relevant for RMTs who flexibly adjust their practices to suit the perceived resources and needs of participants in distinct contexts. Whilst funding and services continue to change under the NDIS, we determined that it would be useful to attempt to better understand music therapy access from multiple perspectives by interviewing stakeholders whose involvements with the NDIS were different during the first two years in the trial sites. Ethical approval was granted by the University of Melbourne (Ethics ID: 1545407.1) and data for this study was collected in October and November, 2015.

Method

Study Design

A qualitative approach was employed to address the research aim which sought perspectives of parties involved with the roll out of the NDIS. Rather than undertaking a large-scale survey to collect relevant data, in-depth interviews with a smaller number of key stakeholders were used to produce rich descriptions of their lived experiences, leading to subjective insights into how each person constructed that particular view from their position. Specifically, Interpretative Phenomenological Analysis (IPA) (Smith & Eatough, 2007; Smith, Flowers, & Larkin, 2009) was utilised since it was developed to interpret how participants make sense of experiences in their personal and social world (Smith & Eatough, 2007). IPA also allows the researcher to take an active role in contributing to meaning making using the techniques such as epoche, which is different to descriptive phenomenology with strict limitations on the researcher's personal involvement with the data (Giorgi, 2009). By using IPA, the researchers aimed to understand the phenomenon from the multiple perspectives by incorporating and making connections between the descriptions.

Recruitment

This study was conducted in partnership with the research office of the NDIA and the AMTA, and funded by the University of Melbourne. Purposive sampling (Creswell & Plano Clark, 2011) was used to recruit people who had experiences with the NDIS through the study's partnering organisations. The AMTA Board invited RMTs already working in NDIS trial sites through their membership base. The NDIA's research office manager invited some NDIS planners and other staff to

participate in the study. Once RMTs and NDIA workers were invited, we used a snowball recruitment method in which the RMTs and the NDIA workers identified others, including persons with a disability and/or their families who have used the scheme to fund music therapy services. All the participants were required to be competent to provide informed written consent, and we sought a balance of NDIA staff, RMTs, and persons with a disability and/or family in the scheme, although this was not achieved.

Study Participants

A total of nine people, consisting of three NDIA staff, five RMTs, and one mother of an eight-year-old boy with a functional disability, agreed to participate in the study. Most of the participants had been involved with the NDIS since the beginning of the trials in July 2013

and represented trial sites in three states: New South Wales (NSW), Victoria (VIC), and Australia Capital Territory (ACT). Information about each participant is presented in Table 1, including the names of the participants (pseudonyms) and the number of clients who accessed music therapy under the NDIS scheme, since these were further analysed.

Data Collection

The same researcher conducted all nine interviews. Due to issues with distance to these regional trial sites, the three NDIA staff and parent participated in phone interviews, and all five RMTs were interviewed via Skype. All participants were offered the option of either medium. The participants all agreed

Table 1.

Participant information

Name	Participated as a	Gender	Region	Involvement with NDIS since	Description of Music Therapy Client
Alicia	NDIA Planner	F	NSW-Hunter	2013	2 Clients
Bryce	NDIA Plan Support Coordinator	M	VIC-Barwon	2014	N/A
Cheryl	NDIA Plan Support Coordinator	F	ACT	2014	N/A
Diana	RMT	F	VIC-Barwon	2013	2 Clients
Emma	RMT	F	VIC-Barwon	2013	3 Clients
Florence	RMT	F	NSW-Hunter	2013	3 Clients
Gabriella	RMT	F	NSW-New Castle	2013	2 Clients
Hannah	RMT	F	ACT	2013	2 Clients
Iris	Parent of an 8-year-old boy	F	VIC-Barwon	2013	Her Son

to their interviews being audio-recorded, and each interview lasted no more than an hour. Open-ended questions were asked as follow:

- 1) In your own words, please explain the NDIS.
 - a. Who does it support?

- b. What are its primary objectives?
- 2) In your experience, how does the development of support plans for participants of the scheme (people with disability) take place?
- 3) How is eligibility for service provision determined?
- 4) What kinds of music-based services do you know about that are available through the scheme?
- 5) What is your understanding of the purpose and use of music-based services for people with disability?
- 6) What has been your experience of working with the NDIS?

Data Analysis

Having gathered the data from nine participants, four stages of analysis were undertaken, following key principles of IPA suggested by Lakin and Thompson (2012).

Stage 1: Immersing in the data and extracting key statements from the interview transcripts.

The interviews were transcribed into text line by line. After becoming familiar with each participant's perspective, key statements relevant to the research questions were identified and extracted in an Excel-spread sheet for further analysis. Each statement was coded with labels such as 'Alice_3,' which means it was Alicia's 3rd statement.

Stage 2: Conducting an idiographic level of analysis, concerning the person-in-context.

Attending to each participant's data, a researcher then performed *double hermeneutics* which enabled her to attend to each statement and try to *make sense* of what the person was *making sense* of his/her own experience (Smith, 2007). More specifically,

with each statement, the researcher first asked "What matters to the interviewee?" from the person's perspective, and then interpreted this perspective from the researcher's point of view by trying to interpret "What that means to the interviewee?" The researcher interpreted the participant's inner thoughts and feelings based on the description of the experiences (Larkin & Thompson, 2012). An example of this idiographic process is presented in the Appendix 1, with all the other analyses recorded in an Excel form.

Stage 3: Developing Emergent Themes by gathering similar perspectives across the nine participants.

As the current study interviewed people representing three groups in relation to the topic, it was apparent that similar perspectives were observed within the same group of people. For example, in the following two statements, the two NDIA staff explained how all their decisions to fund music therapy should have been justified:

- *I've only funded it (music therapy) 2 or 3 times and all sort of different reasons. So, I've funded it for one 15-year-old with a lot of behavioural problems. He had autism, was non-verbal and found it very difficult to self-regulate. Mum was a single parent finding it very challenging. And there'd been some music therapy at school that had been, well they anecdotally said that it had been successful. So, we put that in the plan to look at that sort of self-regulation: breathing and calming. (Alicia_3)*
- *Goals always need to be linked back to the disability and justified from that perspective. (Bryce_6)*

Based on these two statements, an Emergent Theme was developed, "it's

important for me to justify my decision to fund music therapy,” and a code N1 was given to this theme as well. N refers to NDIA staff, indicating that this theme was dominantly reported by the NDIA staff. In this way, R represented RMTs and P represented Parents. By looking across the similar interpretations of nine participants’ perspectives in this way, a total of 14 Emergent Themes were identified. Table 2 shows how each Emergent Theme was developed, typically based on at

least two interviewee’s statements. Two themes (e.g. N5 and P1, see Table 2) comprised only one person’s opinion but were included because those nuanced statements were critical in forming the Final Themes. Moreover, in phenomenological analysis, not only the agreed perspectives across the participants are valued, but also critical individual perspectives are valued (McFerran & Grocke, 2007). Hence, including these two themes was appropriate.

Table 2.

The 14 Emergent Themes

N1	It's important for the NDIA planners to justify their decisions to fund music therapy.
N2	The NDIA planners have personal beliefs about the certain benefits of music therapy.
N3	The NDIA planners hope other planners get some information about music therapy and RMTs.
NPR4	Reports are important and RMTs should be thoughtful and clear about what is included in reports.
N5	The NDIA planners should be careful in supporting music therapy because not everyone is convinced about the effectiveness of music therapy
P1	Depending on the planner's knowledge about music therapy, funding outcomes are different and inconsistent.
PR2	Therapists' active role in educating and promoting music therapy and being acknowledged by other allied health professionals are extremely important.
R1	RMTs need to know how the NDIS works.
R2	Decisions should be informed by parents' voices and RMTs might need to prompt and inform them.
R3	Getting into the NDIS system was a slow and complicated process for RMTs.
R4	Awareness of the benefits of music therapy should be increased in the future.
R5	RMT reports and recommendations about the amount of sessions were not respected by the NDIA.
RP6	The planner's lack of understanding of music therapy negatively impacted clients' access to music therapy
R7	It is not about only the choice of services but also how to make a good argument for that choice and RMTs also need to use right language for effective communication.

*N: NDIA Staff, P: Parent, R: RMT

Stage 4: Searching for connections across Emergent Themes by abstracting and integrating themes and revealing Final Themes.

By further examining the various perspectives captured in the Emergent Themes, three Final Themes were developed. For example, of the 14 Emergent Themes, the following four themes appeared closely related:

- N1: It's important for me to justify my decision to fund music therapy
- N2: I have personal belief about the certain benefits of music therapy
- N5: I should be careful in supporting music therapy because not everyone is convinced about the effectiveness of music therapy
- R7: It is not about only the choice of services but also how to make a good argument for that choice. NDIA planners should understand music therapy more but RMTs also need to use the right language for effective communication.

While the first three themes reflect the NDIA staff's inner thoughts while making decisions about whether to fund music therapy services, the last theme is based on two RMTs' experiences and these further explained that the choice to access music therapy did need to be argued on the basis of a solid justification and using accepted language. Accordingly, this Final Theme was named "The decision-making process of the NDIA planners revealed." Two more Final Themes were developed in this way and are presented in the result section. To ensure the credibility of the analysis, each stage of analysis was recorded transparently and traceable by other researchers in the university team, and each outcome was reviewed by co-researchers.

Findings

Final Theme 1: The decision-making process of the NDIA planners revealed (Emergent Themes N1, N2, N5, & R7).

Initially, most RMTs and the parent expected that music therapy would be easily funded upon request during the planning process, as it was included on the NDIS providers' list. However, in the interviews, all the NDIA staff explained how complicated it could be for them to make a decision on whether to fund music therapy or not, and if they decided to fund, justifying their decisions to fund music therapy became crucial (N1). The planners we interviewed held a range of beliefs about the potential benefits of music therapy and they were more able to agree to funding if the request aligned with those beliefs (N2). For example, one planner strongly believed that music therapy would be beneficial for a child who had difficulties with speech, indicating that she would fund music therapy only for the speech goals. This revealed that most of the NDIA staff we interviewed had limited knowledge of the breadth and scope of music therapy.

It was also understood that there were many other elements to consider when planners made decisions for a participant, and they had to justify their decisions to a higher authority or colleagues in the NDIA. As not everyone in the NDIA was convinced about the effectiveness of music therapy and s/he felt impelled to care about other planners' opinions on music therapy, at least one planner felt that she should be careful or cautious in supporting music therapy (N5). With regard to this issue, two RMTs with years of experiences with the NDIA suggested that the NDIA planners needed to better understand music therapy, and that RMTs need to use the right language for effective communication. One of the RMTs explained that being on the NDIS

providers' list did not mean that all the requests would be accepted, and each request needed to be submitted with an accepted justification which linked back to the client's disability and goals (R7).

In order to understand who made the decision to provide access to music therapy

and how it was justified, ten cases of participants who were able to access music therapy through the NDIS funding were further analysed. The details of each case are presented in Appendix 2 and Table 3 to show the result of the analysis.

Table 3.

Reasons for funding music therapy and decision-making process during NDIS planning

Example No.	Reasons for Funding Music Therapy	Who Made that Decision?
1	To support a single mother of a son who has behavioural problems and whose previous music therapy participation at school was successful	Planner found a good justification in a unique situation
2	To adapt print music for community participation	Planner found a good justification in a unique situation
3	To support a boy born premature that resulted in developmental delays and required early intervention	Family accessing Transdisciplinary Early Intervention Package (TEIP)
4	To support a boy with functional disability resulting from cancer to learn coping skills	NDIA not providing sufficient session amount requested by family and didn't regard music therapy as therapy but a group activity
5	To support ongoing music therapy that has been conducted previously for a 3-year-old girl as part of a TEIP	Family accessing TEIP
6	To fund a music therapist to conduct assessment of sessions provided by a community musician focused on OT needs	Planner found good justification in unique situation
7	To support the client to communicate with her family living overseas, music was found to be effective in this so her sessions have been funded regularly on an ongoing basis for more than several years now.	Planner found good justification in unique situation
8	To support a 5-year-old girl with developmental delays in TEIP (parents had no idea about music therapy)	NDIA (parent didn't know of Music Therapy but it was given as part of TEIP)
9	To support a 6-year-old boy with speech delays in TEIP	NDIA happy to offer TEIP to an organisation
10	To support a 15-year-old girl with mental health issues such as anxiety and Obsessive Compulsive Disorder	Planner found good justification in unique situation

Out of these ten examples, five were child clients who were under 10 years of age (case example no. 3, 4, 5, 8, 9) and receiving

Transdisciplinary Early Intervention Packages (TEIP). Surprisingly, one client (example 8) was given access to music therapy even

though the parents did not request it and did not know what music therapy was. The main goals for these children in early intervention were improving their functional abilities and skills in relation to their developmental needs such as improving speech, communication, physical skills, self-expression and articulation of emotions.

Among the other five examples, four school aged children were aged between 14 and 15 years and attending school (case example no. 1, 2, 6, 10), and two could be described as noteworthy in their uniqueness. Example 2 was reported by the NDIS Planner Alicia, and she explained that the 14-year-old boy who was born without eyes needed extra support in accessing adapted print music in order to participate in a community band. Therefore, the planner supported the boy to have practical support from a RMT. She further explained that his parents were paying for the trumpet lessons, which is an expense expected to be paid by any parent, regardless of whether their child has a disability. However, the extra cost for the adapted printed music was a special need resulting from this boy's disability, so the planner supported this cost.

Similarly, Example 6 appeared to be quite a special case where a teenage boy with autism was participating in ongoing music sessions with a community musician prior to entering the NDIS. Although the main focus of their sessions was expanding song-repertoire and singing together, the NDIS considered it as fulfilling Occupational Therapy (OT) needs and funded this musician as if he was an OT assistant. Under NDIS arrangements, an RMT was funded to twice observe their sessions and provide an assessment. The rationale for funding the other two teenagers was behavioural problems (Example 1) and mental health issues (Example 10), and in both cases,

the families were finding it challenging to manage their child's behaviours and therefore ongoing music therapy was supported.

Only one adult client was funded to participate in on-going music therapy (case example no. 7). This 30-year-old woman had been working with a music therapist for many years before entering into the NDIS. Her family argued that music therapy played an important role in supporting their daughter to share her life experiences with family and relatives living overseas because she would write songs to share with them.

Final Theme 2: The impact of the NDIA's decisions on both participants and RMTs' practices was revealed, and RMTs expressed desires to better understand the NDIS approval process (P1, RP6, NPR4, R3, R5, & R1).

The parent participant in this study reported that the outcomes of her music therapy funding requests across several planning processes depended on the planner's knowledge of music therapy. This resulted in inconsistent outcomes (P1) and these inconsistent outcomes negatively impacted on her son. This mother's experience was also confirmed by other RMTs who described how planners limited the amount and frequency of music therapy which sometimes caused issues related to therapeutic closure (R6).

While most people believed that the RMTs' reports were crucial in the planning processes (NPR4), two RMTs found that the NDIA did not approve the recommendations made in their reports. In particular, one RMT described how the NDIA did not follow through on her six monthly progress reports and never responded to her suggestions for a client to access community music programs (R5). Some RMTs described that communicating with the NDIA was often a

very slow and complicated process and RMTs felt out of their control at times (R3). Accordingly, most RMTs hoped to be better informed about how the NDIA is structured and actually works (R1).

Final Theme 3: This is an important time to raise awareness of music therapy and RMTs can be active in this process to advocate for music therapy as a necessary service (N3, PR2, R2, & R4).

The three NDIA staff hoped that other planners might get more information about music therapy and RMTs in general, and expected RMTs to actively communicate with the planners to provide knowledge and information about music therapy (N3). They explained that the NDIA planners have mandatory trainings every fortnight and that this might be a useful place for RMTs to start the promotion of music therapy and education of the NDIA planners. Likewise, the parent participant and one RMT thought RMTs should have more active roles in educating and promoting music therapy as a reasonable and necessary service to both planners and parents/families of persons with disabilities. It was also understood that being acknowledged by other allied health professionals was helpful and having these professionals write recommendation letters for music therapy might be extremely important in relation to the NDIS (P2).

Most RMTs agreed that awareness of the benefits of music therapy needed to be increased and some believed it was now an important time to raise awareness in collaboration with the NDIS, since some planners had actively recommended music therapy to families (R4). Since the request for music therapy should come from participants of the scheme and/or their parents' voices, RMTs believed they might need to prompt and

inform participants to do so in the future (R2). Some RMTs expected AMTA to take an active role in more formal aspects of advocacy, and to provide publicly available information and tools, which has since occurred. Formal advocacy from AMTA has included animated videos for social media as part of a broader public relations campaign, an online training course on the NDIS, the establishment of an NDIS sub-committee who has had several meetings with the NDIA, and an active Facebook page that is monitored by that committee. Together with the RMT community, many parents and other professionals have been active in contributing to greater understandings about the benefits of music therapy during this time of transition.

Discussion and Conclusion

Since the inception of the NDIS in July 2013, there have been many ongoing changes. These interviews were conducted in October and November 2015 and the focus on individual stories means that there is no basis for generalisation. Therefore, results and findings of the current study should be understood and interpreted appropriately. Following up the participants in music therapy at the time of data collection and investigating their journey in a longitudinal study could provide additional insights in the future.

Music therapy is recognised by the NDIS as a reasonable and necessary therapeutic service. As the scheme unfolds, there have been cases where families, clients and the NDIA staff have not clearly or consistently understood what it is or how it could be funded under the scheme. Similarly, other allied health and creative arts therapies, have anecdotally reported similar experiences of misunderstanding. The results of this study also suggest that RMTs have found it difficult to understand the scheme at times, showing

that the confusion can flow in both directions. This study revealed that the inclusion of music therapy on the NDIS list did not secure families' rights to access music therapy services and there is no guarantee that people's choices to receive music therapy will always be enabled by the scheme.

As the roll out of the NDIS continues in the coming decade, RMTs will be required to demonstrate their professional skills and draw on their ethical obligations to advocate for participants' rights to access music therapy services. This study shows that individual RMTs may have different experiences and face diverse demands as individual planners learn about the kinds of services that participants in their scheme want and desire. During this time, it will be essential to continue to respond to current information about the NDIA and its decision-making processes and it may be useful to engage in research that better explains what music therapists do. Ongoing connection to the Australian music therapy community may serve as one conduit for RMTs in facilitating this ongoing communication, as well as a sensitivity to the desires of people accessing the NDIS and a careful distinction between our own desires to serve and an openness to what people are truly requesting. This kind of ongoing reflexivity will benefit Australian society as we embrace the social model of disability, and all the bio-psycho-social models that come next, ensuring that our actions are in keeping with the famous dictum that heralded the beginning of the critical disability movement: Nothing about us, without us.

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Appendix 1.

An example of an idiographic analysis in stage 1

Alicia/NDIS Planner	What matters to Alicia?	What that means to Alicia?
<p>1 <i>It's making their goals and working with them to look at what supports they have currently and looking at the support, not just funded support so we also look at their informal support network and how they can assist with achievement of the goals, as well as looking at what's out there in the mainstream and community...looking at how mainstream services and community supports can get by that participant in helping them meet their goals and then we look at funded support after that, after we've exhausted what's out there already.</i></p>	<p>Finding the right supports for the participant</p>	<p>Identifying goals to achieve is more important than finding services and support</p>
<p>2 <i>They get to have choice and control of it, the participant, and lots of the modality and therapy that they want to choose. And often they'll come to us and say "well what else can you give me? Or what would someone like me...what else is there?" But we don't really look at it like that. We look at what your goals are and we look at what supports we can put in place around those goals. So, we don't throw the whole catalogue of supports at you and say tick tick tick like a shopping list, pick what you'd like. Some parents do come in with that list. They've been through the catalogue and they are aware of what can be funded under NDIA so they want everything that they can get for their child which is understandable. So it can work both ways a bit but primarily it's just developed around their goals.</i></p>	<p>Finding the right support for the participants to achieve the goals</p>	<p>Identifying goals to achieve is more important than finding services and support</p>
<p>3 <i>I've only funded it (music therapy) 2 or 3 times and all sort of for different reasons. So, I've funded it for one 15 yo with a lot of behavioural problems. He had autism, was non-verbal and very difficult to self-regulate so mum was a single parent finding it very challenging. And there'd been some music therapy at school that had been, well they anecdotally said, that it had been successful. So we put that in the plan to look at self-regulation: breathing and calming.</i></p>	<p>Whether funding music therapy will be beneficial to the participant to achieve the goals</p>	<p>Justifying my decision to fund music therapy is important.</p>
<p>4 <i>There was a 14-year-old boy born without any eyes so I funded Music Therapy (MT) for him because he participated in bands and he wasn't able to access the music. It was not typical MT I funded, but I funded a RMT to help him access print music so they're adapting the print music into a suitable format for him. He can then memorise the music cause that's how he learns it. His parents paid for trumpet lessons each week – if it's something that all parents would be expected to pay for, then it's not something that we'd fund.</i></p>	<p>Whether funding music therapy will be beneficial to the participant to achieve the goals</p>	<p>Justifying my decision to fund music therapy is important.</p>

5	<i>We wouldn't, or I wouldn't consider music lessons. To me that would be an ordinary cost of parents. It's just expected that parents would cover any cost of music lessons. So that's one of our principles in looking at a reasonable and necessary support, is whether it's a day to day living cost by a parent. So even though it might be related to a disability, if it's something that all parents would be expected to pay for, then it's not something that we'd fund.</i>	Whether the request of a certain service is directly related to his/her disability or not	Making decisions according to our principles regarding funding reasonable and necessary supports is important.
6	<i>You can amend the plan in that 12 months if you get a progress report saying they've made these amazing gains and we've still got these goals...we're looking at these goals for the next 10 sessions, then you might look at funding another 10 sessions if you think it's reasonable and necessary. But yeah, it doesn't mean that it's only 10 necessarily for the entire 12 months. But maybe it does keep it accountable that there is progress being made, and the therapist needs to get back to you with those outcomes.</i>	Whether the participant was gaining outcomes to get more funding for music therapy	Making decisions whether to continue the funding is up to the participants' outcomes.
7	<i>I think I'd like info on music therapy as well and when we might actually implement it and when we might not. Because it is, music therapy is a bit of a grey area. It's not requested very often.</i>	Making a right decision when to fund music therapy or not.	Alicia feels she needs to be informed more to make right decisions.

Appendix 2.*Ten funded music therapy cases as described by participants*

Case	Interviewee reporting the case	Age/ Gender of the client	Diagnosis	Other Personal Circumstance	Music Therapy Goals	NDIS Funding
1	Alicia/NDIS Planner	15/M	Autism, Non-verbal, Difficulties to self-regulate	Mother is a single parent finding it challenging and previous music therapy history at school reported to be successful so planner was happy to put music therapy in the plan.	To promote self-regulation through breathing and calming	Not specified
2	Alicia/NDIS Planner	14/M	Born without eyes	He participated in bands but wasn't able to access the music (sheets). His parents paid for trumpet lessons each week. If it's something all parents would be expected to pay for, then it's not something that we'd fund.	To help him access print music so they're adapting the print music into a suitable format for him and then memorise the music cause that's how learns it.	Not specified.
3	Diana/RMT	2/M	Born premature resulted in developmental delays	Family visited RMT's group session conducted in an organisation and noticed the child was positively responding to music.	To improve speech, working on to begin with any words and then two words and now it's putting the word on the end of a song To upskill parents and grandparents to share musical activities with him at home	20 individual sessions funded
4	Diana/RMT	8/M	Functional Disability resulted from Cancer - one of his eyes removed	When they got NDIS funding, his mum asked for music therapy and then I got contacted. But NDIA had already put on the plan for group music therapy but we were unable to provide group music therapy so we ended up only providing a shorter amount of sessions because they wouldn't give us more funding for individual sessions. So that was a bit of a different process because we really had to advocate for him and say that "no, we thought that individual would still work."	To build coping skills like reducing anxiety and dealing with negative emotions such as frustration through song-writing To express emotions through keyboard playing and improvisation To provide creative emotional outlet and build confidence by leading and directing music-making process To use music with mother at home throughout daily routines	Initially got four individual sessions and then we had to write a progress report. Then I think he got ten. And then now we've just had 20 funded for him. But they've been a lot more, this was earlier on and they didn't want to fund as many as 10 individual sessions.

5	Emma/ RMT	3/F	Not specified	<p>She was having music therapy before she joined the NDIS a couple of years ago, so obviously her parents just came in and said we really like music therapy and we'd like it to continue. So that was easily done. They may have asked me for a report.</p>	<p>To exercise choice and control by indicating her preference of song, instrument or activity through head movement, pointing, reaching out or vocalising</p> <p>To maintain and increase body awareness and tactile experiences through different types of touch and active movement</p> <p>To maintain and increase her non-verbal communication</p> <p>To increase gross motor control through playing instruments</p> <p>To have opportunities for increased self-expression and communication</p>	<p>Music therapy is part of an interdisciplinary package she's got.</p>
6	Emma/ RMT	Teen /M	Autism	<p>A musician who was working with a lad who has autism. And I don't know what funding stream...oh Occupational Therapy (OT) I think. I do know that this musician is not being paid same as an OT, they stretched the funding but it's under the OT line, whatever they call it. That was quite a long time ago now and I've done it twice. So, what they've asked is that they have a music therapist write a report about what's going on in the sessions and then they claim it through OT.</p>	<p>To fulfil some OT needs by building up an repertoire of songs which they sing together</p>	<p>2 music therapy assessment sessions</p>
7	Emma/ RMT 2	30's/F	Not specified	<p>Those songs written in music therapy sessions are all recorded onto a cd and she gives them to her family and extended family that are also overseas, so it's a way for her to connect with all sorts of people that she doesn't see very often - her family don't live nearby.</p>	<p>To expand her repertoire in music by playing keyboard and learning new songs</p> <p>To articulate and express different aspects of her life through song-writing</p> <p>To increase confidence through shared music-making</p> <p>To create an expressive outlet through song-writing and recording</p> <p>To extend non-verbal communication</p> <p>To increase self-awareness, control and autonomy</p>	<p>Ongoing regular sessions over several years and the RMT has been submitting report every 6 months.</p>

				To gain independence in music-making outside the sessions	
8	Florence/ RMT	5/F	Not specified	<p>On the one hand, I had a client who rang me saying, "we have music therapy on our plan, what is it?" so then I told him what music therapy was and then, just based on what he had told me about his daughter, what I might possibly be able to work on with his daughter. And he said "Oh that sounds perfect. When can we start?" But I've only had that once and it does seem unusual.</p>	<p>Not specified</p> <p>Initially 10 hours funded for music therapy assessment. Then I've just written a report for them so that can get reviewed and then they're planning to have more music therapy.</p>
9	Florence/ RMT	6/M	Speech Delay	<p>One of my clients has been under an organisation doing all sorts of early intervention stuff. Then they come up for NDIS so they go "well we're happy with this organisation we want to stay with them." They're an organisation that is registered with NDIS to be a provider. Obviously, there is communication with the family as well but there is someone from that organisation who I think also is in the planning meeting and helping develop the plan. Then that organisation is given a bulk amount of money or funding to then provide OT, speech, physio, whatever it is.</p>	<p>To improve speech and motor skills To improve emotional expression and articulation of emotions and experiences</p> <p>Transdisciplinary Early Intervention Package. When it came to me doing music therapy with him because music therapy wasn't listed separately, NDIS told me that I had to go through this organisation and that it would come under their funding. This is extra admin for us so how about we charge you like 10% or something.</p>
10	Florence/ RMT	15/F	Mental Health Issues/ Obsessive Compulsive Disorder (OCD)	<p>She's got a lot of insight and she's quite articulate but when it comes to connecting, she finds what's happening physically and emotionally a bit tricky. This girl has OCD and she won't touch any instruments so we do a lot of singing. Self-expression, self-esteem and confidence are important because she also suffers with depression and low self-esteem so her family are very keen to</p>	<p>To reduce anxiety through relaxation and breathing techniques To gain looking at emotional expression and emotional understanding and articulation as well as body awareness in relation to emotions To discuss about emotions expressed in music through active listening to music</p> <p>Not specified</p>

have opportunity for achievements and positive experiences.

Appendix 3.

The participants' statements

Final Theme 1: The unknown decision-making process of the NDIS planners revealed

Emergent Theme N1: It's important for the NDIS planners to justify their decisions to fund music therapy.

There was a 14-year-old boy born without any eyes so I funded Music Therapy (MT) for him because he participated in bands and he wasn't able to access the music. It was not typical MT I funded, but I funded a RMT to help him access print music so they're adapting the print music into a suitable format for him. He can then memorise the music cause that's how he learns it. His parents paid for trumpet lessons each week – if it's something that all parents would be expected to pay for, then it's not something that we'd fund. (Alicia_4)

Emergent Theme N2: The NDIS planners have personal beliefs about the certain benefits of music therapy.

If a child has speech delay I would say music therapy. The goal would be something like 'be assisted by speech pathologist and music therapist to help with learning to speak'. I mean that's just...I wouldn't word it like that but that's how I would link the goal to the service. I think for music therapy...the only time I've put music therapy in a plan is when it's speech delay, cos that's where I see it as an amazing type of therapy for children with speech delay. (Cheryl_6)

Emergent Theme N5: The NDIS planners should be careful in supporting music therapy because not everyone is convinced about the effectiveness of music therapy

We'd all under plans I guess, work together if someone's got expertise in an area. We talk amongst each other to get some idea of how to put the plans together for different cohorts. (Cheryl_1)/As I said, planners don't recommend therapies. I did once recommend music therapy – I just said "I've heard it can be really great for speech delay" and they were really interested. But as we discussed it's not the general approach. I think getting the information to planners as well would be great because there's so much debate or controversy about supports." (Cheryl_9)

Emergent Theme R7: It is not about only the choice of services but also how to make a good argument for that choice/NDIA planners should understand music therapy more but RMTs also need to use right language for effective communication.

It (allocated financial amount) does matter but it's on a needs basis. So if you can put forward a really good argument for something you can have...I know some people seem to have a huge plan. I'm working with one 3 yo, and her parents think that she may have the biggest plan yet! But within that, it seems that there are some limitations as well. So I think they have to put forward a good argument and that family are really arguing strongly for as many services as they can for their child. (Emme_3)/I guess a lot of confusion on both parts, like the planners not really understanding music therapy, not really understanding what we can offer. Also me trying to find the right language to communicate to them in a way that they're going to understand what we're talking about as well. Because often if they've not heard it before they get a bit confused or lost. (Diana_19)

Final Theme 2: The impact of the NDIA's decisions on the participants and the RMTs' practices was revealed and RMTs expressed desires to have more channels of communication with the NDIS

Emergent Theme P1: Depending on the planner's knowledge about music therapy, funding outcomes are different and inconsistent.

If your planner is clear enough to know how the different disciplines work and what they try to achieve and are cluey enough to sit there and go "Right. Sounds like William's struggling with that. Why don't we get an assessment done on this and say whether or not therapy would be worthwhile?" Then, it's great. It gives you a hint of where to start. But for the everyday person, there's no way. If it was not something that they've been familiar with before. The planners certainly use it. Subsequent to that I've now got a different planner, and that planner hasn't offered or suggested anything different. (Iris_10)

Emergent Theme PR6: The planner's lack of understanding of music therapy negatively impacted William's access to music therapy

So every time at the end of that block then, like the plan comes to an end and you have to provide a progress report so it's always uncertain about whether music therapy is going to continue and that's also something that I've raised with the planner. Because last time before this child got 20 sessions, we only had one session left and mum was due to have her plan reassessed in a month, and we'd been meeting fortnightly and so I contacted the planner and said that's the likelihood of this continuing? You know we've only got one session left and the mum knew that she had flexible support so the mum thought that she could actually take some from speech that she hadn't used and use it for music therapy... But the planner was like we won't know until the day of the plan and I'm talking about, but that's not appropriate for closure. I've been working with this child for so many sessions now, he's really engaged, mum's saying he wants more music, he's saying he wants more music - where do we sit? And she's like just have the final session or hold onto one of your sessions until we know. And I said but that's still not actually enough, because I started these discussions when I still had a couple and then it took that long. And then I had that discussion with them and said that actually for therapeutic closure, that's not appropriate for a child who's highly anxious and had all that trauma in his life. And then so she said she was going to take that up to NDIA but I haven't heard anything back. So that's a big issue as well. The new plan meeting happened after the first plan ended. There was like a lapse. (Diana_9)

Emergent Theme NPR4: Reports are important and RMTs should be thoughtful and clear about what they write in reports.

I guess cos we're not, like most planners aren't therapists or if they are, only in a specific area generally, I always say...if a participant says "I want music therapy or I want my child to have music therapy" I don't say...I don't have any knowledge of whether it would be a good thing or not so I would put in an assessment for music therapy. So I'd put in probably 10 hours and say, "If I could get a good assessment from the music therapist as to why this is a good support, and how many hours they think is required, then I would go off the report." I would make the determination myself. (Cheryl_3)

Emergent Theme R3: Getting into NDIS system was a slow and complicated process for RMTs.

When you are trying to chase up, like I've been trying to find out if this person does have funding before I've provided the service, like the communication between myself and the NDIS is quite slow. They say about 5 business days to answer any email... most of the time when I've rung up, the person on the phone is more just a general call centre sort of person, and if they're not aware of individual cases they'll say well send an email to whoever is dealing with it from that end. So when you have clients that are waiting for a service or if you have issues with looking up their funds and stuff it can be quite a slow process. (Gabriella_6)

Emergent Theme R1: RMTs need to know how the NDIS works.

With this next client, I've got coming on I'm thinking I'm gonna try sorting things out a bit further... I mean I don't really care how it's, I mean if I get paid at the end of the day that's fine like I don't really care. But the way it's set up in terms of when it's on their plan separately and I just keep invoicing NDIS, it's so simple and it works really well. And this other system through the organisation works as well now that we've got it set up. Like I just invoice them and they pay me. Now that we've done that it probably will be okay with the second client. But I'm also thinking well, with any clients I'm advising them that if you want music therapy try and get it as separate item on your plan - that's much simpler. (Florence_8)/Not everybody gets a copy of the NDIS plan. I purposely went out of my way to request them. Because you really need them to know whether you're helping them achieve their goals. So I had to request them (Hannah_9)

Emergent Theme R5: RMTs reports and recommendation about the amount of sessions were not respected by the NDIA.

There's been no input or request from the NDIA at all from me. Except for formally but they don't even seem to follow up with that. They say they want a report every 6 months and I've been doing that fairly consistently but they've never chased me for it. So I've just written what I always write for reports which is goals and what's happening in the session and the outcomes. (Emma_15)/During school terms once a week. I think I asked for forty sessions. She came back and said they do either 48 (half an hour) or 24 (an hour). The other thing I got to ask her which I was just assuming but hadn't clarified with anyone, was ... It's by the hour.... And I said "is that inclusive of chatting to mum, doing the reports, doing an assessment, admin type stuff as well?" Because I assumed it was. And she said that it was, she clarified that it was. (Florence_16)

Emergent Theme 3: This is an important time to raise awareness of music therapy and RMTs can be active in this process to advocate for music therapy as a necessary service**Emergent Theme N3: The NDIS planners hope the other planners get some information about music therapy and RMTs.**

Communities of Practice – setting up groups with differing levels of expertise for knowledge management and transfer of knowledge across the NDIA. Music Therapy and therapy services is probably one of those areas that would fit quite well with that sort of approach. (Bryce_7)/We do have training sessions...well we're meant to have them anyway fortnightly. People from various organisations that provide certain supports come and speak to us. So you could get in touch with the Engagement Teams in different sites and just say if it's possible, we'd like to come and have a chat with the planners about the benefits of music therapy. And that could very well be something that they'd be interested in cos we are meant to have regular training on different supports. (Cheryl_10)/I think I'd like info on music therapy as well and when we might actually implement it and when we might not. Because it is, music therapy is a bit of a grey area. It's not requested very often. (Alicia_7)

Emergent Theme P2: Therapists' active role in educating and promoting music therapy and being acknowledged by other allied health professionals are extremely important.

Unless where the therapists are engaged they are able to communicate with those parents, "Look, you've got to get on the NDIS site. You should consider it." I'm not sure. I sort of think also, perhaps align disciplines for example. Diana does with William's coordination skills and things like that that he struggles with, like it's an Occupational Therapy (OT) goal, but Diana works on that with him as well. She brings out the keyboard and gets him to attend to his left-hand side using the keyboard. So yes, we're doing emotional relief, that was the main purpose of having her, but she's also been able to get him to move fingers and all sorts of stuff. in terms of increasing a profile, then we'll also be working with just making yourself really well known, as to what music therapy can do to support another discipline, so that when the therapist is writing their recommendation for what services you might need, that they're suggesting it as well. That's probably how you get it into the plan. (Iris_11)

Emergent Theme R2: Decisions should be informed by parents' voices and RMTs might need to prompt and inform them.

It sounds like their hands are tied, like it has to be all from the parents' voice. I don't even think they can say "look we've had other people with this diagnosis and they're benefited from you know, x, y, z." I don't think they can do that at all. So it's sort of I figure out what they're needing and then I help them jump through the hurdles. So I pass the message on to the head clinician and I've got to kind of whisper to her "look you need to inform the parents that they need this if you want to get it approved" (Hannah_12)

Emergent Theme R4: Awareness of the benefits of music therapy should be increased in the future.

I believe that they're supposed to click on 'find a provider' and they can search for what's available. But I'm guessing in general, probably the awareness of music therapy is probably not quite as high as awareness of say speech therapy or OT. So they're probably going to search for those sorts of things before they would search music therapy. And other than that, unless individual planners are aware of it and suggest it, then I don't really see the NDIS as kind of sprouting it. (Gabriella_9)

Book Review

Polen, D. W., Shultis, C. L., & Wheeler, B. L. (2017). Clinical training guide for the student music therapist (2nd ed.). Dallas, TX. Barcelona Publishers.

AU \$50.30, 219 pages (paperback), ISBN: 9781945411168 (e-book)

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Training music therapy students is a complex task that is approached differently around the world. The music therapy profession is broad in its application, with qualified music therapists working in diverse contexts with diverse populations to meet diverse needs. Different countries emphasise different skills in their training programs and offer either undergraduate or postgraduate qualifications.

Clinical training is at the heart of music therapy degree courses. Placements (also known as practicums or internships) offer students the opportunity to gain experience with real people, and therefore students are required to put theory into practice and apply their academic knowledge. In this sense, what happens on placements integrates all aspects of course work and professional knowledge. The second edition of “Clinical Training Guide for the Student Music Therapist” could be seen as a compendium for students on placement. Within each chapter, there is an emphasis on professional competencies and developing skills in various aspects of music therapy program development; from planning, assessment and goal writing, to implementing music therapy techniques. At the end of each

chapter, there are learning tasks to help scaffold student learning and support them to engage in personal reflection.

The second edition is a welcome update, and while the general structure of the first edition remains intact, new material is emphasised and expanded. Chapter 3 is one such new addition, titled “Essential Aspects of Becoming a Music Therapist: Education, Clinical Training, and Related Areas”, and highlights that this material is most relevant to the process of becoming a music therapist in the United States and meeting the competencies of the American Music Therapy Association. The authors are transparent about the need for students and educators in other countries to adapt the material within this text to suit local credentialing processes and approaches to practice. Music therapy scholars have recently highlighted the importance of understanding the constitutive, relational, contextual, temporal and corporeal features of music therapy practice in meeting health and wellbeing agendas (Stige, 2015). Therefore, the task of adapting and contextualising the material within this text will require careful planning from educators outside of the United States. It may be challenging for students alone

to understand how perspectives from North America are (or are not) relevant to their local communities.

In addition, some material from the first edition has been removed, most notably the *changing behaviour* section from Chapter 13: “Facilitating Client Responses”. The removal of this material is appropriate and highlights the challenge of providing a broad-based, comprehensive text for students. Behaviour Modification Therapy is a highly skilled area, and it is important for students to understand that they will need training, support, and supervision to implement these types of strategies in music therapy.

Overall, most topics are presented in highly condensed formats throughout the book, such as Yalom’s therapeutic group factors provided as a simple list on page 165. The breadth of material presented is useful in raising students’

awareness of the many theories that might inform music therapy practice and will hopefully provide inspiration for more in-depth exploration of the topics. For music therapy educators, the topics within this second edition provide starting points for discussions with students about all aspects of music therapy program delivery. With its accessible language, clear structure, and broad range of references and materials, students in various stages of their training are likely to experience this text as engaging and informative.

Reference

Stige, B. (2015). The practice turn in music therapy theory. *Music Therapy Perspectives*, 33(1), 3-11. doi:10.1093/mtp/miu050

*Book Review***Jacobsen, S. L. & Thompson, G. (Eds.). (2017). Music therapy with families: Therapeutic approaches and theoretical perspectives. London: Jessica Kingsley.****AU \$44.89, 344 pages (paperback), ISBN: 9781784501051 (e-book)****Helen Shoemark, PhD, RMT
Temple University, Philadelphia, USA**

Stine Lindahl Jacobsen and Grace Thompson have brought together their considerable clinical and research experience to generate a consistently readable text which will be a strong resource for clinicians. The book provides 13 chapters by an array of authors and a final chapter by the editors. Each chapter is predictably organised with the consistent headings of Clinical population and setting; Theoretical background; Research; Therapeutic approach; Case Vignette; and a concluding Discussion. The authorship is international, drawing on the European and Australian alliances of the editors. The absence of authors from other areas of the world does not distract from the strength of the book.

The book has a chronological organization beginning with families with young children and ending with chapters about families that include older adults and those who are dying. While families with younger children do dominate, the nod to the idea of the lifespan gives useful respect to the place of all members of the family, acknowledging the shifting role of carer from adult to child.

The work of music therapy clinicians and researchers is shared across the chapters with some variation in tone. Some clinical authors

provide a more practice-near sensibility (Froggett & Briggs, 2012), and research authors offer a more practice-distant stance, but between these there is an appealing depth to the information generated for readers.

Many of the authors write in the first person, thereby situating the work in their specific context. The prescribed headings ensure the reader has clear information about that context and the guiding principles for the work described. The case vignettes provide an intrinsic case which illustrates those core principles and sometimes produces a pleasing verisimilitude. The selection of topics captures work which champions the various roles of music therapy. The suitability of music as a protective factor is evident in Abad & Barrett's writing about music early learning programs and Teggelove's chapter about the highly successful Sing&Grow program. The concept of music therapy to repair relationships is nuanced and beautifully crafted by Tuomi & Tuulet (chapter 8), Oldfield (Chapter 3), and Pasiali (chapter 10). The more adaptive work needed for children with autism shows clarity and diversity of approach in the writing of Thompson (chapter 4) and Gottfried & College (chapter 5). The notion of creative holding is

evident in Haslbeck's NICU work (chapter 1) and Baron's work within acute paediatrics (chapter 2). The salient role of music as a vehicle for families at risk of emotional and psychological complexity is beautifully encapsulated by Oldfield (chapter 3), Jacobsen (chapter 9) and Oscarsson (chapter 11). Finally, the refocusing of the lens for mature families is clearly presented by Ridder (chapter 12) and Lindstrom (chapter 13) to round out the full range of insightful work.

Perhaps the most exciting part of this book is the articulate list of "emerging characteristics" provided by the editors in the final chapter. The editors demonstrate their mature insight by usefully synthesising the

common threads presented throughout the chapters to produce a speculative set of features that exemplify the expanding landscape for family-centred music therapy.

Reference

Froggett, L., & Briggs, S. (2012). Practice-near and practice-distant methods in human services research. *Journal of Research Practice*, 8(2), Article M9. Retrieved from <http://jrp.icaap.org/index.php/jrp/article/view/318/276>
