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Therapist and Individual Experiences and Perceptions of Music Therapy for Adolescents who Stutter: A Qualitative Exploration

Jessica O'Donoghue
University of Limerick, Jessica.ODonoghue@ul.ie

Hilary Moss
University of Limerick

Amy Clements-Cortés
Wilfrid Laurier University, notesbyamy2@yahoo.ca

Carol Freeley
University of Limerick

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therapy for adolescents who stutter: A qualitative exploration

Authors: Jessica O' Donoghue, Hilary Moss, Amy Clements-Cortes, & Carol Freeley

Correspondence details: Jessica O'Donoghue, Irish World Academy of Music and

Dance, University of Limerick

Email: Jessica.ODonoghue@ul.ie

Abstract

Introduction: Affective reactions frequently reported by adolescents who stutter include embarrassment, frustration, and feelings of anxiety about further stuttering. It is possible that music therapy could enhance stuttering treatment outcomes; however, little is known about how individuals who stutter, and therapists working with this group, view such therapy. The purpose of this study was to explore individuals who stutter and therapist experiences with, and perceptions of, music and music therapy for stuttering. This work is part of a larger mixed-methods project to explore the effectiveness and potential benefit of music therapy with adolescents who stutter.

Methods: Semi-structured interviews were conducted with six clinicians and three individuals who stutter. Interview data were analysed using qualitative content analysis.

Results: Four themes emerged from participants' accounts: (1) the experience of living with stuttering, (2) the importance of music in everyday life, (3) the application of music therapy in stuttering, and (4) recommendations for music therapy in the continuum of support services for individuals who stutter.

Discussion: Participants in this study perceived music and music therapy to benefit individuals who experience stuttering, particularly within the context of mental health. There is agreement that song writing, improvisation and song singing are most useful when working with adolescents who experience stuttering.

Key words: stuttering; adolescence; music therapy

Introduction

It is estimated that approximately 5% of children demonstrate developmental stuttering, with 75% recovering spontaneously (Blomgren, 2013). Stuttering is a multi-dimensional disorder of communication, which, in addition to the disruption of fluency, often encompasses social and emotional elements (Baxter et al., 2015). Overt stuttering behaviors include repetitions and prolongations of sounds, syllables or words; blocks or involuntary silent pauses; pausing or hesitation before speech. Avoidance of particular words or situations are examples of covert behaviors.

Treatment for adolescents who experience developmental stuttering is an under-researched area (Bothe, Davidow, Bramlett & Ingham, 2006; Fry, Millard, & Botterill, 2014). There are several reasons, however, why therapy for this age group and research into the effectiveness of therapy is important. Adolescence marks a transition from childhood to adulthood where major physical transformations are taking place and carry with them changes in body image and in the sense of self (Hearne, Packman, Onslow, & Quine, 2008). In addition, there are environmental pressures from peers, parents, teachers and society (Rustin, Spence & Cook, 1994). During this time of significant change, there are greater pressures on verbal performance. Within school, for example, verbal presentations or reading aloud in front of class are part of the school curriculum. Outside the school environment, the pressures on verbal acuity are also increasing. Although some adolescents who stutter manage the changing demands placed on communication with little difficulty, this is not the case for many (Ward, 2008).

The associated long-term risks of stuttering include reduced social, psychological, and vocational opportunities (Blumgart, Tran & Craig, 2010) and vulnerability to social anxiety (Kraaimaat, Vanryckeghem & Van Dam-Baggen, 2002) which may persist across the lifespan.

There is evidence that adolescents who stutter are vulnerable to these risks. Adolescents who experience stuttering have been found to score higher than adolescents who do not stutter on measures of communication apprehension (Blood, Blood, Tellis & Gabel, 2001), and view themselves as being less able communicators. Craig and Tran (2006) reported that adolescents who stutter are more likely to become more socially avoidant and fearful of communication than their fluent peers and develop negative attitudes and beliefs about themselves. Therefore, the teenage years are a potentially critical period for minimizing the impact and severity of stuttering.

With increasing levels of self-awareness and self-consciousness, the individual is likely to become more concerned about their difficulty in communicating and others' reactions to it, and this often becomes the most significant part of the problem. Furthermore, a complete recovery from stuttering becomes increasingly unlikely in the adolescent years and the emphasis shifts to control of the primary stuttering moments and the cognitive and emotional aspects (Ward, 2008). This evidence suggests that at least some adolescents who stutter may need and benefit from therapy that focuses on psychosocial functioning and associated mental health issues.

Laiho (2004) notes that music has its strongest relevance during the adolescent years. Adolescents engage in music through listening, singing, writing lyrics (Baltazar, 2019) and the functions of music to support this age group are well-documented. North, Hargreaves and O'Neill (2000) carried out a survey with more than two thousand adolescents and found that music is of major importance in identity formation, peer-group-building processes and mood regulation. The authors also found that participants listened to music for an average of 2.45 hours per day. Beyond music listening, music offers adolescents opportunities for mastery and participation in developing goals (Saarikallio, 2019). Music is an important resource for improving adolescent mental health and coping skills (Laiho, 2004; McFerran, Derrington &

Saarikallio, 2019) and adolescents naturally gravitate towards music; this is the basis for using music in therapy with this age group. MT has been extensively applied to adolescent populations (McFerran, 2010; McFerran, Derrington & Saarikallio, 2019; Wigram & De Backer, 1999), however, no studies have explored music therapy (MT) with adolescents who experience stuttering.

The use of music and indeed MT to address speech disorders in a variety of populations includes hearing impairment, articulation disorders and developmental verbal apraxia (Beathard & Krout, 2008; Gfeller, Driscoll, Kenworthy & Voorst Van, 2011; Hurkmans et al., 2015). The Neurologic Music Therapy technique, *Rhythmic Speech Cuing* (RSC; Thaut & Hoemberg, 2014) is effective in fluency disorder rehabilitation for stuttering and cluttering. RSC is reported to be as effective as other fluency-inducing techniques in the form of metric cueing and may lead to optimum coordination of breath and voice (Mainka & Mallien, 2014).

In addition to RSC, there are reports that singing increases fluency for individuals with speech deficits (Clements-Cortes, 2012; Davidow, Bothe, Andreatta & Ye, 2009; Lee, Thaut & Santoni, 2018; Stager, Jeffries & Braun, 2003). Healey, Mallard and Adams (1976) examined whether singing could reduce stuttering and whether familiarity with song lyrics contributed to this. Participants in this study were asked to read or sing lyrics of familiar songs with original or altered text. The authors found that the reduction of stuttering was greater in the singing condition. Another study (Andrews, Howier, Dozsa & Guitar, 1982) examined the effects of fluency-enhancing methods on several stuttering measures. They found that participants who sang a song of their choice for 10 minutes demonstrated reduced frequency of stuttering by over 90%.

Further to increase speech fluency, Clements-Cortes (2012) refers to the calming effects of music and how creating music may allow the client to "express their emotions, fears and

feelings towards the stuttering or the situations that enhance the stuttering" (Clements-Cortes, 2012, p. 47). For adolescents who stutter, MT may contribute to self-esteem and offer an effective means to identify and explore emotions.

Purpose

This qualitative study is part of a larger mixed-methods study that explores the effectiveness and potential benefit(s) of MT for adolescents who stutter. Research questions that guide the project as a whole are outlined below. For practical reasons including word length and adequate reporting (Bradt, 2015; Creswell, 2015), only the initial qualitative phase of the study is presented in this paper. Thus, the purpose of this qualitative study was to explore individuals who stutter and therapist experiences with, and perceptions of, music and MT for stuttering.

1) What are individuals who stutter and therapist experiences and perceptions of music and/or MT for adolescents who stammer?

2) How do MTs working with adolescents who stutter define and describe their practice?

3) Do SLTs use music in their therapeutic work with adolescents who stutter?

4) Does participation in MT improve the communication attitudes of adolescents who stutter?

5) How do adolescents who stutter perceive the experience and benefits of participation in group MT?

<p style="text-align:center">Method</p>

Rationale for the research design

Adopting a mixed-methods design was viewed as the best approach in this study because:

- Stuttering in adolescence is multidimensional. The combination of methods allows the researcher to delve into different complex phenomena without being restricted by the limitations of one type of research method.

- According to Chin (2019), mixed-methods approaches are suited for capturing complex emotional responses to music in young people.

- Combining methods allows for a more comprehensive approach to addressing the research questions.

- Integration of methods facilitates the 'bigger picture' to emerge. The design of the project is intended to achieve complementary data, which, when integrated, will provide more powerful results than the individual phase alone would.

Research design

This mixed-methods study is positioned in a pragmatist epistemology. An embedded mixed-methods design (Creswell & Plano-Clark, 2011; Tashakkori & Teddlie, 2003) is used where qualitative data is placed in two different ways: before the intervention to inform the development of an MT protocol and after the intervention to explore and explain the results further. Figure 1 illustrates the embedded mixed-methods design highlighting the current phase of the research project.

Figure 1

Embedded mixed-methods design
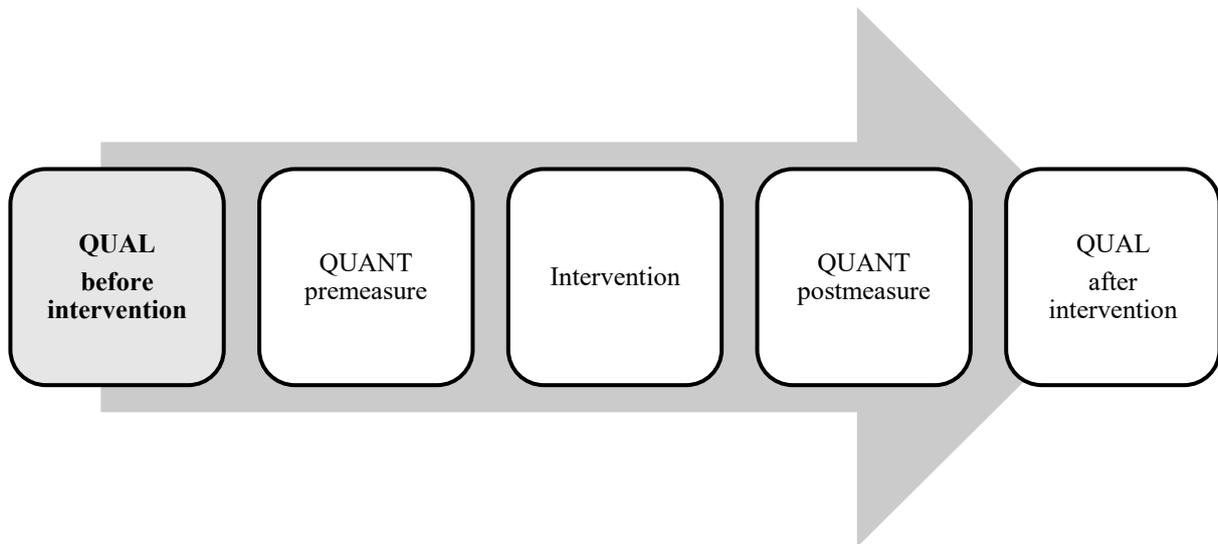
Exploring lived experiences cannot be achieved through the quantitative scientific method, therefore, qualitative interviews were used to develop an understanding of individuals who stutter, and music therapists (MTs) and speech and language therapists' (SLTs) experiences of music and/or MT. Qualitative methods are increasingly being employed to explore stuttering and its treatment (Connery, McCurtin & Robinson, 2019; Hayhow & Stewart, 2006). Rather than trying to fit stuttering into classification systems for frequency counts and statistical analysis, qualitative methods allow researchers to describe observations, and provide a depth of richness that would not be possible under scientific investigation (Tetnowski & Damico, 2001).

Participants

Purposive sampling was used in this study for the selection of information-rich cases (Patton, 2002). Participants were identified based on their knowledge and experience with the phenomenon of interest (Creswell & Plano Clark, 2011). Three individuals who stutter between

the ages of 20 and 35 years, three MTs, two SLTs, and one dual qualified SLT and MT took part in the study. Two of the therapists are also qualified psychotherapists. A summary of participant demographics is presented in Table 1.

Table 1

Summary of participant demographics

Participant Information	Background
Individual who stutters (IWS 1)	Community musician
Individual who stutters (IWS 2)	Musician
Individual who stutters (IWS 3)	University student
Dual qualified SLT and psychotherapist (SLT 1)	Hospital, primary care, child and adolescent mental health, disability, specialist in stuttering
Dual qualified SLT and MT (SLT/MT)	Private practice
SLT (SLT 2)	University clinic, school setting
MT (MT 1)	Private practice
MT (MT 2)	Private practice
Dual qualified MT and psychotherapist (MT 3)	Department of psychotherapy

Ethical considerations

Approval for this study was provided by the Arts, Humanities and Social Sciences Research Ethics Committee at the University of Limerick. Written, informed consent was obtained for each participant.

Data collection

Semi-structured interviews were used. A topic guide was used to direct the interview process and to ensure that the identified issues were discussed (Arthur & Nazroo. 2003). Interviews with the individuals who stutter, conducted by a research assistant, focused on the following areas:

(1) General information about participant including occupation, interest in music and experience of stuttering.

(2) Experience of using music in management of stuttering including motivation for using music and methods used.

(3) Perspective on MT for stuttering and exploration of opinions of MT as an intervention.

The first author carried out therapist interviews which focused on:

(1) Therapists' experience of working with individuals who stutter, particularly adolescents.

(2) Therapists' experience of using music and/or MT with adolescents who stutter.

(3) Therapists' recommendations for practice and service delivery.

Interviews were conducted face-to-face and/or by Skype and telephone, depending on participant preference and geographic location.

Data analysis

Following data collection, the audio-recorded interviews were transcribed. Data analysis was carried out by the first author using qualitative content analysis, more specifically, conventional content analysis. This method may be defined as "a research method of the subjective interpretation of the context of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p. 1278) and aims to produce a rich description of the phenomenon under investigation (Ghetti & Keith, 2016). Conventional content analysis is appropriate when existing theory or research literature on a phenomenon is limited (Hsieh & Shannon, 2005), as is the case in MT for adolescents who stutter.

Analysis of data was carried out in several steps (Hsieh & Shannon, 2005):

(1) The transcripts were read repeatedly to achieve familiarity with the data.

(2) The transcripts were read again, and key thoughts/concepts were highlighted.

(3) Key thoughts/concepts, or codes, were sorted into categories.

(4) Finally, definitions for each category and subcategory were developed.

Credibility

Several methods were employed to promote credibility, rigor and trustworthiness. The researchers implemented several strategies to acknowledge and reduce bias. The first author, who was the primary interviewer, attempted to bracket her views and potential biases regarding MT for adolescents who stutter by journaling before and after each interview (Creswell, 2003).

The use of member checking to verify the findings of qualitative research studies is recommended (Lincoln & Guba, 1985). This practice involves feeding back the data to participants and inviting them to comment on the adequacy of the researcher's interpretations. Member checking was carried out in the current study where the researcher shared information derived from the interviews with participants to check the appropriateness of findings as they emerged (Creswell, 2003).

Peer debriefing was completed between the first author and her supervisors (Creswell, 2003).

<center>**Results**</center>

Although the main purposes of this study were to explore experiences of using music and MT, participants shared their story, including the impact of stuttering. Individuals who stutter talked about the challenges they had experienced, and clinicians referred to clients they work with who struggle with self-esteem, social life and daily activities because of their stutter.

Four themes emerged as significant from analysis of the data and are presented in Table 2.

Table 2

Overview of themes

Theme	Sub-theme(s)
Impact of developmental stuttering: *"You're just so embarrassed all the time"*	Mental health Withdrawal Identity
Music in everyday life: *"Music for me is a release"*	Importance of music Motivation for using music Effects of music
Application of MT in stuttering: *"…I could see how it would really have a benefit"*	MT approach MT methods and techniques SLT perspectives
Recommendations for MT in the continuum of interventions for adolescents who stutter: *"the addition of music therapy is essential"*	Meeting individual needs Recommendations for practice

Theme 1: Impact of developmental stuttering: "*You're just so embarrassed all the time*"

This theme related to the experience of living with developmental stuttering. The individuals who stutter in this study referred to the negative impact stuttering can have on mental health, withdrawal and identity.

Mental health

The impact of stuttering on mental health was evidenced extensively in the interview data. Participants in this study acknowledged the following negative effects:

IWS 1: I was afraid to put myself in a position where I would have to speak and engage. I thought of myself as stupid when I was stuttering. You're just so embarrassed all the time. It's an awful position to be in when you cannot trust your own voice.

SLT 1: I had a guy last week who I've only met briefly because he's not from this area, but he comes to some of our groups and he just said to me "I don't know why, I just don't know why, I'm just really pissed off with it [stutter] now".

Strong negative feelings including fear and embarrassment were acknowledged by many of the participants in this study. Furthermore, frustration was linked to speaking situations. The impact of stuttering on quality of life in psychosocial domains such as emotional and mental health functioning are reported in the literature (Craig, Blumgart & Tran, 2009).

Withdrawal

Withdrawal is a theme that surfaced for a number of participants due to communication challenges. Participants spoke of choosing to participate in activities they did alone, to avoid talking with others and to socially isolate themselves. Participants noted specifically:

IWS 1: I was on my own. I was so worried about my stammer that I put myself in a position where I would be doing a hobby on my own so I wouldn't have to talk to anyone.

IWS 2: My kind of thing was to go into my shell and not be socializing. I'd loads of mates and that, but I was still on my own a lot.

Identity

Given the importance of communication in all facets of life including school, university and family and how individuals who stutter are impacted by their challenges in communicating, it is not surprising that the theme of identity surfaced from analysis of the data. For example, stuttering was seen as being a central part of the individuals' identities.

The influence stuttering can have on communicative exchanges in school, university and family settings was reported, and the consequences of this on identity.

SLT/MT: …if you're dealing with an adolescent, they are becoming more and more identified with themselves as someone who stammers and it's more likely to become an ingrained problem.

SLT 1: Maybe he's coming up to identity forming around being an adult who stutters, somebody who's going to go into college and work life with the stuttering.

These sub-themes highlight how the impact of stuttering has significant consequences for individuals who stutter. Specifically, the negative impact of stuttering on daily activities and core aspects of the individual's identity.

Theme 2: Music in Everyday Life: "*Music for me is a release*"

Importance of music

The individuals who experience stuttering in this study explained how music has always been part of their daily life, and they acknowledged the importance of music. Individuals reported using music for self-expression and as a form of communication.

> IWS 1: From then on, I just ate it [music]. It was my everything. It was my way of saying what I couldn't say, and it was my way of expressing myself.

> IWS 2: I would very rarely not do something musical for a few days.

> IWS 3: Although I couldn't string a sentence together, I could sing like a bird. I felt tranquilized when I sang.

Motivation for using music

Two primary motivations were shared by MTs working with individuals who stutter. The first motivation identified was the interest in, and application of, MT with this client group. The clients' ways of interacting and responding through the medium of music is also considered.

> MT 2: There have been, over the years, a couple of clients who have a stammer and I've always been really intrigued like, oh my goodness, it [MT] works here, the kinda thing where they [individuals who stutter] can sing fluently.

The second motivation was the belief in MT for clients who stutter. A music therapist who has worked in the area for four years stated:

MT 1: Even though there is very little evidence, very little writing about that [MT for individuals who stutter], I was certain that language, any sort of language disorder, can be treated with music.

Adolescent motivation for attending a singing group was also highlighted by one music therapist:

MT 2: One day he arrived and got out of the car and you could clearly see that his stammer was exacerbated, and I think his mother said to one of the speech therapists, "I wasn't even sure he was going to come tonight, the form is dreadful" and yet he kept on coming.

Effects of music

Individuals who stutter reported that music had considerable effects on their communication and confidence. One individual reported how songwriting in particular helped to gain confidence.

IWS 2: I certainly found that around the time I was getting good at music was around the time I was getting good and confident at speaking.

IWS 1: I firmly believe writing your own music is really important and it can give you a silent confidence.

Playing an instrument and songwriting helped individuals to decrease their levels of anxiety, and all three individuals who stutter stressed the benefits of music for their well-being. One participant used songwriting to externalize internal emotions, thoughts and feelings.

IWS 1: I use music very much for anxiety. Music for me is a release. The guitar is my security blanket.

IWS 2: Just, I dunno, music really (in response to "Over the years, what do you

think has helped you most to manage your stammer?")

IWS 3: It [song writing] was a way for me to vent.

Theme 3: MT and stuttering: "*…I could see how it would really have a benefit*"

MT is used effectively with many client groups, particularly those who have communication difficulties. This theme relates to the use of MT for individuals who experience stuttering, specifically adolescents. The MTs' reports tell us about the approaches, methods and techniques that are currently being used with this population and the observed outcomes.

MT approach

A variety of approaches grounded in diverse philosophical orientations are used by music therapists. These include those informed by music education approaches such as the Orff Schulwerk approach, or approaches informed by psychology including psychodynamic theory and Nordoff-Robbins.

Two of the music therapists in the current study are Nordoff-Robbins trained, and use improvisational methods primarily when working with individuals who stutter.

MT 3: I would work in a psychotherapeutic way using improvisation. So, I think very, very, detailed and layered musical listening is how I work and it's how I worked with Jerry [pseudonym] and absolutely trusting there would be music to meet whatever it was. I mean that's the main thing. With a complete trust, that would be possible and that we would find the music together or sometimes separately.

Client-centered, or person-centered, care has become the foundation for practice across many health care professions. Carl Rogers developed the client-centered approach to therapy which puts the therapist in the role of helper rather than the expert. Within this approach, the therapist seeks to understand the world of the individual from his perspective providing a safe environment to examine their own behavior and motives (Rogers, 2003). It has been reported that this approach may improve client satisfaction, perceived quality of care and improve therapy outcomes. This type of approach is used by the music therapists in this study when working with adolescents who experience developmental stuttering.

> MT 1: The person [client] is the one who chooses the musical style, the musical theme or the melody to improvise with.

> SLT/MT: I think it's whatever they're [adolescents who stutter] drawn to, so I think that's what I'd be driven by.

MT methods and techniques

While music therapists shared similar perspectives about motivations for their clinical practice, the ways in which they facilitated MT sessions were different between therapy settings. Two of the music therapists who work with adolescents reported that spontaneity, fun and humor in creative expression were vital to work with adolescents:

> MT 1: I do use a lot of sense of humor in the music as well.

> MT 2: I would have introduced a few fun warm ups and things like that and a bit of humor to try as well and I really did find that out in front of them, I had to be wackier nearly than in any other choir situation to kind of get that, draw, elicit some response...

Therapists noted that improvisational methods provided clients with an opportunity to explore fluency using their voice and through instrumental play.

> SLT/MT: …expanding the concept of what it is to be a fluent speaker, and exploring, kind of, constructs the person may have like, you know, the idea of like fluent versus non-fluent and actually exploring what it means to be fluent but also what fluency feels like and sounds like.

> MT 1: So, in music, more, you provide experience of not stopping so the person feels the fluency, but you also provide the experience of building the phrase. So, when you build a phrase, I provide the improvisation.

Improvisation and instrumental play are also used to facilitate emotional expression and to explore feelings.

> SLT/MT: …if I'm looking at the emotional side of it, or looking at the, you know like, in relation to stammering, looking at the things below the surface".

> IWS 1: Not playing the guitar affects my mood hugely. It's a grounding thing for me. If I'm upset or anxious or sad, that's what I go for.

Songs and songwriting have long been part of a music therapist's techniques. When used in therapy sessions with clients across the lifespan these techniques can provide safety, support, stimulation or sedation (Baker & Wigram, 2005). Individuals who stutter in this study used songwriting as a tool or avenue to project their feelings and confront difficulties within their intrapersonal experiences.

> IWS 1: For me, songwriting, music, singing, music making made me the person I am today. I couldn't and still can't trust my speaking voice, but I can trust my

singing voice. Music was and is the way I communicate. I will sing to you about things I would never speak to you about.

IWS 2: Yeah I have done so (song writing), like, I guess the music I make up is kind of like stammering in that you're taking pieces and you're repeating it and putting in a stammer where there was none before essentially.

IWS 3: Weeks went by and I had begun to conduct my own songwriting sessions with my stammer. I had written many different songs and lyrics. I found it to be comforting and felt like it calmed me and brought back some expression into my life. Through songwriting, I was able to assess and illustrate my feelings.

MTs refer to singing songs, listening to songs and repertoire when working with clients who stutter:

MT 1: …they [individuals who stutter] choose their favorite songs and we sing the song the way it is. When working with their favorite song, you can provide experience of being in touch with the affective part of the message of the song.

MT 2: We chose Elvis because Elvis had a stammer. We chose Wonderwall because one of Oasis, one of the Gallagher brothers has a stammer. That was initially why we chose a couple of them.

SLT perspectives

In order to provide MT intervention to adolescents who experience stuttering, it is important to consider SLT perceptions of MT so that it can be appropriately integrated into the continuum of support services. Several of the SLTs in this study did not have any previous experience with MT:

SLT 1: No, I mean I don't know anybody who's had music therapy. I mean, you know, when I trained which is not today or yesterday, there was melodic intonation therapy you know for aphasics and stuff.

SLT 2: I don't have any formal experience with it [MT], but I have used music during therapy sessions.

However, use of music in SLT sessions was reported, as well as an awareness of the potential of using music-based interventions with individuals who experience developmental stuttering:

SLT 1: Quite often, in telling the story, sometimes, younger people will mention some song that they identify with, or, and sometimes, you know, because if you look at the websites and that you'll see actors and famous people who stutter like Emily Blunt.

SLT 1: I could see how it [MT] would really have a benefit. Yeah, and I could see how because I have heard particularly the younger adults in the adult therapy talk about how, you know, there was some song that they had loved and there was a lyric in it and, you know, that they really like...

SLT 2: We have used music in therapy, and we do use it occasionally during mindfulness activities. Many of our clients listen to and appreciate music, so we have talked to them about how they use music to relax or do schoolwork.

Theme 4: Recommendations for MT in the continuum of interventions for adolescents who stutter: "*The addition of music therapy is essential*"

Meeting individual needs

Participants indicated that music and MT interventions can provide a unique and additional modality to meet the individual needs of individuals who experience stuttering.

> MT 3: I think the emotional side is such a huge component and it's undervalued, that component and the problem, the problem, I think music is essential actually. Music therapy should be provided before speech and language therapy. I think that is the foundational way of working with sound and it goes back to the earlier developmental stuff. You don't even have to think about it, it just happens that way.

The clinicians in this study noted that MT can provide support through direct collaboration between therapists (SLT and MT) or through reinforcing goals worked on in each therapy.

> SLT 2: We have used music in therapy, and we do use it occasionally during mindfulness activities. Many of our clients listen to and appreciate music, so we have talked to them about how they use music to relax or do schoolwork.

> MT 1: I try to go together with the speech therapist. We work towards building consistency together...

Recommendations for practice

Participants reported that group work for adolescents who stutter provided an opportunity for peer support which reduced feelings of isolation.

IWS 3: I was stunned, but yet, relieved that there was someone else like me out there. Since this day, we speak about our stammers openly.

SLT 1: …we could start seeing children in groups and that would be seen as really important… just because it's important, I think, for them [adolescents who stutter] to realize they're not the only person who stutters and they would all talk about that, that it's amazing when they go to group and they discover they're not the only people who stutters.

Whilst recognizing client needs, therapists also expressed an understanding of the fact that the types of formats used to manage stuttering may not be appropriate for some individuals and vice versa.

SLT 2: I believe it is a balance of both [individual and/or group format] and probably not an "or" option but an "and" balance. There is a strong desire to be social, so the group support format can help to create bonds and help support common struggles and thoughts. Then, for some, the group format is overwhelming, for they are afraid to talk in a group, but the one-on-one might feel safer.

Collaborative work between SLTs and MTs is increasingly documented in the literature. The clients they work with include individuals of all ages with developmental delay, Autism Spectrum Disorder, neurological disorders, Alzheimer's disease, Parkinson's disease and head injury. Participants in this study highlighted the need for collaboration between, or a combination of, the two disciplines for individuals who experience developmental stuttering.

SLT/MT: I think you would need to have a speech and language therapist alongside it because I think if you're dealing with a child say who is an adolescent, they are becoming more and more identified with themselves as someone who stammers

and it's more likely to become an ingrained problem so you would need to be working with a speech and language therapist around it.

IWS 1: Music to me is the most important thing. I think absolutely music needs to be there but I'm of the opinion that speech therapy equally needs to be there, it needs to be a combination of the two for me anyway...

Discussion

By adolescence, many aspects of an individual's life may become shaped around a fear of stuttering and negative self-image (Guitar, 2006). Addressing affective responses to stuttering is therefore a critical aspect of the therapeutic process when working with adolescents (Murphy, Yaruss & Quesal, 2007). There is growing evidence to support the potential of music-based interventions in health care. The purpose of this qualitative investigation was to explore individual and therapist experiences and perceptions of using music and MT for adolescents who experience stuttering. The findings suggest that music and MT may have a beneficial effect on anxiety and improve communication and self-expression in individuals who stutter.

Impact of stuttering

The participants' descriptions are consistent with the analyses of other authors (Baxter et al., 2015; Blumgart, Tran & Craig, 2010; Kraaimaat, Vanryckeghem & Van Dam-Baggen, 2002) who have investigated the perceptions of individuals who stutter. Individuals who stutter in this study described negative emotions, avoidance and restriction across many aspects of their lives. This is similar to findings from other studies that stuttering negatively impacts an

individual's life including mental health (Craig, Blumgart & Tran, 2009) and overall quality of life (Iverach, O'Brian, Jones et al., 2009).

Although themes in the current study were largely based on communicative situations, the individuals who stutter also referred to wider life experiences such as self-identity and self-perceptions. Previous studies describe how stuttering negatively impacts self-identity (Daniels, Hagstrom & Gabel, 2006). Furthermore, critical self-judgement and repeated negative reactions of society resulted in negative self-identity for participants in one study (Kathard, Pillay, Samuel, & Reddy, 2004).

Applications of MT to stuttering treatment

The participants in this study perceived music and MT to benefit individuals who experience stuttering, particularly within the context of mental health issues. In considering the reported use of different MT techniques, there was agreement that song writing, improvisation and song singing are most useful when working with adolescents who experience developmental stuttering.

Songwriting is 'the process of creating, notating and/or recording lyrics and music by the client or clients and therapist within a therapeutic relationship to address psychosocial, emotional, cognitive and communication needs of the client' (Baker & Wigram, 2005, p.16). Songwriting has been used in MT to enhance language, speech and conversational skills across a broad range of clinical populations including mental health, neurorehabilitation, and aging (Baker, 2015). Individuals who stutter in the current study experienced being able to communicate effectively and were able to express their feelings through songwriting. Songwriting may offer adolescents who experience stuttering a way to explore and express

their emotions, and to construct a sense of self and identity (Baker, Wigram, Stott & McFerran, 2008).

In MT, improvisation includes any experiences in which individuals actively participate in spontaneous music making with the therapist and/or other individuals – vocalizing, playing instruments or sounding their bodies (Bruscia, 2014). In the current study, improvisational methods were used by therapists to explore aspects of fluency and emotional processes, or *things below the surface,* with clients. The creation of extemporaneous music may help adolescents to identify and explore affective responses to their stuttering.

Group treatment

Therapists in this study recommended working with this population in group formats. Opportunities provided by group interaction are well documented for individuals who stutter and are a valuable component of a comprehensive programme (Manning, 2010). Hearne, Packman, Onslow and Quine (2008) suggest that adolescents who stutter have a strong preference for group rather than individual therapy. They report that this format is preferred for many reasons, including that group helps participants to realize they are not the only one who stutters. Conture (2001) also notes that group settings provide social and interactive opportunities for individuals who might otherwise go for periods of time without communicating or interacting with others. Furthermore, evidence suggests that group approaches are effective in addressing negative thoughts and feelings by eliminating the individual's sense of isolation (Yalom & Leszcz, 2005).

Combining services

SLTs and individuals who stutter valued, and recommended, the addition of music to the management of stuttering. One of the SLTs uses music within therapy sessions with children and adolescents, however this does not involve live music making. Furthermore, an understanding of the role that music, and indeed MT, can play for individuals who stutter was also highlighted. Collaboration with a music therapist would be advantageous to target goals using a different approach.

Study limitations

Of the three individuals who stutter in this study, two are musicians which may have influenced the outcomes. Furthermore, findings of this study are specific to the individuals who participated and thus not generalizable to the wider population of individuals who stutter. However, findings provide important knowledge about a range of experiences that can inform future research and initialize exploration into the area of MT and stuttering.

Recommendations for future research

Further research is needed to explore ways in which adolescents who stutter use music and/or MT. In the current study, the individuals who stutter provided a retrospective account of their adolescent experiences; a more in-depth inquiry with adolescents would expand the understanding of this age group's experience. In addition, it would be useful to explore the experiences and observations of parents of adolescents who stutter. This could lead to further interpretation of how music is used, and act as an extension to the findings of this paper.

Findings from this study will be used to develop the MT intervention and protocol for the next phase of this mixed-methods study.

Conclusion

This study forms an integral part of a larger, three-year study to ascertain the effectiveness and potential benefit(s) of MT for adolescents who experience developmental stuttering. The themes that emerged from this study provide unique insights into how music and MT may be used to meet the needs of this population. Furthermore, participants feel that the opportunity to access MT should be an important component of a stuttering treatment program.

This study advances the integration of MT into a contemporary viewpoint when considering options for effective therapies for individuals who stutter. Positive reports from this study indicate there is future scope for the inclusion of MT services, particularly as both individuals and SLTs valued it. Further studies to evaluate the effectiveness of MT for individuals who stutter are required.

Acknowledgments

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