

ARTICLE

Bruscia's clinical techniques for improvisational music therapy in autism research: A scoping review

Kathleen Skinner

Grand River Hospital, Canada

Ashley Kurkjian

Independent Scholar, Canada

Heidi Ahonen

Wilfrid Laurier University, Canada

ABSTRACT

This scoping review explores Bruscia's (1987) clinical techniques for improvisational music therapy as they relate to music therapy in autism research to determine the most commonly used clinical techniques in music therapy with clients with autism. The work was undertaken as a preliminary step in a pilot study to explore how the techniques can be represented in terms of individual ways of playing, musical relationships; and how the use of the techniques impacts the participant's experience of musical connection, influence, and expression. To be included in the screening, the research articles had to employ improvisational music therapy with clients with autism, and label the techniques used, or provide a clear description of them. In addition, it was required that articles were published in a peer-reviewed journal. Based on the qualitative thematic analysis, currently the most commonly used clinical improvisation techniques with autistic clients are as follows: imitating, reflecting, synchronising, extending, symbolising, holding, incorporating, and rhythmic grounding.

KEYWORDS

autism,
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AUTHOR BIOGRAPHIES

Kathleen Skinner is an accredited music therapist and qualifying registered psychotherapist. She owns a private practice in Guelph, Ontario, specialising in mental health work with teenagers and adults. In addition, Kathleen works at Grand River Hospital in child and adolescent mental health. [Kathleen.Skinner@grhosp.on.ca] **Ashley Kurkjian** is an accredited music therapist and qualifying registered psychotherapist. She currently works in private practice, providing music psychotherapy services in long-term care facilities through New Song Music Therapy (Greater Toronto Area) and speech-supported music therapy to children and adolescents through Move and Talk Therapy (Halton/Peel). [ashleykurkjianmusic@gmail.com] **Heidi Ahonen**, PhD, RP, MTA, FAMI, is Professor of Music Therapy at Wilfrid Laurier University and the Director of the Manfred and Penny Conrad Institute for Music Therapy Research. [hahonen@wlu.ca]

INTRODUCTION

For decades, research has demonstrated music therapy's value in treating core deficits of autism spectrum disorder (ASD). The Cochrane Review of music therapy and autism in both 2006 and 2014 concluded that music therapy with individuals with ASD may improve "social interaction, verbal

communication, initiating behaviours, and social-emotional reciprocity" (Geretsegger et al., 2014, p. 2) and is considered superior to standard care. That being said, the research community calls for higher-quality research to continue demonstrating efficacy and deepening understanding. In both reviews, the authors identified a deficit in the sample size and the need for overall improvement in study design (Geretsegger et al., 2014; Gold et al., 2006).

The largest autism and music therapy study completed to date was conducted with 364 children with autism in 9 countries; the purpose was to examine the effects of improvisational music therapy on autism symptom severity (Bieleninik et al., 2017). The study provided a clear description of most facets of the research method, except the music therapy techniques used. The only indications of the nature of therapy were the mention of synchronisation, mirroring, and grounding, and a reference to consensus principles developed for the study (Bieleninik et al., 2017). Without a description of the music therapy techniques, readers are unable to determine how the music therapists delivered therapy, resulting in an inability to reproduce the method.

In general, the production of consistent, reproducible techniques in improvisational music therapy (IMT) research with individuals with autism remains elusive. The main difficulty in addressing this facet of research seems to lie in the individualised and flexible nature of IMT. Geretsegger et al. (2014) identified the essential and unique components of IMT with individuals with autism as the facilitation of musical and emotional attunement; scaffolding the flow of interaction musically, and tapping into a shared history of musical interaction. To accomplish such attunement and musical relationship the music therapist must skilfully assess and implement the appropriate therapeutic interventions with their client. The process of building an effective therapeutic relationship requires flexibility and the ability to individualise treatment to address the client's needs. This process is not only highly variable in a clinical context, it can also be interpreted differently by the reader. In a research context it is helpful if researchers are able to clearly structure and describe their interventions so they can be reproduced by others. However, adhering to a research-focused treatment guide while working effectively to build therapeutic relationship in IMT can be a challenging task.

In the 2015 study "Music Therapy: An Effective Approach in Improving Social Skills of Children With Autism", Ghasemtabar et al. directly acknowledged methodological weaknesses in past music therapy research, and designed a methodology to accurately measure and clearly portray the effectiveness of improvisational music therapy with individuals with autism (Ghasemtabar et al., 2015). Treatment guidelines were also developed by Geretsegger, Holck, Carpena, Elefant and Kim (2015) through qualitative research in "Common Characteristics of Improvisational Approaches in Music Therapy for Children With Autism Spectrum Disorder: Developing Treatment Guidelines". One way to address the above-mentioned difficulties is to find a way to standardise the terminology and techniques involved in clinical improvisation, and to implement them with purposeful clinical rationale. Bruscia's (1987) taxonomy of 64 clinical techniques for IMT is an already-existing framework that could be used to standardise terminology.

The literature demonstrates that Bruscia's techniques have been taught in educational contexts and utilised in clinical work and research. That being said, there is evidence of the techniques being identified incorrectly in research, and new terms and definitions being coined to describe similar therapeutic techniques. This results in a lack of clarity in research methods. That is,

without explicit definitions it is difficult to determine what techniques are being used in music therapy research. This ambiguity likely stems from a misunderstanding of the techniques themselves; many are abstract, and Bruscia's instructions for their implementation within a therapy session may be interpreted in different ways. We have undertaken this work as a preliminary step in a pilot study to explore how the techniques can be both quantitatively and qualitatively represented in terms of individual ways of playing, musical relationships; and how the use of the techniques impacts the participant's experience of musical connection, influence, and expression. To date, no research has examined the techniques in an experimental context with clients with autism in order to learn more about their implementation, use, and related clinical outcomes.

PURPOSE AND RESEARCH QUESTIONS

In this article we seek to address the above-mentioned research gap relating to clinical improvisation techniques—aiming to determine Bruscia's most commonly used clinical techniques within the context of work with children with autism, and to clarify their definitions. Our research questions are as follows:

1. What clinical improvisation techniques have been primarily used in autism research?
2. How are these techniques defined in comparison to Bruscia's taxonomy of 64 clinical techniques for IMT?

LITERATURE REVIEW

Autism and music therapy

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disorder with a variety of manifestations, as indicated by the term "spectrum". Common core characteristics of the disorder include impairments in communication and social skills, including difficulties with emotional expressivity, relating and building relationships (Pinel, 2013). Addressing these characteristics with therapeutic techniques can be challenging, due to difficulties building relationships (Kim et al., 2009). There is a large body of research indicating that improvisational music therapy (IMT) can address many of the core deficits of ASD, allowing individuals to explore emotional expressivity and build relationship through spontaneously created music (Gold et al., 2006).

This body of research began building decades ago, pioneered by the work of Juliette Alvin, author of the text *Music Therapy and the Autistic Child* (Alvin, 1978). In this text, Alvin combines theory and practice by both introducing her model of Free Improvisation, as well as providing case studies exemplifying the use of particular improvisational techniques (Warwick & Alvin, 1991). Alvin's work was one of the first texts to focus specifically on work with autistic clients, and demonstrated the value of clinical improvisation with this clientele. Paul Nordoff and Clive Robbins (2007) also played an important role in contributing both theory and demonstrating the value of clinical work, through their work with individuals with disabilities. Their concepts of meeting and matching (Nordoff & Robbins, 2007) are often used by music therapy clinicians and researchers to describe musical interactions that meet the client in their current experience and then match this experience

musically. Nordoff and Robbins (2007) make reference to the power of creating a musical representation of the client's experience through meeting and matching saying, "When you play, or play and sing to express the intensity of and quality of a child's crying or the urgency of her protests, she hears something that corresponds to what she is feeling and expressing. Her experience of herself becomes related to her experience of the music. The music accepts and meets her state while it matches, accompanies, and answers, and enhances her expression, emotionally and physically" (p. 209).

Bruscia's 64 clinical techniques

In his text *Improvisational Models of Music Therapy*, Kenneth Bruscia (1987) introduces a taxonomy of 64 clinical techniques that are fundamental to clinical improvisation. Bruscia developed this taxonomy in an attempt to create consistent vocabulary to be used in all models of clinical improvisation, translating to increased clarity in music therapy practice and literature. According to Bruscia (1987): "one of the difficulties encountered in reviewing the literature is that the same term is often used to refer to different techniques, and that different terms are often used to refer to the same technique." (1987, p. 533).

The techniques are named and categorised based on the focus, clinical objectives, and mode of implementation. The categories are as follows: 1. techniques of empathy, 2. structuring, 3. intimacy, 4. elicitation, 5. redirection, 6. procedural, 7. emotional exploration, 8. referential, and 9. discussion techniques (Bruscia, 1987). A complete listing and description of the 64 techniques can be found in Chapter 37 of *Improvisational Models of Music Therapy* (1987). Bruscia developed the categories and delineated the techniques by examining similarities and differences in the areas mentioned above: focus, objectives, and implementation.

When utilising different techniques, the therapist may focus on different aspects of the client and the experience, influencing how the therapist observes, assesses and carries out the intervention. If a clinician uses a technique that focuses more on the client's verbalisations, it would be more likely to be categorised as a discussion technique. Technique objectives can vary significantly and were an important way to delineate and group together techniques. For example, the main objective of 'structuring techniques' is to provide ground and contain the client's music. Finally, Bruscia considered the different modalities used to implement the technique (i.e. movement, verbalisation or music), when creating categories. It is also important to note that some techniques share considerable similarities when considering their focus, objective, or implementation, and are rarely used in isolation (Bruscia, 1987). This will be important to consider when attempting to isolate the use of techniques in research studies.

Since Bruscia's text was published, the use, definition, and implications of the techniques have been investigated further and new techniques have been coined. Tony Wigram's (2004) *Improvisation: Methods and Techniques for Music Therapy Clinicians, Educators, and Students* explores the techniques and provides readers with a guide to the various clinical skills for clinical improvisation. Furthermore, *Improvising in Styles: A Workbook for Music Therapists, Educators and Musicians* provides a scope of practice derived from Wigram's concept of musical frameworking, and incorporates styles of music within a similar context (Lee & Houde, 2011). Lee (2015) further elaborates on this concept, as well

as incorporating salient points and important concepts of Aesthetic Music Therapy in *International Perspectives in Music Therapy Education: Adapting to a Changing World*. Similar texts, such as *Clinical Improvisation Techniques in Music Therapy: A Guide for Students, Clinicians and Educators*, have been written by music therapists to deepen understanding of the techniques and provide new perspectives on fundamental concepts related to IMT (Carroll & Lefebvre, 2013).

In the following review we aim to synthesise the existing knowledge, map the key concepts, and explicate types of evidence (Colquhoun et al., 2014).

METHODOLOGY

This scoping review falls under the qualitative paradigm, as existing literature is collected and analysed by utilising content analysis (Ghetti & Keith, 2016). In this particular review, the framework presented by Arksey & O'Malley (2005) was utilised in the following manner: We first identified the research questions and relevant studies. Then we selected those studies that met the certain criteria. After this we gathered and documented the data according to our research questions, and finally we summarised and reported the results. This scoping review also has an interpretivist nature, as it explores different clinical improvisation techniques that have been used in autism research and their alignment to Bruscia's taxonomy of 64 clinical techniques for IMT (Wheeler & Bruscia, 2016).

Data collection

A literature screening was completed to determine the most commonly used techniques in autism and IMT research. To be selected, the articles had to meet the following criteria:

- a) A research study that employs improvisational music therapy with clients with autism.
- b) The study either names the IMT techniques used or includes a description of the improvisational music therapy employed.
- c) The study is published in a peer-reviewed journal, in English language.

Based on these criteria, we gathered data by systematically searching databases relevant to current music therapy research. These databases included Primo, Cochrane Library, Oxford Academic, Scholars Portal Journals, Medline, Cinahl, and PsycINFO. The journals we searched included: *British Journal of Music Therapy*, *Music & Medicine*, *Journal of Music Therapy*, *Music Therapy Perspectives*, *Journal of the American Medical Association*, *Autism*, *Nordic Journal of Music Therapy*, *Voices*, and *Approaches: An Interdisciplinary Journal of Music Therapy*. We used the following keywords: Improv* music therapy, music therapy auti*, IMT autism, music therapy AND autism, music therapy autism AND experiment, music therapy autism case study, music therapy autism research.

The following eight articles met the inclusion criteria and were chosen to be included into this scoping review:

Source	Title	Type of research
Geretsegger et al. (2014). <i>Cochrane Database of Systematic Reviews</i>	Music therapy for people with autism spectrum disorder (review)	<ul style="list-style-type: none"> • Literature (systematic) review
Bieleninik et al. (2017). <i>The Journal of the American Medical Association</i>	Effects of improvisational music therapy vs enhanced standard care on symptom severity among children with autism spectrum disorder	<ul style="list-style-type: none"> • Assessor-blinded randomised controlled trial
Knapik-Szweda, S. (2015). <i>Journal of Education Culture and Society</i>	The effectiveness and influence of vocal and instrumental improvisation in music therapy on children diagnosed with autism	<ul style="list-style-type: none"> • Qualitative study, experimental • Two case vignettes included in results
Vaiouli et al. (2015). <i>Autism</i>	“Bill is now singing”: Joint engagement and the emergence of social communication of three young children with autism	<ul style="list-style-type: none"> • Mixed methods research <ul style="list-style-type: none"> ◦ Quantitative methods included measuring outcomes in 10-second intervals ◦ Qualitative methods included semi-structured informal interviews with the children’s circle of care • Complementary qualitative analysis
Ghasemtabar et al. (2015). <i>Advanced Biomedical Research</i>	Music therapy: An effective approach in improving social skills of children with autism	<ul style="list-style-type: none"> • Clinical trial, experimental
Geretsegger et al. (2015). <i>Journal of Music Therapy</i>	Common characteristics of improvisational approaches in music therapy for children with autism spectrum disorder: Developing treatment guidelines	<ul style="list-style-type: none"> • Qualitative research • Survey format
Banks, S. (1982). <i>Music Educators Journal</i>	Orff-Schulwerk teaches musical responsiveness	<ul style="list-style-type: none"> • Qualitative • Descriptive, instructional
Schumacher, K. (2013). <i>Approaches: An Interdisciplinary Journal of Music Therapy</i>	The importance of Orff-Schulwerk for musical social-integrative pedagogy and music therapy	<ul style="list-style-type: none"> • Historical review

Table 1: List of eight articles selected for literature screening

Data analysis and interpretation

The qualitative content analysis (Ghetti & Keith, 2016) was utilised when analysing and interpreting the text and its meanings.

The chosen research articles relating to autism and IMT were screened for the clinical improvisation techniques utilised. In order to answer our first research question, “What clinical improvisation techniques are primarily used in autism research?”, we first reviewed which clinical techniques were implemented in each study. Then we revisited the literature and checked which researchers had used the techniques.

The IMT technique utilised	Frequency
Imitating	Direct: Geretsegger et al. (2015); Knapik-Szweda (2015) Indirect: Geretsegger et al. (2015); Vaiouli et al. (2015)
Reflecting	Direct: Geretsegger et al. (2014); Geretsegger et al. (2015) Indirect: Nordoff & Robbins (2007); Markworth (2014); Knapik-Szweda (2015)
Synchronising	Direct: Bieleninik et al. (2017) Indirect: None
Extending	Direct: Vaiouli et al. (2015) Indirect: Geretsegger et al. (2014)
Symbolising	Direct: None Indirect: Banks (1982); Schumacher (2013)
Holding	Direct: Geretsegger et al. (2014) Indirect: Knapik-Szweda (2015)
Incorporating	Direct: None Indirect: Vaiouli et al. (2015)
Rhythmic Grounding	Direct: Geretsegger et al. (2015) Indirect: Bieleninik et al. (2017)

Table 2: Top eight IMT techniques utilised with autistic clients.

In order to answer our second research question, “How are these techniques defined in comparison to Bruscia’s taxonomy?”, we conducted an additional qualitative and interpretative analysis by literally comparing the descriptions provided by the different authors with Bruscia’s definitions. From this, we determined the eight most commonly utilised techniques and their associated sources.

In some cases, the specific techniques employed were not named at all. In those cases we compared the authors’ descriptions to Bruscia’s definitions, and if they aligned, we included them by renaming them according to the IMT taxonomy. If descriptions given for the included techniques did not align with Bruscia’s definition, we simply excluded them.

The researchers collaboratively interpreted and analysed the data by coding it for the meaning units and labelling for the categories. The obvious components such as named IMT techniques were coded first. If the technique was not named according to Bruscia’s taxonomy, the researchers used their collaborative best judgment to determine these meaning units based on the authors’ descriptions of the particular techniques.

AUTISM LITERATURE SCREENING RESULTS

The following techniques were determined as the most commonly referenced in the included articles: *imitation*, *reflection*, *synchronisation*, *extending*, *symbolising*, *holding*, *incorporating*, and *rhythmic grounding*. In the text that follows, each technique and the corresponding articles that noted it will be reviewed.

Technique #1: Imitating

The clinical technique referenced most frequently in the selected articles is imitating. As noted in Bruscia's *Improvitational Models of Music Therapy* (1987), imitating is defined as "echoing or reproducing a client's response, after the response has been completed" (p. 535). Imitating is a technique of empathy that seeks to promote client self-awareness and build the therapeutic relationship. Its clinical aims include focusing the client's attention on their own actions, reinforcing the client's relevant actions and communications, conveying leadership and acceptance of the client and their improvisations, establishing turn-taking and modelling imitative behaviour (Bruscia, 1987, p. 538).

Imitation is directly mentioned as an improvisation technique in Geretsegger et al.'s (2015) "Common Characteristics of Improvisational Approaches in Music Therapy for Children With Autism Spectrum Disorder: Developing Treatment Guidelines", as well as in "The Effectiveness and Influence of Vocal and Instrumental Improvisation in Music Therapy on Children Diagnosed With Autism" (Knapik-Szweda, 2015). Geretsegger et al. (2015, p. 271) state that "improvisational techniques may involve imitation", further elaborating that "the therapist may communicate that s/he is also aware of the child's playing by imitating, exaggerating, and augmenting the child's musical utterances" (p. 272). Furthermore, Knapik-Szweda directly refers to the "therapist imitating each subject's musical material, movements and mood" (2015, p. 155), all appearing to match the terminology put forth by Bruscia.

In Vaiouli, Grimmet, and Ruich's article "Bill Is Now Singing", the methodology alludes to the use of imitation, but it is not directly mentioned. They explain the technique by describing that the therapist "engaged in call-and-response music interactions" (Vaiouli et al., 2015, p. 79), with the term 'call-and-response' potentially aligning with Bruscia's definition of imitation. Vaiouli et al. (2015) also provide their clinical aims for the use of these musical interactions, explaining that it creates "opportunities for the child to explore musical instruments, take initiatives, and be creative and playful" (p. 79). As mentioned previously, Bruscia describes bringing the client's attention to their own actions, promoting client leadership and establishing interactions through turn-taking as some of the aims of imitation. The call-and-response music interactions and related aims that Vaiouli et al. describe align with Bruscia's description and aims in some ways. It is important to differentiate whether or not the client's response was a direct imitation. For example, the call could be phrase one, and the response phrase two – i.e. musically compatible but not imitative. This demonstrates that a specific set of parameters that specify what musical elements are being imitated (i.e. if the client's rhythms are being imitated but not their melody, or if the client's musical phrase in its entirety is being imitated) is imperative to ensuring proper explanation and implementation of the clinical technique in music therapy research.

Technique #2: Reflecting

Reflection is defined by Bruscia (1987, p. 539) as, "matching the moods, attitudes, and feelings exhibited by the client". Just like imitation, it is classified as a "technique of empathy" that may involve musical, lyric, verbal, or movement reflection depending on aims and objectives for the client.

Musical reflection may also include improvising a musical expression of the client's personality. This technique may be used to establish rapport and build relationship, by demonstrating the therapist's acceptance of the client musically. In addition, the client may achieve a greater sense of emotional self-awareness through experiencing their musical reflection (Bruscia, 1987).

When describing the "Unique and Essential Principles Within IMT for Children With ASD", Geretsegger et al. (2015) convey the necessity of facilitating attunement with the child, both musically and emotionally. The article does not directly mention the use of reflection as an improvisational technique, but rather describes the ways in which therapists can work towards attunement through music, which closely align with Bruscia's definition: "The music played or sung by the therapist is closely attuned to the child's immediate display of (musical or other) behaviour, focus of attention, and/or emotional expression" (Geretsegger et al., 2014, p. 271). The authors articulate similar goals in using this technique, such as promoting self-awareness and building the therapeutic relationship.

Reflecting also aligns closely with the concept of meeting and matching, which is pivotal to the Nordoff-Robbins model of music therapy. According to Nordoff and Robbins (2007, p. 209), when the therapist creates music that matches the client's non-verbal, verbal, or musical expression, it conveys acceptance and the willingness to meet the client in their current experience. Although Nordoff and Robbins did not use the term "reflecting" to describe meeting and matching, Bruscia (1987) drew this parallel in *Improvisational Models of Music Therapy*. Multiple articles referenced meeting and matching, including Knapik-Szweda's (2015) study published in the *Journal of Education Culture and Society*, and Markworth's (2014) "Without Words: Music as Communication for Children With Autism".

Technique #3: Synchronising

The third most commonly referenced clinical improvisation technique as determined by the literature review is synchronising. Like imitating and reflecting, synchronising is a technique of empathy that seeks to promote client self-awareness and build the therapeutic relationship. Bruscia (1987, p. 535) defines synchronising as "doing what the client is doing at the same time". Bruscia also described the technique of mirroring as 'synchronising – doing what the client is doing at the same time' (Wigram, 2004, p. 82)

Synchronising may occur with different elements of the music and with varied levels of precision, depending on the therapist's aims and objectives. For example, the therapist may respond to certain elements, such as the rhythms, melodies, or lyrics. The synchronisation becomes more complex, with multiple dimensions, as the intent is to produce the same musical elements at the same time as the client. The technique's use may also involve the therapist mirroring the client's posture, actions, and/or behaviours (Bruscia, 1987). Geretsegger et al. (2015) also mention the use of mirroring in improvisational music therapy with children with autism, which could be analogous to imitating. The article does not, however, expand on the nature of the music-making while using mirroring, so this connection is unclear.

Synchronisation was also mentioned in Bieleninik et al.'s (2017) study. Specifically, the "therapists developed joint musical activities (singing or instrumental play) individually with each

child, based on the child's focus of attention, using improvisation techniques such as synchronizing, mirroring, or grounding" (Bieleninik et al., 2017, p. 527). In this study, synchronisation was used to promote the development of social competencies such as affect sharing and joint attention.

Technique #4: Extending

The fourth technique we uncovered is extending. Bruscia categorises extending as an elicitation technique, aimed at lengthening the client's phrasing. He states: "This may be accomplished by adding sounds to the end of the phrase, or by adding an overlapping phrase to the client's" (Bruscia, 1987, p. 544). Extending may be used to encourage further playing, increase musical continuity, and aid the client in expressing a complete musical idea.

While Vaiouli et al. (2015) do not directly mention extending, aspects of their improvisation description align closely with Bruscia's definition of extending. The authors state: "A child-led component was designed to strengthen each child's ability for sharing intentions and initiating joint engagement episodes. For that purpose, the researcher expanded on each child's music-making actions" (Vaiouli et al., 2015, p. 78). The description continues, "the researcher provided musical structure by adding melodic, harmonic, and/or rhythmical variations to the child's music choices" (p. 79). In both quotes, the authors describe a musical interaction in which the researcher expands or adds to the child's music-making, which strongly implicates the use of extending despite not using the specific terminology. The clinical rationale for the use of this technique, was to encourage joint music-making and interaction within the music, as well as to enrich the musical experience for the child (Vaiouli et al., 2015). It is again important to note that techniques are rarely used in isolation when considering the mention of providing musical structure in the latter description.

Geretsegger et al. (2014, p. 271) mention the use of elaboration while describing the common improvisational techniques employed with children with autism. Based on a description of the clinical music-making, it is likely that elaboration is akin to Bruscia's extending. The description is as follows: "If the child displays signs of newly emerging communicative skills, the therapist gently reinforces them and expands on them in a playful and encouraging way [...] the therapist may communicate by imitating, exaggerating, and augmenting the child's musical utterances" (Geretsegger et al., 2014, p. 272). The aim of extending within the context of the paper is to "scaffold the flow of interaction musically" (Geretsegger et al., 2014, p. 271).

Technique #5: Symbolising

The fifth most often cited clinical technique is symbolising. Symbolising is defined as "having the client use something musical (instrument, motif, etc.) to stand for or represent something else (e.g. an event or person)" (Bruscia, 1987, p. 536). Within a session, symbolising can be used to explore a non-musical entity in a musical context and give the client the ability to project feelings onto these non-musical entities (Bruscia, 1987).

Symbolising is not directly referenced in any major publications, though it is alluded to in Ghasemtabar et al.'s (2015) article describing the use of Orff-Schulwerk improvisation techniques within a music therapy session. The authors explain that the "Orff method puts emphasis on

nonverbal elements of music” (Ghasemtabar et al., 2015, p. 6), alluding to the ability to project feelings onto non-musical entities described by Bruscia. The use of improvisational techniques derived from the Orff-Schulwerk model is also found in Schumacher’s article “The Importance of Orff-Schulwerk for Musical Social-Integrative Pedagogy and Music Therapy”. Schumacher (2013, p. 115) writes that “it is not the playing from notation but the free making improvisation that is meant and demanded, for which the printed examples give information and stimulus”.

Clinical aims for the use of symbolisation are also found in Ghasemtabar et al.’s (2015) article, and in Banks’ (1982) “Orff-Schulwerk Teaches Musical Responsiveness”. Ghasemtabar et al. (2015, p. 6) describe the implementation of symbolisation “to improve poor nonverbal behaviors of the children with autism and lead to enhancement of their social skills”. Banks elaborates by saying that the children gain:

[Motivation] to participate in more aesthetic events, and, through these experiences, they also learn music concepts and build music skills. They synthesize and internalize these concepts and skills through improvisation and use them in more complex and significant music experiences. This cycle produces self-actualizing people who seek out music and respond deeply to it. (Banks, 1982, p. 43)

In a therapeutic context, the information and stimulus noted in Banks’ article appear to relate to the exploration of non-musical entities in Bruscia’s definition of symbolising, where the free making improvisation appears to relate to the use of symbolising itself.

Schumacher (2013) also argues that in implementing symbolisation into improvisation, “the child should express himself freely, give form to his expression and use it in social relationships” (p. 114), thus suggesting that symbolisation can be used as a technique to enhance social interaction as well as connection within a group.

Technique #6: Holding

In Bruscia’s taxonomy of 64 clinical improvisation techniques, there are nine categories including “techniques of emotional exploration”. Holding, the sixth technique uncovered in our literature review, falls into this category. Specifically, “as the client improvises, the therapist provides a musical background that resonates the client’s feelings while containing them” (Bruscia, 1987, p. 552). The quality of the music is usually ‘anchoring’; e.g. the use of harmonic accompaniments that incorporate rhythmic or tonal grounding techniques (such as a series of slow, sustained octaves). Since holding involves both reverberating the client’s feelings and containing them, it involves a combination of multiple other techniques including reflecting, pacing, grounding, and centring. These may be used at different times during the improvisation, depending on the client’s emotional needs. It is also important to note that the therapist follows the client and does not attempt to elicit emotions that the client may be suppressing; instead they remain in the musical background and provide a musical container for the client (Bruscia, 1987). The use of holding in

clinical improvisation encourages the safe and full expression of emotions for the client, which has the potential to lead to further therapeutic insights.

The use of holding as a clinical improvisation technique is articulated in multiple research studies with individuals with autism. In “Common Characteristics of Improvisational Approaches in Music Therapy for Children With Autism Spectrum Disorder”, Geretsegger et al. (2015) conclude that facilitating musical and emotional attunement is an essential principle for effective IMT with children with ASD. They describe the purpose of this principle as follows: “[To] increase opportunities for awareness of self, shared attention, social reciprocity, and relationship building” (Geretsegger et al., 2014, p. 268). The article lists holding as an example of a technique that can be used to accomplish musical and emotional attunement. Considering the purpose of holding mentioned above, it appears to align with Bruscia’s definition. It is important to note that the definition of holding was not directly outlined; the researchers extrapolating the definition based on the context and purpose. In this context, it appears the authors’ definition of holding aligns strongly with Bruscia’s.

Mentioned previously, Knapik-Szweda’s (2015) study examines the influence of improvisational music therapy with children diagnosed with autism. In the methods section, the author states that the improvisations were informed by both the Nordoff-Robbins (1977) Creative Music Therapy model and Tony Wigram’s (2004) improvisational techniques. The article describes four specific techniques in the following passage:

Therapist imitating each subject’s musical material, movements and mood; dialogues – a process where therapist and child/children communicate through their musical play; holding – where therapist is providing a rhythmic or tonal foundation for the subject’s own improvisation; and frameworking - where the therapist provides a functional and consistent musical structure within which the child’s musical play fits. (Knapik-Szweda, 2015, p. 155)

This definition of holding differs slightly from Bruscia’s in that it does not seek to reverberate the emotional content in addition to containing it. Based on the context and information given in the article, the use of holding in this study may be an example of the researcher’s label misaligning with Bruscia’s definition of the technique. However, it is well aligned with Wigram’s interpretation.

Technique #7: Incorporating

Incorporating is the seventh clinical technique explored in this study. Incorporating is defined as “using a musical motif or behaviour of the client as a theme for one’s own improvising or composing, and elaborating it” (Bruscia, 1987, p. 535). Incorporating can be used to provide positive reinforcement of a client’s musical motif, display an acceptance of a client’s music, and to model musical creativity and expression; and it provides various ways of working through a musical feeling. Incorporating also helps build a musical repertoire between a therapist and a client (Bruscia, 1987).

While incorporating is not directly referenced in the selected research literature, it appears to be referenced indirectly by Vaiouli et al. (2015). They explain one of the intervention techniques as elaborating, where “the researcher provided musical structure by adding melodic, harmonic, and/or

rhythmical variations to the child's music choices" (Vaiouli et al., 2015, p. 79). This technique appears to be included in the session based on the child's behaviours and preferences, lining up with Bruscia's definition of elaborating on a client's behaviour.

Clinical aims for the use of incorporation are also found in Vaiouli et al.'s (2015) article. The use of incorporating is rationalised as a way to "invite the child's response and create a shared musical context for joint engagement" (p. 79). Inviting a child's response through music aligns with Bruscia's (1987) clinical aim to both accept a client's music and to reinforce the presentation of a musical motif; and creating shared musical context aligns with the clinical aim to build a repertoire between the therapist and the client, and to eventually build rapport to work through musical feelings that present themselves during sessions.

Technique #8: Rhythmic grounding

The final improvisation technique identified in this review is rhythmic grounding, which is defined as "keeping a basic beat or providing a rhythmic foundation for the client's improvising" (Bruscia, 1987, p. 541). Its clinical aims strictly revolve around maintaining tempo, pulse and meter, as it is not intended to meet and match the emotional intensity of the client.

Rhythmic grounding is directly referenced as an improvisation technique in Geretsegger et al.'s "Common Characteristics of Improvisational Approaches in Music Therapy for Children With Autism Spectrum Disorder: Developing Treatment Guidelines" (2015). They state that "IMT techniques for musically scaffolding interventions include rhythmic grounding by providing a rhythmic foundation for the child's musical behavior" (p. 272). The use of the term rhythmic foundation in Geretsegger et al.'s article matches Bruscia's terms used in his definition of the technique.

While rhythmic grounding is not directly referenced in Bieleninik et al.'s 2017 article, they do mention "grounding" (p. 527), though it is unclear whether this definition is meant to reflect Bruscia's definition of rhythmic grounding. Bieleninik et al. (2017) explain that "these activities aimed to develop and enhance affect sharing and joint attention, which are associated with development of social competencies" (p. 527), which can be maintained through pulse and meter maintenance defined in Bruscia's clinical aims.

DISCUSSION

When conducting the literature screening, we noted a general lack of detail when describing the improvisational techniques utilised within the research. In some literature, virtually no description was given beyond noting the use of improvisational music therapy, and there were no descriptions of how the music was employed by client and therapist. In the majority of studies, the techniques were briefly referenced or extrapolated from descriptions given. In some cases, the descriptions given for the included techniques did not align with Bruscia's definition. This is to be expected to a certain extent, as the practice of music therapy has evolved over time and Bruscia's work has been built upon. Naturally, we should also acknowledge that processes change over time. For example, Wigram

and others have built on Bruscia's work, and Bruscia himself might write about things differently now.

Beyond the practical difficulty of determining the specific techniques, a lack of clarity relating to naming and defining the techniques resulted in considerable ambiguity in determining the nature of improvisational music therapy provided to clients. It is likely that the inconsistent definitions for techniques and mislabelling relate to a lack of understanding, resulting in difficulty labelling the technique. It is possible that this ties back to differences in training and education, as there are a number of training texts for improvisational music therapy teaching varied content; individual preferences influence which texts and techniques are taught and individual differences influence how they are perceived. For example, meeting and matching are common terms associated with Nordoff-Robbins (1977) music therapy, and are not included in Bruscia's 64 clinical techniques. There is also evidence of new terms being coined to better describe the exact technique being used; although the intent of this is likely to increase clarity and better describe the therapeutic process, this may increase confusion for readers who are unfamiliar with the new terms being coined.

To address this issue, it is recommended that the music therapy community develop and utilise a universally understood terminology relating to clinical improvisation. This does not remove the fact that people will continue to practise and talk about their practice in various ways. However, although we cannot always hold on to historical practices, we do need to describe what we are doing now, clearly, and in the context of what has gone before.

In the interim, it will be important to elaborate upon the guidelines set forth by Ghasemtanar et al. (2015) and Geretsegger et al. (2015) to ensure that techniques are properly labelled and described in the event that there is a discrepancy in the technique used and its implementation in a research context. This will allow for more consistent knowledge and application of the techniques for all music therapists working in a clinical setting and, ultimately, higher-quality practice as we move closer to successfully implementing standardised clinical improvisation terminology. As mentioned previously, Bruscia's taxonomy could be used as an existing framework to standardise clinical improvisation terminology, as the techniques included are extensive and thoroughly described.

The results of this literature screening determined the eight most commonly used clinical improvisation techniques with clients with autism in current peer-reviewed music therapy research. The researchers employed multiple keywords, databases and the understanding of multiple theories to ensure credibility of the research. Findings point to a lack of continuity in the literature regarding definitions of the techniques, as well as for what clinical purpose they were used. Articles employing a variety of research methods were referenced, however, there were few articles that fulfilled the researcher's search criteria that also offered descriptions of the techniques used. From this exploration, it appears that terminology relating to clinical improvisation is not universally understood or applied. A universal understanding of the terms is needed to maintain consistency when using the techniques for more effective clinical work and clearer methodologies in future research studies. Further research that builds on the results of this study and seeks to address the aforementioned gap, can provide a deeper understanding of the definition, application, and use of clinical improvisation techniques. We anticipate this research will ultimately help music therapists successfully incorporate these techniques into their clinical practice with autistic clients.

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Ελληνική περίληψη | Greek abstract

Οι κλινικές τεχνικές του Bruscia για την αυτοσχεδιαστική μουσικοθεραπεία στην έρευνα για τον αυτισμό: Μια οριοθετημένη ανασκόπηση

Kathleen Skinner | Ashley Kurkjian | Heidi Ahonen

ΠΕΡΙΛΗΨΗ

Η παρούσα οριοθετημένη ανασκόπηση διερευνά τις τεχνικές κλινικού αυτοσχεδιασμού του Bruscia (1987) στην αυτοσχεδιαστική μουσικοθεραπεία όπως αυτές σχετίζονται με την έρευνα της μουσικοθεραπείας στον αυτισμό, με στόχο να προσδιορίσει τις κλινικές μεθόδους που χρησιμοποιούνται πιο συχνά στη μουσικοθεραπεία με άτομα με αυτισμό. Η μελέτη ξεκίνησε ως ένα προκαταρκτικό βήμα σε μία πιλοτική έρευνα που εξετάζει τους τρόπους με τους οποίους οι τεχνικές αυτές αφορούν τους διαφορετικούς τρόπους παιξίματος, των μουσικών σχέσεων και το πώς η χρήση τους επιδρά στην εμπειρία του συμμετέχοντα ως προς τη μουσική του διασύνδεση, επιρροή και έκφραση. Τα άρθρα που συμπεριελήφθησαν στην ανασκόπηση, σύμφωνα με τα κριτήρια επιλογής, έπρεπε να αφορούν την αυτοσχεδιαστική μουσικοθεραπεία με άτομα με αυτισμό όπου συγκεκριμένες τεχνικές είτε να αναφέρονται με σαφήνεια ή να περιγράφονται με λεπτομέρεια. Επιπρόσθετα, όλα τα άρθρα έπρεπε να έχουν δημοσιευτεί σε περιοδικά που ακολουθούν τη διαδικασία ομότιμης αξιολόγησης. Ακολουθώντας ποιοτική θεματική ανάλυση, οι συνηθέστερες τεχνικές κλινικού αυτοσχεδιασμού που χρησιμοποιούνται με άτομα με αυτισμό είναι οι εξής: μίμηση [imitating], αντανάκλαση [reflecting], επέκταση [extending], συγχρονισμός [synchronizing], συμβολισμός [symbolizing], κράτημα [holding], ενσωμάτωση [incorporating] και ρυθμική γείωση [rhythmic grounding]

ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ

αυτισμός, τεχνικές κλινικού αυτοσχεδιασμού του Bruscia, αυτοσχεδιασμός, μουσικοθεραπεία