

This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Letule, Nerdinga; Ala-Ruona, Esa; Erkkilä, Jaakko

Title: Professional freedom : A grounded theory on the use of music analysis in psychodynamic music therapy

Year: 2018

Version: Published version

Copyright: © 2018 GAMUT – The Grieg Academy Music Therapy Research Centre

Rights: CC BY 4.0

Rights url: <https://creativecommons.org/licenses/by/4.0/>

Please cite the original version:

Letule, N., Ala-Ruona, E., & Erkkilä, J. (2018). Professional freedom : A grounded theory on the use of music analysis in psychodynamic music therapy. *Nordic Journal of Music Therapy*, 27(5), 448-466. <https://doi.org/10.1080/08098131.2018.1490920>



Professional freedom: A grounded theory on the use of music analysis in psychodynamic music therapy

Nerdinga Letulè, Esa Ala-Ruona & Jaakko Erkkilä

To cite this article: Nerdinga Letulè, Esa Ala-Ruona & Jaakko Erkkilä (2018) Professional freedom: A grounded theory on the use of music analysis in psychodynamic music therapy, Nordic Journal of Music Therapy, 27:5, 448-466, DOI: [10.1080/08098131.2018.1490920](https://doi.org/10.1080/08098131.2018.1490920)

To link to this article: <https://doi.org/10.1080/08098131.2018.1490920>



© 2018 GAMUT – The Grieg Academy Music Therapy Research Centre



Published online: 06 Sep 2018.



Submit your article to this journal [↗](#)



Article views: 233



View Crossmark data [↗](#)

Professional freedom: A grounded theory on the use of music analysis in psychodynamic music therapy

Nerdinga Letulé ^a, Esa Ala-Ruona^a and Jaakko Erkkilä ^a

^aDepartment of Music, Art and Culture Studies, University of Jyväskylä, Jyväskylä, Finland

ABSTRACT

Although music is the fundamental element of music therapy, music analysis methods are a particularly under-researched area. This study investigates how and when psychodynamically orientated music therapists employ the analysis of musical material in both clinical work and research. Constructivist grounded theory was employed in the collection and analysis of the data. Eight participants, all highly experienced in psychodynamic music therapy, were recruited using referral sampling. In-depth interviews focused on therapists' experiences of working with different client groups, and the applicability of different assessment methods. Strauss and Corbin's coding paradigm was used to determine causal and intervening conditions, action strategies and the consequences of music analysis. Professional freedom (a tension between creative forces and professional responsibilities) emerged as the most important factor influencing the method, application and frequency of music analysis. Therapists used either explicit knowledge (model-based theoretical understanding and reductionist action strategy), or implicit knowledge (context-based theoretical understanding and holistic action strategy) or used a combination of both approaches. Implicit knowledge was found to lessen the ability to give an account of analytical processes, but increased sensitivity to clients' abilities and needs, while explicit knowledge led to frustration about interdisciplinary disagreement, greater excitement about discovery and increased workloads.

ARTICLE HISTORY Received 15 May 2017; Accepted 21 May 2018

KEYWORDS Music analysis; grounded theory; psychodynamic music therapy

Introduction

Music is the essential mode in music therapy. It enables both communication and interaction with the client. Yet, despite its key importance to the therapeutic process, Bonde (2016b) notes that “music therapy literature includes surprisingly and disappointingly few studies with a focus on music itself” (p. 105). The author continues by comparing the music in music therapy to a black box – a complex system whose internal workings are not readily understood. To date, while some research has been carried out (Bonde, 2016a), there remains very little scientific understanding of the music in music therapy.

Musicologists, by contrast, have been analysing music for centuries, and research from this field is also relevant to the music therapy setting (Ansdell, 1997; Rolsvjord, 2006).

CONTACT Nerdinga Letulé  nerdinga@gmail.com  Department of Music, Art and Culture studies, University of Jyväskylä, Jyväskylä FI-40014, Finland

© 2018 GAMUT – The Grieg Academy Music Therapy Research Centre

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Meyer (1989) introduced the distinction between the primary and secondary parameters of music. Primary parameters, such as meter and harmony, have discrete, proportional relationships (up-beat and down-beat, or tonic and dominant). Secondary parameters, such as dynamics and timbre, do not have the capacity to form musical syntax, because the changes in these parameters are relative (softer and louder, darker and brighter, etc.). Primary parameters, because of organizational complexity, take time to perceive, while secondary parameters are perceived instantaneously. But, as Eitan and Granot (2009) point out, “while the perception and cognition of secondary parameters, even in a musical context, may be chiefly based upon general auditory experience (or perhaps even on innate tendencies), processing primary parameters relies chiefly on music-specific exposure” (p. 144). In music therapy, this music-specific exposure is not a commonality amongst the client population; therefore, musicological analyses that focus on primary parameters are not sufficient to account for the musical processes taking place in therapy.

In the music therapy literature, three music analysis methods have been documented: aural (Abrams, 2007; Baxter et al., 2007; Forinash & Gonzalez, 1989; Keith, 2007; Mahoney, 2010), notation-based (Bergström-Nielsen, 1993; Gilboa & Bensimon, 2007; Lee, 2000) and computational (Erkkilä, Lartillot, Luck, Riikkilä, & Toiviainen, 2004; Hunt, Kirk, Abbotson, & Abbotson, 2000; Streeter et al., 2012). Aural music analysis is the most subjective method of the three, and arguably the most prevalent in music therapy practice. Nordoff–Robbins scales (Nordoff & Robbins, 1977) and later contributions (Aigen, 2014; Guerrero & Turry, 2012), Bruscia’s Improvisation Assessment Profiles (Bruscia, 1987; Gardstrom, 2004), Bruscia’s method of analysing GIM music (Bruscia, 1996) and Wigram’s quantitative use of IAP (1999, 2000) are amongst the most influential aural analysis methods. Notation-based analysis is performed after transcribing music into either a traditional or a graphical score. Because of the skill and attention to detail required in the transcription of clinical improvisations, this method is the most time consuming of the three (Gilboa, 2012), but could enable a very detailed examination of musical processes. Computational methods promise great benefits in terms of efficiency, but currently lack links between computationally retrieved results and clinically relevant issues (De Backer, 2008). At the present developmental stage, algorithms cannot achieve pattern-recognition results comparable to those of notation-based analyses and cannot identify secondary parameter changes as successfully as aural analysis (Letulé, Brabant, Thompson, & Erkkilä, 2015). Furthermore, very few of these methods have been subjected to rigorous testing for validity and reliability (Sabbatella, 2004). With the exception of the Streeter surveys (2010), which included questions about music therapy evaluation methods, to date there has been no research on how music therapists use these diverse music analysis methods in their practice.

The objective of the present study is to explore how and when psychodynamically oriented music therapists use music analysis in practice. The term psychodynamic music therapy refers herein to the “existence of, and dynamic processes in, an unconscious mind, which has an influence on intrapsychic and interpersonal processes within and outside of the musical activity between the therapist and patient” (Metzner, 2016, p. 448). A psychodynamic music therapist seeks to enable a client to communicate his/her inner state through musical expression. A researcher, then, needs to reject absolutism in favour of referentialism (i.e., a belief that music is capable of communicating extramusical meanings) (Meyer, 1956). Readers should bear in mind that this investigation does not seek to recommend a single best approach to music analysis, but rather to explore multiple perspectives and to reveal

the causalities and consequences of different action strategies in music therapy practice. The current study aims to determine factors influencing music therapists' approaches to music analysis and explore how available music analysis methods are being utilised in practice, and, as a result, to create the grounds for future studies by identifying key categories for qualitative as well as quantitative research and to guide the development of subsequent music analysis methods.

Method

We chose a constructivist grounded theory approach for the present study in order to capture the complexities of the phenomenon (Charmaz, 2006, 2014; Mills, Bonner, & Francis, 2006). Since grounded theory building is entirely inductive, it was not affected by the lack of previous literature on the topic (Davieson, 2016; O'Callaghan, 2016).

Although, according to grounded theory principles, a literature review was performed as the last step of the research process, we were already aware of eminent authors in this field, and used this knowledge to select informants for the present study. We made a list of psychodynamically oriented music therapists that had developed music analysis methods or published research that employed music analysis methods. All key informants were, or had been, involved in clinical, educational and research work and had no less than 10 years of professional experience. In order to form a comprehensive theory, we chose therapists that used various music analysis methods and worked with diverse client populations. Though we attempted to recruit informants from a wider geographical area, not all invitations to participate were answered, and the eight who participated were all based in Europe.

In qualitative research, findings are generated rather than discovered, therefore it was very important to be reflexive on the entire research context (Gentles, Jack, Nicholas, & McKibbin, 2014; Mruck & Mey, 2007). We removed terminology from the interview questions that might have led participants, and attempted to prevent our professional interests from affecting the way we viewed or worked with data. Although we are involved in the activities of the Finnish Centre for Interdisciplinary Music Research, apply an Integrative Improvisational Music Therapy approach (Erkkilä et al., 2011), and use computational music analysis tools such as MIR Toolbox (Eerola & Toiviainen, 2004; Lartillot & Toiviainen, 2007) and Music Therapy Toolbox (Erkkilä, 2007), the current research is equally interested in all possible approaches to and outcomes of analysing music in psychodynamic music therapy.

According to the National Advisory Board on Research Ethics in the country where the current study was carried out, this type of research did not require ethical review. The present study was based on interviews with a small sample of experts, and the data was analysed by one researcher only. Consequently, it lacked triangulation within and between methods (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Flick, 2004). More generally, this qualitative study had a relatively broad research question with little previous research having been undertaken on the topic, so it was challenging for informants to answer, and – because of the diversity of opinions and experiences – difficult for researchers to conceptualize without being too simplistic (Wheeler & Bruscia, 2016). It should also be noted that interviews were conducted in English, and none of the informants were native English speakers. The most challenging aspect of the current study was the process of raising the analytical

level from description to abstraction. Participants voiced very different, sometimes opposing, opinions on approaches to music analysis and it was difficult to account for all variation within a single core concept.

The subjects, material, design, and analysis methods varied depending on the phase of the study. Phase 1 – Exploration – identified the most salient themes (initial coding), and facilitated the design of the questionnaire for Phase 2. In Phase 2 – Theoretical Sampling – new interview data were collected and coded (initial, axial, selective coding) until the point of saturation was reached. In Phase 3 – Refinement – the theory was presented in order to clarify and validate it. We employed two styles of interaction with participants: in Phases 1 and 3 interviews were interactive and discussion-like, while in Phase 2 the approach was based on open, non-directive listening to informants. Although Phase 3 discussion did not result in any new categories, it was an important part of validation. As Strauss and Corbin (1990) said, “opening up one’s analysis to the scrutiny of others helps guard against bias. Discussions with other researchers often lead to new insights and increased theoretical sensitivity” (p.11).

Phase 1 – exploration

Participant

Key informant 1, coded as Mr A, was a Finnish music therapist with 29 years of experience (at the time of interviewing, February 2015). Mr A was selected because his research interests (as seen from research publications) were the most similar to the research question of the current study.

Procedure

Interview data were collected in person over two meetings, which lasted a total of 3.5 h.

Materials

Mr A answered 49 questions about music recording techniques, music analysis, analysis interpretation, communication with clients and colleagues, the use of different assessment tools, and issues in relating assessment results to clinical issues. Because interviews were lengthy and rich in data, we decided that these were sufficient for the first stage of the current study.

Data analysis

Transcripts of the interviews with Mr A were analysed with initial coding. We used the *in-vivo* technique (labelling the data only with participant’s own words) to stay as close to the participant’s point of view as possible. This phase was used to identify different practices in music analysis and highlight areas of inconsistency and debate.

Phase 2 – theoretical sampling

Participants

Six participants were interviewed during Phase 2 from March to May 2015 (see Table 1). In addition to being music therapists, some had training in music performance, music education, composition, dance therapy, psychotherapy, and psychoanalysis.

Table 1. Information about participants in Phase 2.

Participant	Experience (years)	Country
Ms B	25	Finland
Ms C	25	Switzerland
Mr D	32	Denmark
Mr E	30	Belgium
Ms F	10	Denmark
Mr G	19	Finland

Procedure

Interviews were conducted in person where possible or via Skype, and lasted on average for 62 min.

Materials

The main questions addressed to each participant related to music making (four questions), music analysis (three questions), interpretation of analysis results (three questions), and a final open question that inquired whether there was anything else the participant considered to be important regarding music analysis in music therapy that had not been discussed in the interview. As seen in [Appendix 1](#), the questions were very open: no music parameters (e.g., rhythm, melody) or music analysis methods (e.g., aural, computational) were identified in the questions in order to avoid leading. If participants found a question confusing and asked for clarification, then suggestions (marked as a. b. c. in [Appendix 1](#)) were presented to them. Clarifying and probing questions were asked with the aim of explicating or expanding upon opinions and experiences, which necessarily varied for each participant.

Data analysis

Coding was completed in three stages. In the first stage, open coding was used to identify concepts, define their properties, and start grouping them into categories. Two techniques were used in open coding – first line-by-line *in-vivo* coding, followed by process coding. During process coding (Saldana, 2009), all the gerunds (verbs ending “-ing”) and transitional indicators (“if”, “when”, “because”, etc.) were highlighted and subsequently used to generate new codes or establish code properties. While many categories discussed in the results correspond with individual interview questions (e.g., therapists’ background, client populations), some emerged directly from data (e.g., creativity, bodily experiences). Axial coding was the second stage of data analysis, which focused on the connections between categories by clustering the data. Following Strauss and Corbin’s coding paradigm (Strauss & Corbin, 1990), causal conditions, intervening conditions, action strategies and consequences were identified. Selective coding was the final stage, which was used to integrate all the findings into a coherent picture. Conditions, strategies, and consequences were inter-related, and a core category emerged as the best explanation for the observed phenomenon.

Phase 3 – refinement

Once it was judged that saturation point had been reached in Phase 2 and the theory was formulated, an oral presentation was given at the 10th European Music Therapy Conference in Vienna (Letulé, Thompson, & Erkkilä, 2016). To begin with, the first author gave a 30-min presentation explaining the methodology and results of this study. Compared to the final version of the theory presented in this paper, some

categories had different names (e.g., “positivistic” instead of “model-based” theoretical understanding) and “client’s abilities and needs” was paired with other intervening conditions, as opposed to having its own space in the flowchart of the coding paradigm. After the presentation, the audience was informed that their input, voiced during the next 10 min, would be used as part of the study and encouraged to express any thoughts or opinions regarding the theory. Several audience members affirmed that they could relate to the theory from their own professional experience. In addition to this feedback, a suggestion was made to replace the term “intuition” with “implicit knowledge”, which was adopted.

One member of the audience was approached for thorough feedback on the proposed theory. Like all the other key informants, Mr H was involved in clinical work, research, and education, but he had also had specific experience in using the grounded theory method. He was a Finnish music therapist with 26 years of experience. The meeting occurred in August 2016 and lasted 75 min. Mr H was presented with coded transcripts, figures, and tables, as well as a draft of the Abstract, Method and Results of this paper. His feedback resulted in the revision of the names of some categories and inclusion of more tables in the manuscript, as this helped to present findings more clearly.

Results

Results will be reported in three sections that reflect different levels of data analysis: Summary (description), Coding Paradigm (analysis) and Core Category (interpretation).

Summary

Informants reported the use of a variety of therapeutic methods, both active (improvisation, singing, song writing) and receptive (listening to client’s preferred music), in their clinical work. They practiced in both public and private sectors in a variety of venues (hospitals, schools, nursing homes, etc.). In response to questions they referred to examples from their work with neurological (e.g., autism, epilepsy, cerebral palsy, deafness, blindness, brain injury, intellectual disabilities) and psychopathological (e.g., depression, anxiety, bipolar disorder, schizophrenia, personality disorders, addictions) disorders and non-clinical populations (Table 2).

Participants had varying degrees of familiarity with different approaches to music analysis. Some informants (Mr D, Mr E, and Ms F), had extensive knowledge of different assessment tools and had clearly defined opinions regarding the phenomenon. They

Table 2. Client populations discussed in Phase 2.

Participant	Neurological clients	Psychiatric clients	Non-clinical population
B	×	(×)	
C	(×)	×	
D	×	×	(×)
E	×	×	
F	×	×	
G	(×)	×	

Note. (x) – has some experience, but not the main client group.

referred to K. Bruscia's IAPs (Bruscia, 1987), VOIAS by S. Storm (Storm, 2013), MATADOC by W. L. Magee and colleagues (Magee, Siegert, Daveson, Lenton-Smith, & Taylor, 2014), S. Malloch's Vocal Timbre (Malloch, 1999), and E. Streeter's work with Music Therapy Logbook (Streeter et al., 2012) as examples of music analysis that they did not implement in practice, but regarded highly. Others (Ms B and Ms C) tended towards implicit knowledge rather than formalised analysis methods, did not refer to other published works, and sometimes had difficulty in verbalising their implicit knowledge.

Participants also had different attitudes towards music assessment in their clinical work. Ms B and Ms C liked to have more freedom – their decisions relied primarily on implicit knowledge, while the other informants employed specific methods as part of the structure of their sessions. Ms B, for example, avoided systematic work and thought that using a tool or specific method would detract from her sensitivity to an individual client. In their clinical approaches, some (Ms B & Mr D) focused on individually differing circumstances – client personalities, cultural backgrounds, and the stage of the therapeutic process – while others (Mr E & Ms F) aimed for generalizable, verifiable knowledge. Ms F said:

I wanted it to be objective, the results of this type of assessment can be quite severe – if it is not good enough the child might be taken away. So my opinion should not be based on whether I like the family or not, or can relate to them – it needs to be based on objective issues.

When asked about tools or specific methods of music analysis, informants' answers were grouped into one of three categories: aural, notation-based, and computational (Table 3). While all therapists – consciously or not – analysed music in an unstructured way, Ms F also used a well-documented aural music analysis method. Mr D and Mr E used traditional notation on staves. Mr D also employed graphical notation, which was based on various visual symbols. Mr E, the only user of computational software, found that notation-based analysis enabled detailed examination of music, but was time consuming, and that using computational methods was objective, fast (1 week for notation – 5 min for computation), and performed complex operations, but at the current stage of development software was sometimes unreliable. Without regard to which analytical approach informants chose to use in their work, all agreed that having a variety of options was beneficial and emphasized the complementary nature of different methodologies.

When answering the question “Which musical parameters do you consider the most important when analysing music?”, participants identified both primary and secondary parameters (Table 4). The most frequently discussed primary parameter was rhythmical organisation. When talking about primary parameters, informants used terms such as “cells” or “patterns” and spoke of “finding” them. Of the secondary parameters dynamics was identified most frequently during the interviews.

Table 3. Phase 2 participants' use of music analysis methods.

	Aural	Notation-based	Computational
B			
C			
D		×	
E		×	
F	×		×
G			

Table 4. Phase 2 participants’ perceived importance of music parameters.

	Primary			Secondary			
	Melody	Rhythm	Harmony	Dynamics	Tempo	Timbre	Structure
B		×		×	×		×
C	×	×	×				×
D		(×)		×	×	×	
E	×	×	×	(×)	×	×	×
F	×	×	×	×		×	×
G	×	(×)	×	×	(×)	×	×

Note. (x) – referred to a parameter indirectly and only once.

In discussing secondary parameters, informants used terms like “atmosphere” and “mood” and spoke of “sensing” them. In Mr E’s opinion, secondary parameters were connected to the unconsciousness.

All informants, except Ms C, referred to creativity when talking about assessment in music therapy. Ms F talked about evaluating the level of creativity and methods to assess it, while Mr D emphasised the importance of experiencing the joy of creativity in making music with a client. Although Mr E did not specifically mention the word creativity, the way he described the phenomena indicated the importance of creativity in his work: “music therapy – I’m very sure you cannot be taught it, you can only develop it. And music training I feel like it is only developing the potential of music in yourself”.

Therapists also talked about the significance of bodily experiences. Mr E considered the music therapist a resonant object: “Therapist can feel sometimes very physically, but mostly mentally, what is happening in the relationship. That, like a projective identification, that you can experience what is in the psyche of the patient”. Countertransference was a common theme in other informants’ narratives regarding the interpretation of musical expression, for example, Ms F said:

Relationship and your own countertransference, emotions and things how you experience the client in your own body – and I think you really need to develop that tool in your clinical work, so that you can trust more on your own emotions and feelings about the client. . . for that you need, for example, very regular supervision for yourself and maybe sometimes your own therapy, if you have some personal issues going on.

Some informants investigated in their clinical work and research what constituted a healthy style of playing and what could be identified as pathological playing. Mr E argued that musical expression could indicate the severity of a client’s condition:

Autism. . . they are looking for sensorial material, like ocean drum. When you give it to him, autistic child is calm for an hour, looking at the fish and so on. Borderline patients, when you see the preference of an instrument, how heavier the pathology, how more rhythmically. Psychotic patients have no interest in melodic, borderline patients they like more the melodic instruments. . . Harmony is . . . for the neurotic people, and the melody is more for borderline, and rhythm for psychosis. Of course, this is not being proved, but I see in daily practice.

Ms F notes that “norms are very interesting in terms of specific clinical goal . . . is it good enough or not. . . looking to non-clinical population we will learn a lot about different combinations of parameters, or combinations about analysis, what they will mean”. Conversely, Ms C believes, that a client’s opinion is the only one that matters. “I say. . . my associations. . . also what I feel if it is very strong. . . But I do not interpret,

normally they know it and they say it. . . And that what they say is the most important, more than what I think”.

In understanding and accounting for musical expression, informants had a range of perspectives. Ms B did not want to generalise. Ms C thought it was about the quality of the relationship with the therapist. Mr D considered a client’s behaviour holistically, without discrimination. Mr E considered the client’s pathology. Ms F thought that the client’s level of confidence was the most important factor determining their musical expression, and for Mr G it was the client’s regulation of arousal (e.g., in the case of traumatised children “very difficult for you to keep the steady beat. . . it might very easily start to go faster or slower because you don’t really feel a beat inside of you. And I think that’s also related to this regulation problem”).

Coding paradigm

The Coding Paradigm identified from the data had 6 constituent parts: (1) *Causal conditions*, (2) *Intervening conditions*, (3) *Client populations*, (4) *Theoretical understanding*, (5) *Action strategies*, and (6) *Consequences* (Figure 1). Causal conditions were the situations in which therapists were compelled to perform music analysis. Intervening conditions were the circumstances that influenced the choice of approach to the analysis, affecting it indirectly. Client populations affected the choice of the analysis method like a filter – the more severe the client’s disability, the more limited the options for music analysis. Theoretical understanding explained both the underlying motivations towards different actions and the interpretations assigned to the results of music analysis. Action strategies were the different music analysis methods chosen by the participants. Consequences described the interdisciplinary and intra-disciplinary impact of different approaches to the phenomena.

(1) Causal conditions

Three categories of causal condition emerged: *education*, *research*, and *clinical practice*. In the *education* condition, participants analysed music because they were either a student, and it was a part of their training, or an educator, who was asked to teach music analysis. The influence of individual role models was highlighted when Ms F described the reasons why she started to analyse music: “My first encounter with assessment being taught by Tony Wigram. That just hit a core in me”. In the *research* condition, participants analysed music because they wished to add to the

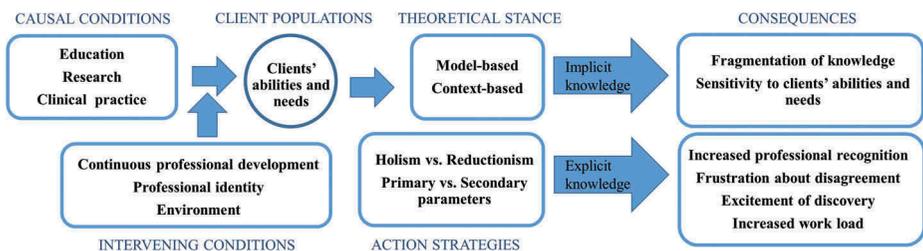


Figure 1. Coding paradigm illustrating the relationships between causal conditions, intervening conditions, client populations, theoretical understanding, action strategies, and consequences.

existing body of knowledge and/or were seeking validity. As Mr E. said, “at the university here they said it is very subjective, you cannot validate it. Now with the computational analysis we have a lot more quantitative data and we use the quantitative data to prove the qualitative data”.

In the *clinical practice* condition, participants analysed music because of external factors, such as communication with clients and their relatives, requirements for clinical reports and requests for consultation. Ms F said, “different ways of interacting, I saw it while they were having a [musical] contact, so it made sense to me to dig deeper, because my co-workers asked me all the time – what do you think? ...could you help me?” Internal factors fell into five subcategories: sense of professional responsibility, professional development, inexperience, workload and belief that the therapeutic process happens outside the session. Sense of professional responsibility played a role when it was judged that the results of a therapist’s assessment would have a severe impact, for example in determining whether a child would be taken into custody or would remain with biological parents. Professional development was related to a sense of obligation to acquire the newest methodological and theoretical knowledge about one’s practice. Inexperience influenced early career therapists, who sought to have their implicit knowledge or assessments validated by the results of music analysis. Heavy workload limited therapists’ available time between sessions and having a clear method of analysis saved time and brought clarity to the process. The belief that the therapeutic process continued outside the session was also a reason to explore the music. As Mr E said, “When I am very triggered or I am suffering by some patient, I ask colleague ‘Can we improvise together?’ and then the music digests it and makes new forms. And this I bring into the next session.”

(2) Intervening conditions

Three intervening conditions emerged: *continuous professional development*, *professional identity*, and *environment*. *Continuous professional development* affected the tendency to analyse music when a therapist was a member of an organisation (e.g., association, hospital or university), when they attended scientific events (e.g., conference, congress or symposium) or when they received new knowledge from students. For example, at the university where Mr D was teaching, “everyone recorded improvisations”, so he started doing it as well. He also talked about workplace policies at different hospitals, which impacted the way he had to assess clients.

Professional identity affected the tendency to analyse music depending on where participants fell on a spectrum: musician versus therapist. Mr E, who was at the musician end of the spectrum, said that “music says it all”, while Ms C, who was at the therapist end, believed that what a client expressed verbally during a session was most important. Participants having extensive musical training were more likely to analyse music. Professional Identity could be further differentiated by a participant’s training, for example, some of the informants had degrees in musicology, composition, or performance, while others had been fully trained in psychoanalysis, or had influences from existentialism. It is important to note that all participants had both clinical and musical training. Therefore, while training could explain certain therapeutic or musical choices (the use of composition or performance in therapy, influences of psychoanalysis or existentialism), it did not explain whether a

participant would lean towards the therapist's or musician's end of the professional identity spectrum.

The *environment* condition could be divided into three categories: personal background, music preference, and role models. A participant's informal learning environment in early life affected the tendency to analyse music, as Mr E noted: "Family, where you have been born, education, and what kind of environment we are developed, and the choice of your first instrument is very interesting. Is the same instrument of the father?" Participants also mentioned certain musical styles (e.g. avant-garde, electronic music, serialism, minimalism, South American, and jazz) that influenced their way of playing or thinking. Mr E. explained that by listening to contemporary music he learned "when it is even chaotic playing . . . I can find some structure in it. And I talk about that: "it's like Stockhausen", or "it is like Philip Glass", [then] patients say "this is music, so therapist finds it meaningful".

(3) Client population

Client population affected the choice of music analysis method, depending on how reduced a client's abilities were overall, how varied a client's functionality was day-to-day, what the therapeutic goals were, and how many different populations a therapist worked with concurrently. Primarily, the client population affected the activities that could be undertaken in music therapy. Mr D said "some people are wordless – really down there with intellectual disabilities, so you cannot talk and you cannot expect to have turn-taking music phenomenon". Consequently, the search for harmonic or melodic patterns is likely to be fruitless. Furthermore, the importance of bodily expression increased as musical and verbal expression decreased. All these factors shaped the therapist's actions and ways of thinking. Mr E said, "The most I learnt from my patients in the practice room and later in my clinical work. . .how I have to listen, how I have to play".

(4) Theoretical understanding

Theoretical understanding could be summarised as two stances that were adopted by participants: *model-based* (a mindset that leaned more towards positivism and searched for patterns and regularities) and *context-based* (a mindset that inclined more towards interpretivism and empathetic understanding of a singular case). Mr E said, "It's all in the music: the interactions, the improvisational effects, the communication, interpretation – everything is in the music". The intent to decode music arose from a wish to objectively explain and validate the working mechanisms of intervention. Also, participants who had greater involvement in academia were more likely to exhibit a model-based mindset. Ms B presented another perspective: "I am really afraid of analysing too mechanically, because a situation can be very different. Clients are so different, so the meanings can be really different". She perceived the meaning as something negotiated, which depended on individual experience, the stage of the therapeutic process, the state of a client's wellbeing that day, and the client's cultural background. These categories were not forced onto the data but emerged from it and helped to navigate it. For example, Ms C was unique in her approach: she was not interested in patterns, but neither did she make any interpretations.

(5) Action strategies

A participant's action strategy tended to fit onto two spectra: Perspective, representing the tendency towards a holistic or reductionist perspective, and Parameters, indicating a tendency to focus on primary or secondary musical parameters. *Holistic perspective* could be applied to both musical expression and to a client's physical expression during musical interaction. Ms C understood musical expression holistically: "It is all music, harmony, melody, form. . . in the session it is always everything together, it is not only one, music is all elements together". Mr D asked "how I am. . . to distinguish the musical expression from everything else? There are many cases in which the behaviour, the eye contact, the breath and other things, are the things that really contribute to some overall communication". A *reductionist perspective* could be applied to music analysis using three different approaches: (1) Aural analysis (Ms F), (2) Notation-based analysis (Mr D and Mr E) and (3) Computational analysis (Mr E).

Primary and *secondary musical parameters* could be analysed from both holistic and reductionist perspectives. Primary parameters are musical features that can be transcribed into a traditional score and analysed aurally or computationally. Secondary parameters can be analysed aurally and computationally, but cannot be fully represented in a traditional score, only in a graphical notation. A participant's choice of analysis method determined which set of features they were more inclined to pay attention to. Primary parameters were analysed in order to find patterns that formed over time (e.g. development of rhythmical patterns), while secondary parameters were instantaneously sensed (e.g. loud as opposed to quiet) and did not constitute hierarchical organisation.

(6) Consequences

The Consequences of a participant's actions could be interdisciplinary or intradisciplinary and depended on the strategies chosen. When relying on implicit knowledge (context-based understanding and a holistic strategy), the consequences were different compared to when relying on explicit knowledge (model-based understanding and a reductionist strategy). *Interdisciplinary* consequences related to one category only – professional recognition. Approaches based on explicit knowledge seemed to increase professional recognition. As Ms F said:

In terms of the whole field. . . I think in order to say out loud, and to be well graded in social and health care systems we need to standardise assessment tools, because if we can argue that we have unique information, we can argue that we have unique treatment, if we can measure something unique, we can work with something unique.

Intradisciplinary consequences varied for each approach adopted. Where implicit knowledge dominated participants were less able to give an account of analytical processes they employed, but had a great sensitivity to clients' abilities and needs. Where explicit knowledge dominated, there was frustration about disagreement, excitement regarding discoveries, and, depending on the therapist's choice of analysis method, a potentially increased workload.

Core category

Selective coding resulted in the emergence of the core category – professional freedom. Professional freedom could be described as a spectrum representing the tension between a

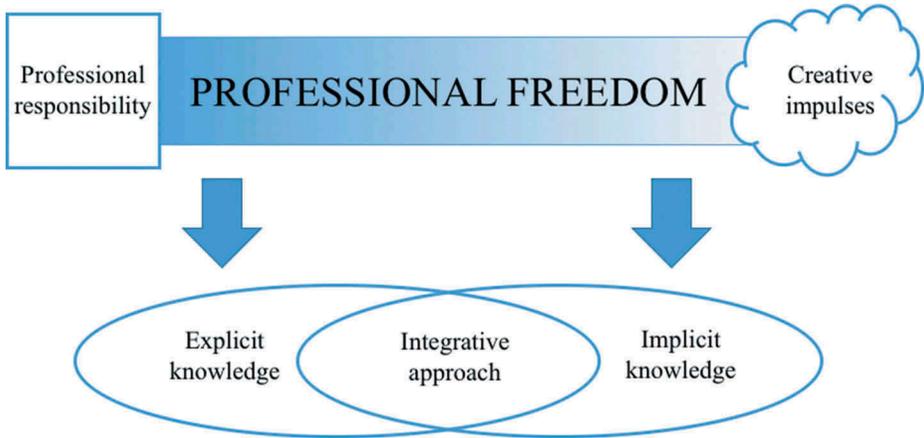


Figure 2. Core category illustrating the tension between professional responsibilities and creative impulses.

therapist's professional responsibility and creative freedom (Figure 2). On one end of the spectrum was reliance on explicit knowledge and use of well-documented methods. On the other end of the spectrum was reliance on implicit knowledge and intuition, and the importance of sensitivity to the client "here and now". The first approach tended to be employed by those who used, or even developed upon, pre-existing methods of analysis that were documented and tested. The second approach relied more heavily on the use of the therapist's feelings and insights as the main tool to assess the therapeutic process. The integrative approach combined both explicit and implicit knowledge. Of the participants in this study, Ms F used explicit knowledge, Ms B, Ms C and Mr G. favoured implicit knowledge, while Mr A, Mr D, and Mr E tended to integrate both.

Discussion

The purpose of the current study was to determine how and when music therapists analysed musical material. It was found that, when analysing music, therapists tended to favour explicit or implicit knowledge. These approaches were not separate, but rather formed a spectrum with many degrees in between. In general, when relying on explicit knowledge, therapists tended to search for patterns and regularities (model-based *theoretical understanding* and using a reductionist *action strategy*), while when relying on implicit knowledge, therapists focused on being sensitive to an individual client's case (context-based *theoretical understanding* and using a holistic *action strategy*).

The results of this investigation present a complex picture, where the possible reasons for analysing music (education, research, clinical practice – *causal conditions*) are influenced by various factors (continuous professional development, professional identity, environment – *intervening conditions*) and specific *client populations* (client's abilities and needs). Attitudes towards music analysis differed on two levels: *theoretical understanding* (model- or context- based) and *action strategies* (primary and secondary parameters analysed in a holistic or reductionist manner). As for *consequences*, when employing implicit knowledge, the ability to give an account of analytical processes lessens, but sensitivity to clients' abilities and needs increases,

while explicit knowledge can lead to frustration about interdisciplinary disagreement, greater excitement about discovery and potentially increased workloads.

The explanation that this study offers for the variety of attitudes to analysing music is that each therapist needs to find a balance – professional freedom – between their inner creative impulses and professional responsibilities. On one hand, in psychodynamic music therapy clients are often encouraged to “go-with-the-flow” in a free improvisation – an activity which is believed to reflect unconscious processes taking place (De Backer & Sutton, 2014; Erkkilä, Ala-Ruona, Punkanen, & Fachner, 2012; Metzner, 2016). In order to facilitate such a flow, therapists are trained to bear uncertainty, to be spontaneous and sensitive to possible occurrence of transference or counter-transference (Hadley, 2003; Wigram, 2012). On the other hand, music therapists are expected to fill out formalised assessment tools, follow pre-existing working plans and make decisions that will affect a client’s life. As Smetana (2017) describes it, “even when structuring and directive interventions were indicated, the music therapeutic work required a high degree of flexibility and willingness for spontaneous action. Furthermore, it was always necessary to find a certain balance between presence and restraint” (p. 117).

The findings of this study have implications for all disciplines that combine creative expression and health care intervention. For music therapists, it provides a means of understanding the choice of method and use of music analysis and encourages further discussion and research into it. Firstly, it appears that each music therapist – consciously or not – seeks a balance between professional responsibility and their creative impulses. It seems that this personal decision can have a wider impact on the discipline, for example, on professional recognition and the fragmentation of knowledge. Secondly, education plays an important role in therapists’ attitude to music analysis (as shown by causal conditions in the coding paradigm). Based on the results of this study, we would recommend a greater emphasis on courses teaching music analysis methodology as a part of music therapists’ training programmes.

In addition to formulating a grounded theory, as presented in the results, we would like to share some observations – hypotheses, if you will, to be tested in future studies. It seems that therapists who had diverse client populations and heavy workloads tended to favour context-based approaches, and that those more heavily involved in academia had a more model-based understanding. Also, it appears that participants having more musical training were more likely to analyse music. But is it that one starts to analyse music after having extensive musical training, or is it that because of having a more analytical approach to it, one seeks further training in it? Also, why did no participants mention any interpretative methods of music analysis (Trondalen & Wosch, 2016)? Did they believe these methods to be self-evident, were interview questions not inclusive enough, or maybe these methods are not commonly practised? Furthermore, no participant discussed technical limitations such as how to make a good recording or where to store data (Hadley, Hahna, Miller, & Bonaventura, 2014). Is it that having a good smartphone eliminates most of these issues today, or was this because the experienced professional participants had access to specialized facilities that are not widely available?

Regardless of its exploratory nature, this study offers valuable insight into the way music therapists analyse music for assessment purposes, and also provides deeper insight into the mindset and practical approaches that expert therapists, and, by implication, music therapists as a wider community, employ. Approaches to music analysis seem to vary depending on the background, the stage of career, and the specific working environment of each individual, and this should be considered a developmental

process, rather than a fixed choice. Despite all these interesting results, the question remains: how can we understand so differently something that is at the very core of music therapy? Maybe, after all, as Ruud (1998) wrote: “Our profession will be forever populated with people and paradigms with competing claims of knowledge. The only answer is to learn from each other and communicate what we learn” (p. 114).

Acknowledgments

The authors thank Duncan Snape, Elsa Campbell and Olivier Brabant for feedback on the theory.

Conflict of interest

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Jyväskylän Yliopisto [doctoral scholarship for Nerdinga Letulé].

Notes on contributors

Nerdinga Letulé is a member of the Lithuanian Music Therapy Association and the Finnish Centre for Interdisciplinary Music Research. She has degrees in Musicology and Music Psychology. She is currently a music therapy doctoral candidate at the University of Jyväskylä, researching methods of music analysis that can be meaningfully applied to clinical improvisations.
Email: nerdinga@gmail.com

Esa Ala-Ruona, PhD, is a music therapist and psychotherapist working as an associate professor and senior researcher at the Music Therapy Clinic for Research and Training, University of Jyväskylä. He is the current president of The European Music Therapy Confederation. He is also a member of the Finnish Centre for Interdisciplinary Music Research, studying clinical processes in music psychotherapy, and the effects of active music therapy on post-stroke recovery. He develops clinical models of music therapy and data collection set-ups to be used with different clinical target groups. He is the co-founder of the first extensive Vibroacoustic/Physioacoustic (VAT/PA) training in Finland, and he has been developing and studying the possibilities of VAT/PA in specialized health care within psychiatry, neurology, and physiatrics.
E-mail: esa.ala-ruona@jyu.fi

Jaakko Erkkilä, PhD, is professor of music therapy at University of Jyväskylä, Finland. He is the Head of the Music Therapy Clinical Trainings at the Eino Roiha Institute, in Jyväskylä and in Tampere, Finland. His clinical experience includes working with people with psychiatric and developmental disorders, and children with neurological disorders. He has been involved in research networks funded by the Academy of Finland and the European Union (EU6 and EU7 frameworks, Finnish Centre of Excellence in Interdisciplinary Music Research). He serves on the editorial boards of several music therapy journals and is a member of the Consortium of Music Therapy Research. His current research interests are the theory and practice of improvisational music therapy.
E-mail: jaakko.erkkila@jyu.fi

ORCID

Nerdinga Letulé  <http://orcid.org/0000-0003-3196-0584>
Jaakko Erkkilä  <http://orcid.org/0000-0003-1130-837X>

References

- Abrams, B. (2007). The use of improvisation assessment profiles (IAPs) and RepGrid in micro-analysis of clinical music improvisations. In T. Wosch & T. Wigram (Eds.), *Microanalysis in music therapy: Methods, techniques and applications for clinicians, researchers, educators and students* (pp. 92–105). London: Jessica Kingsley Publishers.
- Aigen, K. (2014). Music-centered dimensions of Nordoff-Robbins music therapy. *Music Therapy Perspectives*, 32(1), 18–29.
- Ansdell, G. (1997). Musical elaborations: What has the new musicology to say to music therapy? *British Journal of Music Therapy*, 11(2), 36–44.
- Baxter, H. T., Berghofer, J. A., MacEwan, L., Nelson, J., Peters, K., & Roberts, P. (2007). *The individualized music therapy assessment profile: IMTAP*. London: Jessica Kingsley Publishers.
- Bergström-Nielsen, C. (1993). Graphic notation as a tool in describing and analysing music therapy improvisations. *Music Therapy*, 12(1), 40–58.
- Bonde, L. O. (2016a). Analysis and interpretation of musical data in interpretivist research. In B. L. Wheeler & K. M. Murphy (Eds.), *Music Therapy Research: (3rd)*. (pp. 1304–1385). Gilsum NH: Barcelona Publishers. E-reader version.
- Bonde, L. O. (2016b). The black hole – Or is music a black box? *Nordic Journal of Music Therapy*, 25(1), 105–106.
- Bruscia, K. E. (1987). *Improvisational models of music therapy*. Springfield, IL: Charles C. Thomas.
- Bruscia, K. E. (1996). *Music for the imagination: Rationale, implications and guidelines for its use in Guided Imagery and Music (GIM)*. Santa Cruz CA: Association for Music and Imagery.
- Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum*, 41(5), 545–547.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London: SAGE Publications.
- Charmaz, K. (2014). *Constructing grounded theory*. London: SAGE Publications.
- Daveson, B. A. (2016). Charting the terrain of grounded theory research in music therapy: Where we've been and where we have the potential to go. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 748–767). Oxford: Oxford University Press.
- De Backer, J. (2008). Music and psychosis: A research report detailing the transition from sensorial play to musical form by psychotic patients. *Nordic Journal of Music Therapy*, 17(2), 89–104.
- De Backer, J., & Sutton, J. (2014). Therapeutic interventions in psychodynamic music therapy. In J. De Backer & J. Sutton (Eds.), *The music in music therapy: Psychodynamic music therapy in Europe: Clinical, theoretical and research approaches* (pp. 338–350). London: Jessica Kingsley Publishers.
- Eerola, T., & Toiviainen, P. (2004). MIR in Matlab: The Midi Toolbox. Proceedings from the 5th International Conference on Music Information Retrieval (pp. 22–27). Barcelona, Spain.
- Eitan, Z., & Granot, R. Y. (2009). Primary versus secondary musical parameters and the classification of melodic motives. *Musicae Scientiae*, 13(1), 139–179.
- Erkkilä, J. (2007). Music therapy toolbox (MTTB) – An improvisation analysis tool for clinicians and researchers. In T. Wosch & T. Wigram (Eds.), *Microanalysis in music therapy: Methods, techniques and applications for clinicians, researchers, educators and students* (pp. 134–148). London: Jessica Kingsley Publishers.
- Erkkilä, J., Ala-Ruona, E., Punkanen, M., & Fachner, J. (2012). Creativity in improvisational, psychodynamic music therapy. In D. Hargreaves, D. Miell, & R. MacDonald (Eds.), *Musical imaginations: Multidisciplinary perspectives on creativity, performance and perception* (pp. 414–428). Oxford: Oxford University Press.
- Erkkilä, J., Lartillot, O., Luck, G., Riikilä, K., & Toiviainen, P. (2004). Intelligent music systems in music therapy. *Music Therapy Today*, 5(5). Retrieved from <http://musictherapyworld.net>
- Erkkilä, J., Punkanen, M., Fachner, J., Ala-Ruona, E., Pöntiö, I., Tervaniemi, M., Gold, C. (2011). Individual music therapy for depression: Randomised controlled trial. *The British Journal of Psychiatry*, 199(2), 132–139.
- Flick, U. (2004). Triangulation in qualitative research. In U. Flick, E. Von Kardoff, & I. Steinke (Eds.), *A companion to qualitative research* (pp. 178–183). London: SAGE Publications.
- Forinash, M., & Gonzalez, D. (1989). A phenomenological perspective of music therapy. *Music Therapy*, 8(1), 35–46.

- Gardstrom, S. C. (2004). An investigation of meaning in clinical music improvisation with troubled adolescents. *Qualitative Inquiries in Music Therapy*, 1(4), 77–160.
- Gentles, S. J., Jack, S. M., Nicholas, D. B., & McKibbin, K. (2014). Critical approach to reflexivity in grounded theory. *The Qualitative Report*, 19(44), 1–14.
- Gilboa, A. (2012). Developments in the MAP: A method for describing and analyzing music therapy sessions. *Nordic Journal of Music Therapy*, 21(1), 57–79.
- Gilboa, A., & Bensimon, M. (2007). Putting clinical process into image: A method for visual representation of music therapy sessions. *Music Therapy Perspectives*, 25(1), 32–42.
- Guerrero, N., & Turry, A. (2012). Nordoff-Robbins music therapy: An expressive and dynamic approach for young children on the autism spectrum. In P. Kern & M. Humpal (Eds.), *Early childhood music therapy and autism spectrum disorders: Developing potential in young children and their families* (pp. 130–144). London: Jessica Kingsley Publishers.
- Hadley, S. (2003). Psychodynamic music therapy: An overview. In S. Hadley (Ed.), *Psychodynamic music therapy – Case studies* (pp. 1–22). Gilsum, NH: Barcelona Publishers.
- Hadley, S., Hahna, N. D., Miller, V., & Bonaventura, M. (2014). Setting the scene: An overview of the use of music technology in practice. In W. Magee (Ed.), *Music technology in therapeutic and health settings* (pp. 25–44). London: Jessica Kingsley Publishers.
- Hunt, A., Kirk, R., Abbotson, M., & Abbotson, R. (2000). Music therapy and electronic technology. *Proceedings of the Euromicro Conference* (pp. 362–367). Maastricht, Netherlands.
- Keith, D. R. (2007). Understanding music improvisations: A comparison of methods of meaning-making. *Qualitative Inquiries in Music Therapy*, 3, 62–102.
- Lartillot, O., & Toivainen, P. (2007). A Matlab Toolbox for musical feature extraction from audio. *Proceedings from the International Conference on Digital Audio Effects* (pp. 237–244). France: Bordeaux
- Lee, C. (2000). A method of analyzing improvisations in music therapy. *Journal of Music Therapy*, 37, 147–167.
- Letulé, N., Brabant, O., Thompson, M. R., & Erkkilä, J. (2015). Triangulation of methods in assessing clinical improvisations. *Musiikkiterapia Lehti*, 30(1–2), 25–47.
- Letulé, N., Thompson, M. R., & Erkkilä, J. (2016). Investigating music therapists' approaches to the assessment of musical material. *Nordic Journal of Music Therapy*, 25(Supplement 1), 43.
- Magee, W. L., Siebert, R. J., Daveson, B. A., Lenton-Smith, G., & Taylor, S. M. (2014). Music therapy assessment tool for awareness in disorders of consciousness (MATADOC): Standardisation of the principal subscale to assess awareness in patients with disorders of consciousness. *Neuropsychological Rehabilitation*, 24(1), 101–124.
- Mahoney, J. F. (2010). Interrater agreement on the Nordoff-Robbins evaluation scale I: Client-therapist relationship in musical activity. *Music and Medicine*, 2(1), 23–28.
- Malloch, S. (1999). Mother and infants and communicative musicality. *Musicae Scientiae*, 3(1), Suppl. 29–57.
- Metzner, S. (2016). Psychodynamic music therapy. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 448–471). New York, NY: Oxford University Press.
- Meyer, L. B. (1956). *Emotion and meaning in music*. Chicago: University of Chicago Press.
- Meyer, L. B. (1989). *Style and music: Theory, history, and ideology*. Philadelphia: University of Pennsylvania Press.
- Mills, J., Bonner, A., & Francis, K. (2006). The development of constructivist grounded theory. *International Journal of Qualitative Methods*, 5(1), 25–35.
- Mruck, K., & Mey, G. (2007). Grounded theory and reflexivity. In A. Bryant & K. Charmaz (Eds.), *The Sage handbook of grounded theory* (pp. 515–538). London: SAGE Publications.
- Nordoff, P., & Robbins, C. (1977). *Creative Music Therapy*. New York, NY: John Day.
- O'Callaghan, C. (2016). Grounded theory. In B. L. Wheeler & K. M. Murphy (Eds.), *Music therapy research: (3rd)*. (pp. 2757–2814). Gilsum NH: Barcelona Publishers. E-reader version.
- Rolsvjord, R. (2006). Whose power of music? A discussion on music and power-relations in music therapy. *British Journal of Music Therapy*, 20(1), 5–12.
- Ruud, E. (1998). *Music therapy: Improvisation, communication, and culture*. Gilsum NH: Barcelona Publishers.
- Sabbatella, P. (2004). Assessment and clinical evaluation in music therapy: An overview from literature and clinical practice. *Music Therapy Today*, 5(1). Retrieved from http://www.wfmt.info/Musictherapyworld/modules/mmmagazine/magazine_start.html

- Saldana, J. (2009). *The coding manual for qualitative researchers*. London: SAGE Publications.
- Smetana, M. (2017). Recurring similarity: The meaning of musical objects in music therapy for adolescents with structural disorders. *Nordic Journal of Music Therapy*, 26(2), 105–123.
- Storm, S. (2013). *Research into the development of voice assessment in music therapy* (Doctoral dissertation). Aalborg, Denmark: University of Aalborg
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: SAGE Publications.
- Streeter, E., Davies, M. E., Reiss, J. D., Hunt, A., Caley, R., & Roberts, C. (2012). Computer aided music therapy evaluation: Testing the Music Therapy Logbook prototype 1 system. *The Arts in Psychotherapy*, 39(1), 1–10.
- Trondalen, G., & Wosch, T. (2016). Microanalysis in interpretivist research. In B. L. Wheeler & K. M. Murphy (Eds.), *Music therapy research: (3rd)*. (pp. 3007–3060). Gilsum NH: Barcelona Publishers. E-reader version.
- Wheeler, B. L., & Bruscia, K. E. (2016). Overview of music therapy research. In B. L. Wheeler & K. M. Murphy (Eds.), *Music therapy research: (3rd)*. (pp. 95–139). Gilsum NH: Barcelona Publishers. E-reader version.
- Wigram, T. (1999). Assessment methods in music therapy: A humanistic or natural science framework? *Nordisk Tidsskrift for Musikterapi*, 8(1), 6–24.
- Wigram, T. (2000). A model of diagnostic assessment and analysis of musical data in music therapy. In T. Wigram (Ed.), *Assessment and evaluation in the arts therapies: Art therapy, music therapy and drama therapy* (pp. 77–91). Radlett, Hertfordshire, UK: Harper House.
- Wigram, T. (2012). Developing creative improvisation skills in music therapy: The tools for imaginative music making. In D. Hargreaves, D. Miell, & R. MacDonald (Eds.), *Musical imaginations: Multidisciplinary perspectives on creativity, performance and perception* (pp. 429–450). New York, NY: Oxford University Press.

Appendix 1. The questionnaire used in Phase 2.

- (1) What are possible factors that contribute to a client's musical expression?
 - (a) Client's personal qualities: musical skills, musical preferences
 - (b) Diagnosis-related qualities
- (2) In your experience, how do specific disorders affect a client's musical expression?
 - (a) Depression – restricted expressivity
 - (b) Developmental disorders – lack of changes
- (3) What are the possible ways a therapist contributes to music created together with a client?
 - (a) Therapist's personal qualities: personality, current mood, thoughts about the client and perhaps chemistries, unconscious factors (can be positive and negative)
 - (b) Professional qualities: planned interventions, training, clinical experience, a specific improvisational technique/model, client's diagnosis, knowledge of a client's diagnosis
- (4) Which musical abilities do you consider meaningful in musical assessment?
 - (a) Ability to improvise
 - (b) Musical interaction
 - (c) Emotional expression
- (5) Which musical parameters do you consider the most important when analysing music?
 - (a) Music theory related features (e.g., melody, harmony, rhythm)
 - (b) Basic features (e.g., pulse, dynamics, timbre)
- (6) Do you relate musical expression to emotional or psychological aspects? If yes, could you identify those relations?
 - (a) High pitch might indicate joy or anxiety
 - (b) Basic rhythm might indicate need for support
- (7) Do you use any tools or specific methods when analysing music?
 - (a) What is your opinion on IAPs?
 - (b) What is your opinion on graphical or staff notation systems?
 - (c) What is your opinion on computational tools?
- (8) What are the main issues in making an assessment based on musical material?
 - (a) It is not important in clinical work

- (b) Lack of time
 - (c) Lack of appropriate tools
 - (d) Lack of guidelines on how to relate results to clinical issues
- (9) Why are there no standardised protocols for musical assessment?
- (a) Clinical methods related issues
 - (b) Clinical population related issues
 - (c) Requirements of institutions
- (10) What are possible strategies that would improve the implementation of musical analysis into clinical practice?
- (a) Education-related (teaching methods in clinical training)
 - (b) Research-related (develop better tools)
- (11) Is there something important about the assessment of musical material that we have not discussed yet?