

ARTICLE

Building relationships in music therapy: A case study with a boy with Down syndrome based on transcendental phenomenological analysis

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ABSTRACT

This practice-based article came from experience that occurred during a sixth-semester internship at a primary school in Denmark with special classes for children with learning disabilities. The client of this case is a nine-year-old boy with Down syndrome. This qualitative case study investigates the impact of relationships in music therapy and how they can influence the development of the therapy. The study explores how the relationship between a music therapist and a client with Down syndrome affects the therapeutic outcome and the client's development and participation in music therapy. This study came from a qualitative case study with material derived from the four music therapy sessions using sequences of video recordings. Based on a phenomenological approach, the material had been analysed through microanalysis using thematic coding, horizontal analysis, and qualitative analysis. The results indicate that relationships are the key to development in music therapy. The client shows more initiative and becomes more independent throughout the sessions. Finally, this study indicates that the client's communicative skills and the development of the music therapy sessions show improvement as the relationship between the music therapist and the client improves.

KEYWORDS

music therapy,
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approach

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INTRODUCTION

Music therapy is a form of treatment that uses music to promote communicative skills and social interactions and enhance relational experiences through the client's expressions (Mössler et al., 2017). The music therapist Carpenle (2009) has suggested that relationships and attachment are essential for a child's development. It is thus assumed that good relationships create good outcomes. Mössler et al. (2017) reported that psychotherapeutic studies show that the development of the therapeutic relationship can predict or act as an indicator of therapeutic change. They conducted a study with children with autism spectrum disorders (ASD). They investigated whether the therapeutic relationship in a music therapy process could indicate whether there would be general changes in the participants' social skills. The study found that the music therapy relationship was a significant predictor of the child's development of social skills as well as of their communication skills (Mössler et al., 2017).

Down syndrome (DS) is a condition in which a person has a third chromosome (Centers for Disease Control and Prevention [CDC], 2021). Babies with DS have an extra copy of one of these chromosomes, chromosome 21. People with DS present some specific characteristics that vary among different people with this condition. Some of the characteristics are: a flat face with a small nose with a low nasal bridge, almond-shaped eyes, small ears, a tongue that tends to stick out of the mouth, small feet and hands, shorter than average height, muscle laxity, and hypermobile joints (CDC, 2021). As a result of having DS, it is also common to have one or more health problems such as hearing loss, sleep apnea, ear infections, or eye diseases.

In addition to the physical characteristics, Boston Children's Hospital (n.d.) explains that this client group typically also has a low intelligence level (IQ), which means that learning may be slightly more difficult, and the children will reach developmental milestones such as walking or talking later than other neurotypical children. They may be challenged in attention, language, and communication. Behaviourally, individuals with DS appear stubborn and impulsive and can easily throw tantrums. Despite these challenges, many children in this client group have good social skills and use non-verbal communication to connect with others from the time they are newborns. In addition, they are also good visual learners and understand best when they can see something, for example, through concrete pictures or demonstrations (Boston Children's Hospital, n.d.).

There is a lack of publications regarding music therapy for DS, but at least two populations can be highlighted in this area. O'Donoghue (2017) studied music therapy on parent-child interaction, specifically focusing on children with a diagnosis of DS. This case study involves two in-depth cases of children diagnosed with DS and their primary caregivers. Scarpeta (2012) investigated the effect of music therapy on the control of dental anxiety in children with DS. When comparing the anxiety level and the behaviour of the groups during dental consultation, the following was observed: 80% of the children without anxiety were in the group exposed to music therapy versus 27% in the control group.

During the internship experiences and based on the client's development, it was interesting to observe how the relationship between the client and the music therapist affected the child's engagement in music therapy. This background leads to the following question: based on a

transcendental phenomenological design (with a narrative and qualitative analysis) of an explorative, intrinsic case study with a nine-year-old boy with DS, what is the significance of relationship formation in music therapy and how does it influence the client's development and participation?

DEFINITION OF TERM AND LITERATURE REVIEW

Phenomenology

Phenomenological inquiry seeks to discover and describe the structure and meaning of a phenomenon that makes it intrinsically what it is (Jackson, 2016). This project consists of a phenomenological study based on the German philosopher Husserl's (2014) philosophical direction called transcendental phenomenology, as it attempts to create a representation of a phenomenon through analysis and further descriptions thereof (Jackson, 2016).

Phenomena (variables)

Joint attention

Joint attention is a term used especially in the context of infants but also in many studies of children with various developmental disorders, such as ASD. Kim (2006), a music therapy researcher, writes in her study that joint attention in infant developmental psychology is also called joint visual attention, which is to look at the same point as someone else. From birth until six months, an infant interacts with its mother through direct eye contact, also referred to as joint visual awareness. When a typically developing child is between six months and two years of age, they will begin to look around more and use joint attention more by shifting their focus from toys to the mother and then back to toys. Typically, joint attention occurs when the child is playing with something and wants to show it to their mother, when the child points to something, or when the child has accomplished or achieved something (Kim, 2006).

Bakeman and Adamson (1984) distinguish between two forms of joint attention between a partner and an object:

1. **Passive joint involvement:** when the partner carries out an activity with an object, the child's attention is often drawn to that activity but not to the partner. For example, when the mother rattles a toy, the infant's attention is only on the toy, and it will try to reach for it even though the mother's action captures the infant's attention.
2. **Coordinated joint attention:** the infant actively coordinates engagement between the partner and the object. For example, in addition to reaching for the rattling toy, the infant will also pay attention to the mother by smiling or pointing at the toy when she moves the toy.

In summary, joint attention is thus defined as two people having a shared focus on an object to interact with each other (Kim, 2006).

Initiative

According to The Danish Dictionary (Den Danske Ordbog, n.d.), joint attention is an action that sets a series of events or activities stemming from a specific (innovative) idea or objective in motion. In short, it means to initiate something.

Joint attention can be divided into two categories: responding to joint attention (RJA) and initiating joint attention (IJA) (Mundy & Newell, 2007). RJA refers to the child's ability to respond to the gaze direction or gestures of others used to draw attention to a shared point or object. IJA refers to the child's use of eye contact and gestures, e.g., pointing, to draw the attention of others to a particular point, object, or themselves and often occurs spontaneously.

Continuing the conversation

To participate in social communication, it is essential to develop the ability to take turns. Beginning during the child's infancy, this skill is trained by parents' responding to the child's expressions by, for example, smiling back or talking to the child when they make sounds (CDC, 2022). In addition, it is trained through conversations, play, and games throughout the years when the child is growing up.

Holck (2004) explains that in a well-functioning conversation, non-verbal, visual, and auditory cues (giving signs) are used, which make the conversation flow back and forth without interruptions or speaking all at once. This is crucial in an interaction between two or more people. Through analysing these turn-taking cues, information can be obtained about a person's social skills, regardless of whether the dialogue is verbal or nonverbal (Holck, 2004).

Shared moments

One of the concepts that guides the understanding of the variables studied in the case that will be presented is the understanding of "shared moments." According to Mössler et al. (2019; 2020), the crucial and distinct aspects of music therapy involve musical and emotional attunement and synchronisation, which are fundamental for fostering the structuring and management of relational encounters rooted in the physical realm, akin to the establishment of a connection between a baby and its caregiver during its early formative years. Engaging in music offers a means to explore diverse corporeal aspects of relational existence, potentially aiding in fostering emotional synchronization between the child and the therapist.

Music therapy DIRFloortime

One of the central approaches used to guide the case described below is the Developmental, Individual-differences, Relationship-based model also known as the DIRFloortime music therapy model. Carpente (2009) developed this proposal from his clinical experience as a music therapist trained in the DIRFloortime ASD intervention model and the Creative Music Therapy model (also known as the Nordoff-Robbins model).

Among the main characteristics of this model is the focus on the stages of development, the understanding of the individual as someone unique and the relationships established with the patient (where the patient takes the lead in the interactions) (Carpente, 2009). In addition, the model is based on including the family in the care context (not precisely in every session). In this way, family members

can continue the work carried out in the music therapy setting at home (especially concerning playful ways of creating musical experiences). Another primary feature of the model is music based on affection. The music therapist needs to demonstrate forms of affect, from how they use their voice to how they play with the patient. A third major characteristic of the model is the use of musical improvisation. Although Carpenste considers the influence of different models of improvisation on his approach, Nordoff-Robbins music therapy is the "flagship" for explaining the theoretical and practical forms of intervention. However, it is essential to note that there are fundamental differences between the Nordoff-Robbins model and DIRFloortime. The first difference is that the Nordoff-Robbins model focuses much more on music. Although the DIRFloortime model is music-centred, the relationship is equally important. In the Nordoff-Robbins model, music determines a large part of the interventions, much more than the relationships built. The other significant difference is the greater focus on the patient's leadership of the interactions. Even though the Nordoff-Robbins model focuses on the patient's leadership, the therapist has a stance of proposing musical ideas more strongly compared to DIRFloortime.

METHOD

Case study

A case study is based on a specific case that is found interesting. This can be a particular situation, a group, an organisation, an individual, an object, and more (Robson & McCartan, 2016). One examines a phenomenon and its context to understand it (Robson & McCartan, 2016) based on transcendental phenomenological design. The case design of the current project is called 'intrinsic,' as it is based on creating understanding in a specific case (Stake, 1995). The case study aims to explain what is happening and why, which makes this an exploratory case study with an intrinsic design (Murphy, 2016).

Transcendental phenomenological design

The transcendental phenomenological inquiry focuses on understanding a phenomenon by means of analysing its essential structure and thoroughly describing it (Jackson, 2016). This design phenomenological inquiry is also sometimes referred to as constructive phenomenology because the final descriptive synthesis is a conscious construction of a new understanding of the phenomenon that has been reached through a transcendence of the natural attitude. For this case, specific phenomena and processes are described considering how the client develops different forms of relationships in the music therapy process and how these relationships might impact the client during the music therapy process. In this sense, the focus is on the client's experiences and the relationship with the music therapist. Regarding the quantitative presentation of data, the quantitative information wasn't analysed, but they were used to organise it before conducting a qualitative approach to the data.

Description of the case

Theo is a nine-year-old boy with DS. He has some important learning difficulties and limited language. However, the client can clearly express what he wants/does not want through the words "yes" and "no" and expresses himself with clear body language and sounds. He mirrors everyone around him both emotionally and in movement. For this reason, he is challenged when engaging in social interactions. He has difficulty understanding the social rules. This often causes him to be overstimulated, resulting in him reacting violently towards the other children.

In class he is influenced by the moods of the other children. If another child is angry and reluctant and does not want to participate in the lesson, he mirrors this and becomes unwilling. He is also challenged in his fine motor skills and is sensitive to sensory stimuli – especially concerning the tactile sensory system. Because of his sensorial difficulties, he can find two pieces of a puzzle and place them correctly next to each other but cannot put them together himself. He loves music. He sings along and makes gestures when songs with gestures are sung. The first author of this article is the therapist of the case.

The project investigates the impact of the relationship between the music therapist and the client on the client's development. By relationship, the authors mean initiative, turn-taking, and joint attention related to connections as described above. Selected sequences from four different sessions are used. The four video sequences consist of the same activity with a balloon. This activity was first introduced to the client in session two and was used each time in the remaining six sessions of the music therapy process. Except for the video sequence from session 3, the activity begins with the song "Jeg er en lille blå ballon" [I am a little blue balloon] which is described in the selection of data later in this article. The song is seen as the longest mark in the video sequences in the following transcripts. Session 3 begins with turn-taking, where the music therapist and the client take turns pulling the uninflated balloon and saying words and sounds such as "yes, yes" and "no" before singing, and the activity begins.

Earlier, the category system was described that forms the basis for the choice of video sequences. This development takes place over the four sessions and consists of the following actions in each session:

Session 2: The client does not want to pick up the balloon but points to it, takes the music therapist by the hand and has the music therapist pick it up. Furthermore, he touches the balloon briefly afterwards but quickly drops it again as he does not like how it feels to touch the balloon.

Session 3: The music therapist cues the client to pick up the balloon by pretending she cannot reach it.

Session 4: The client picks up the balloon himself. The music therapist cues him by looking at him, then at the balloon, and then at him again.

Session 5: The client picks up the balloon himself when the song is finished and without the music therapist doing anything to make him pick it up.

Analysis methods and design

Ethnographic descriptive approach to video microanalysis

The ethnographic approach, together with video microanalysis, is a good tool for investigating and contextualising interactions and small communication expressions, especially with clients who are communicatively limited (Holck, 2007). This analytical tool is particularly well suited to describe what is happening between the client and the music therapist and can help to make therapists and students aware of which interactions are taking place partially or completely outside the music therapist's awareness (Holck, 2007). Holck's method follows four basic steps:

1. Data selection,
2. Transcription,
3. Pattern generalisation – horizontal and vertical analysis,
4. Interpretation.

Plahl's video microanalysis

Plahl (2007) has developed a microanalysis model for analysing aspects of preverbal communication, such as joint attention, emotional signalling, and behavioural regulation in children with different developmental disorders. Through video microanalysis of music therapist's and client's communicative performance, it is possible to describe and analyse what works in music therapy and understand why it works or does not (Plahl, 2009). In Plahl's (2009) video microanalysis, there are five essential steps:

1. Constructing a category system
2. Defining and selecting the sample of sequences (time sampling, event sampling)
3. Choosing the program of analysis and the technique of coding
4. Training application of category system and assessing reliability (inter-, interrater)
5. Analysing different parameters on a micro level (frames, seconds, minutes)

(Plahl, 2007, p. 43).

ELAN

The computer software ELAN version 6.3 (2022) is a tool that can be used to record and transcribe both audio and video recordings. It allows you to add notes and comments in words, phrases, descriptions, or translations for various parts or sequences of the exact recording (ELAN, 2022). ELAN also creates different layers or levels that provide an overview of the coding and the other focus points (ELAN, 2022).

Analysis design

The analysis of the four video sequences was inspired by Holck's (2007) and Plahl's (2007) methods of analysis, and they were carried out by the music therapist of the case (first author). The idea of having the therapist in charge of the video analysis was to be more pragmatic and closer to the real

life of the music therapy practice. Inspired by these analysis models, the study of this project was based on the following points:

Category system (focus points)

First, a system of categories is developed in terms of definitions of behaviours (phenomena/variables) and their meaning (Plahl, 2007). The focus points of the analysis for the observation of the video sequences are defined as follows:

- The client responds to the music therapist's initiative: the focus of attention, the client responding to the music therapist's initiative, is when the client mirrors the music therapist and/or acts on the music therapist's ideas through verbal, non-verbal, auditory, and visual cues.
- Client's initiative: the client's initiative is when the client spontaneously tries to create or initiate something.
- Joint attention: it is when the client and the music therapist have a shared focus on an object or a point, e.g., a balloon.
- Turn-taking: it is taking turns interacting through verbal, non-verbal, auditory, or visual cues.

Selection of data

This point is inspired by both Holck's (2007) first step of her video microanalysis model and by Plahl's (2007) second step of her analysis model. It is based on a specific musical activity which is introduced in session 2 and repeated in all the following sessions including the eighth and final session. The activity begins with the song "Jeg er en lille blå ballon" [I am a little blue balloon]. The song begins by singing about the balloon and its colour, which can vary from session to session. It continues by singing that there is no air in the balloon and that if you want air in it, you must blow it up yourself. Towards the end, "blow" is sung three times. After each sung "blow" the music therapist blows a little air into the balloon, and after the three blows the balloon is completely inflated. Then the music therapist holds out the balloon and sings "until it bursts with a..." whereafter the client is encouraged to hit the balloon. As the client hits the balloon, the phrase is completed by singing "bang!" and the music therapist releases the (untied) balloon so it flies across the room. Hereafter the client must try to find the flat balloon and afterwards it is to be picked up as part of the activity. Of these eight sessions, seven are recorded on video, giving video material of a total of 4 h., 16 min. and 53 sec. A sequence has been selected from sessions 2, 3, 4, and 5, with each sequence lasting between 46 sec. and 1 min. and 2 sec. depending on the duration of the activity in that session. These four sessions/time sequences have been chosen because the target behaviours started from the activity introduced in session 2 and occurred over the subsequent three sessions. It means that the same activity is assessed in all the selected sessions and the time duration will depend on the duration of the target activity. Therefore, analysing this development at a micro-analytical level is relevant for investigating what is happening.

Transcription

Plahl's (2007) third step of the analysis model deals with the coding technique for the analysis. In this project, the coding technique that was developed was inspired by Holck's (2007) second step of the analysis model. The use of ELAN was also included. In this study, a narrative notation is used in which the music therapist describes the observations in her own words.

Analysis of the data

The project is inspired by Plahl's (2007) method of analysis, especially concerning the presentation of the analysis. Based on a horizontal (Holck, 2007) and a quantitative organisation, the data is presented based on transcriptions performed in ELAN. Here, what happens in the video sequences is narrated and patterns are searched for. Finally, the findings of the analysis are interpreted through a discussion of the results.

First, a narrative notation was made through a horizontal transcription of the four video sequences. The horizontal transcription was performed using the computer software ELAN (2022) (see section above). The y-axis shows the different codes and selected focus points for the music therapist and the client, respectively. The focus points presented on the y-axis are client responding to music therapist's initiative, client's initiative, joint attention, and turn-taking, divided into two to mark when the music therapist takes a turn and when the client takes a turn. To see when the client responds to the music therapist's initiative, the music therapist's initiative is also marked in the analysis. In addition, the verbal communication and sounds of the music therapist and the client are noted to provide an overview of what is being said between the music therapist and the client and to get an idea of how it influences the other focus points.

The x-axis shows the temporal evolution of the session over time. The markings for the music therapist are shown as red boxes, the client markings as green boxes, and the markings for both are shown as purple boxes.

Ethics

Based on the General Data Protection Regulation (GDPR) rules and in order to protect personal data, the place of internship and the client are anonymised in this article and its case. Before the music therapy session, consent was obtained from the client's guardian as the client is not of legal age. In this consent, the client's guardian has permitted the video recordings of the music therapy sessions and further use of the video material in the current project. The case that gave rise to the analysis presented here is derived from a clinical process carried out during the internship of the first author. This case was used in her bachelor's thesis, which was transformed into this article. For this reason, the authors only obtained the informed consent of those responsible for using the data presented here.

RESULTS

This section describes the different results according to the different sessions. The results also include some figures that help in the description of the different findings.

Session 2

Session 2 lasts 33 min. and 38 sec. Of these, a video sequence from 23:20-24:12 in the session has been selected lasting 52 sec. Below is the horizontal transcription of these 52 secs. (Figure 1).

The client responds to the music therapist's initiative: first, the video sequence begins with an extended response from the client to the music therapist's initiative, with the music therapist singing the song, 'I'm a little blue balloon,' and the client singing along shortly after. After this, the transcription shows that the client reacts to most of the initiatives music therapist takes, with reactions of different lengths. The client does not respond to six of the music therapist's initiatives.

Client's initiative: the figure shows that the client takes the initiative twice. In the figure, these initiatives are seen as a substitute for a reaction by the client to the music therapist's initiative.

Joint attention: in the middle of the video sequence, joint attention occurs between the music therapist and the client. It is observed that the first time this joint attention occurs, it is relatively short. By the end of the session, the joint attention lasts longer.

Turn-taking: after the song is finished, some turn-taking between the music therapist and the client occurs. It is seen that the music therapist initiates the turn-taking twice and ends them both times.

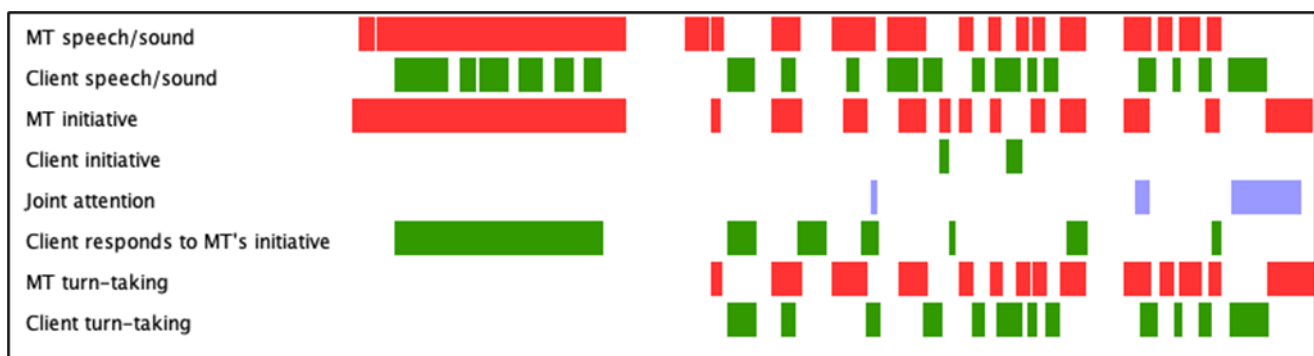


Figure 1: Horizontal transcription of session 2

Session 3

Session 3 has a duration of 35 min. and 38 sec. The video sequence has the time code 13:21-14:18 in the session and lasts 57 sec. Below is the horizontal transcription (Figure 2).

The client responds to the music therapist's initiative: in this sequence, it is seen that the client responds to all of the music therapist's initiatives. The response is staggered by the music therapist's initiatives, and there is an extended response in the middle of the sequence where the song is sung.

Client's initiative: the transcription shows that the client takes the initiative himself twice while responding to an initiative from the music therapist. However, it should be added that in Figure 2, the client takes the initiative two times when the music therapist does not develop a new initiative.

Joint attention: There is joint attention from the beginning of this sequence. It is only interrupted a few times but is otherwise present for most of the session. However, the length of joint attention becomes shorter towards the end of the sequence.

Turn-taking: in this sequence, there is also a lot of turn-taking. The first turn-taking interaction is initiated by the music therapist but completed by the client. The second turn-taking interaction is both

created and conducted by the music therapist. In this interaction, there are also two times where the client does not take turns; therefore, the music therapist takes turns twice in a row before the client takes his place in the turn-taking pattern again.

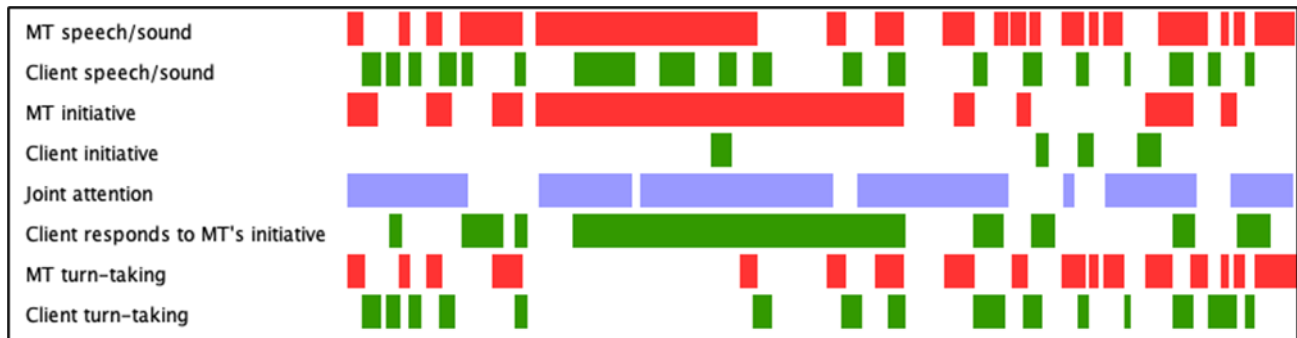


Figure 2: Horizontal transcription of session 3

Session 4

Session 4 is 40 min. and 56 sec. long. The video sequence is from the middle of the session from time code 22:47-23:49. The sequence has a duration of 1 min. and 2 sec., and the horizontal transcription is shown below (Figure 3).

The client responds to the music therapist's initiative: In this sequence, the client responds to all of the music therapist's initiatives. However, the music therapist does not take the initiative as often in this sequence, and in addition to the long initiative with the song, there are only three more initiatives to which the client can respond.

Client's initiative: the client briefly shows initiative during the song and a more extended initiative at the end of the sequence.

Joint attention: toward the end of the song, joint attention is created and continues for a while after the song has ended. Brief joint attention occurs a few times toward the end of the sequence.

Turn-taking: in this sequence, there is turn-taking, but less frequently than in the previous two sequences. The communication is initiated and completed by the music therapist.

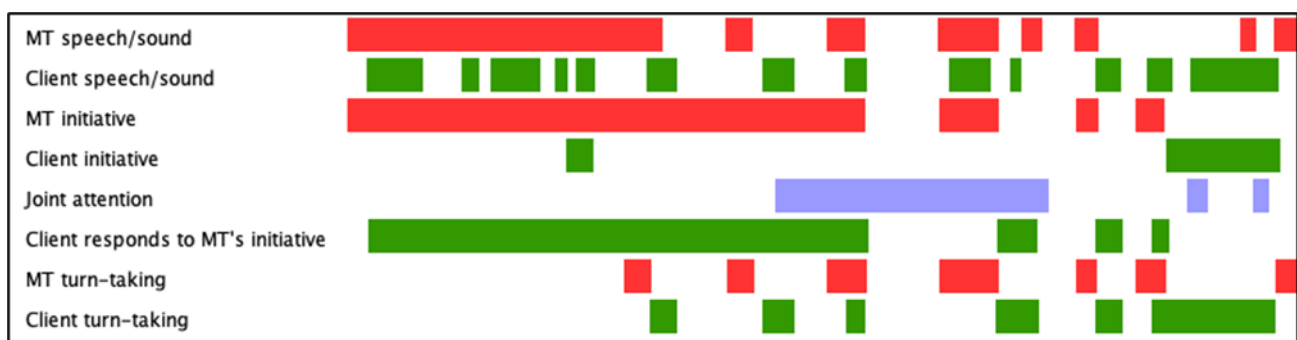


Figure 3: Horizontal transcription of session 4

Session 5

Session 5 has a duration of 35 min. and 2 sec. The video sequence is selected shortly after the beginning of the session from 8:41-9:27. The sequence has a length of 46 sec., and its horizontal transcription is shown below (Figure 4).

The client responds to the music therapist's initiative: the client responds to all but one of the music therapist's initiatives. There is one extended response, three short ones, and one long response.

Client's initiative: the client shows initiative during the song. Then there is a pause, after which the client shows initiative three times in a row. First, one that lasts for a while, followed by two short ones.

Joint attention: here, joint attention only occurs towards the middle of the sequence. Then the joint attention increases in length, and joint attention occurs twice. At the end of the transcription, it is seen that the joint attention becomes twice as long as the previous one.

Turn-taking: the first turn-taking interaction is initiated and completed by the music therapist. The client responds or does not respond to two of the music therapist's attempts to pass the turn. However, the client initiates the second turn-taking interaction and completes it.



Figure 4: Horizontal transcription of session 5

Quantitative organisation

The data from the horizontal transcription are inserted in a table to provide an overview of the frequency of the different focus points in the four video sequences. On the left of Table 1 are the focus points and on the right are the number of times each focus point occurs in the video sequence from that session.

Client responds to the music therapist's initiative: in session 2, the music therapist initiates thirteen times of which the client responds to seven of them. There are thus six initiatives that do not trigger a reaction from the client. In sessions 3 and 4, the client responds to all the music therapist's eight and four initiatives respectively, whereas in session 5 the client reacts to five out of six of the music therapist's initiatives.

Client's initiative: from session 2 to session 3, the client's initiative increases twofold from two initiatives to four. This pattern holds from session 4 to session 5 where it also goes from two to four times.

Joint attention: in sessions 2, 4, and 5 there is joint attention three times, while in session 3 there is joint attention seven times.

Turn-taking: In sessions 2, 3, and 5 the music therapist has the turn twice as much as the client, while in session 4 it is only once. When comparing the tables, there is an association between the music therapist's turn-taking and the client's turn-taking. It seems that the more turn-taking the music therapist presents, the more turn-taking the client demonstrates.

Focus points	Frequency of focus points per session			
	Session 2	Session 3	Session 4	Session 5
Music therapist's initiative	13	8	4	6
Client responds to music therapist's initiative	7	8	4	5
Client's initiative	2	4	2	4
Joint attention	3	7	3	3
Turn-taking	14	17	7	7
Client turn-taking	12	15	6	5

Table 1: Frequency of the focus points in session 2, 3, 4 and 5

Summary of the results of the analysis

The four focus points for the analysis were:

- Client responds to the music therapist's initiative
- Client's initiative
- Joint attention
- Turn-taking

Looking at sessions 2 and 3, it is noticed that the music therapist initiates many things in the activity and is very keen to get the client to participate. This is seen in the number of times the music therapist takes the initiative and in the number of times turn-taking occurs. In sessions 2 and 3, it is also the music therapist who initiates the turn-taking every time. This can be interpreted as the client mirroring or copying the music therapist's expression and therefore just following along during the session. This is, hence, a reaction to the music therapist's initiatives.

In sessions 4 and 5, the music therapist takes less initiative and the number of episodes decreases when compared to the first two sessions. Even though the frequency of the client taking the initiative is similar when looking at sessions 2 and 3, the length of the client's initiative increases significantly. The length of the initiatives in sessions 4 and 5 increase to double, if not triple, when compared to the first two sessions. Common to sessions 3, 4, and 5 is that the client shows initiative

when the music therapist pauses. This indicates that the more the music therapist gives space to the client, the more prolonged the client's bouts of initiative become.

In three of the four video sequences, joint attention occurs three times. In session 3, however, there is an important difference as joint attention occurs seven times and almost extends over the entire activity. In sessions 3 and 4, there is a lot of joint attention compared to sessions 2 and 5, where the length of joint attention is the same. Overall, joint attention occurs when the object (balloon) is in motion and needs to be picked up.

Finally, a correlation between the music therapist's and the client's initiatives is observed. When the music therapist takes a lot of initiative and engages in frequent turn-taking, the client responds to this most of the time, showing only minimal initiative. But when the music therapist takes less initiative, initiates less turn-taking, and gives more space, the client takes more initiative. The joint attention also occurs towards the end of the activity when the balloon flies around and must be picked up before the activity can start again.

DISCUSSION

Discussion of results

The analysis results show that the music therapist takes a lot of initiative and initiates the turn-taking in sessions 2 and 3. This seems to cause the client to react to these initiatives and take less initiative himself. This may reflect that it is early in the music therapy process and that the activity is new. Therefore, there are still a lot of new impressions for the client to relate to, and as the client is challenged with DS, this client group is also characterised by learning difficulties. From the case description above, it is understood that the client needs predictability and a good, safe environment. Being with a new person in a completely new environment, the client is pulled out of the safe and usual environment. In the first sessions, the client is burdened with all the new impressions he must process. This might cause him to take less initiative because his focus is on so many other things in addition to the activity presented. One can imagine that this could be why the client responds to most of the music therapist's initiatives, because it is a play rule he knows from his everyday life where he mirrors others and because it is more accessible or tangible for him. This fits well with LaGasse's (2017) explanation that music can be used to train social skills. Here it is seen that the client's social behaviour is trained through imitation of the music therapist's initiatives and that he responds to what his interaction partner produces.

Another point of view is that the relationship between the music therapist and the client is strengthened during the sessions. In the first sessions, the client must learn who the music therapist is, what the music therapist does, how the interaction with the music therapist is, how the music therapist reacts, and what the boundaries are when the client is with the music therapist. These are just some of the many things involved in forming a new relationship, and one can imagine that it can easily become overwhelming on top of the many other new experiences. The goal of DIRFloortime is to "understand the challenges of each unique child and facilitate their development through a tailored process to reach their full potential" (Carpente, 2009, p. 7). The music therapist is active in the first sessions because the new activity needs to be introduced. By repeating the activity over and over

during each session, the music therapist creates predictability for the client regarding what will happen and what the music therapist does. As with DIRFloortime, she tailors the activity to the client, allowing the activity to be repeated and meeting the client at his level while allowing the client to develop. This is also seen through the activities where there is a development from the client not wanting to pick up the balloon and touch it to him voluntarily picking it up. This development occurs against the background of the music therapist using techniques in music therapy such as cueing, gaze, repetitions, and pauses to meet the client where he is and, at the same time, challenge him to promote his development. As the client experiences predictability and recognisability in the activity and the music therapist's actions concerning the activity, it can provide more space for the client to dare to explore and detach more from the music therapist.

The third perspective suggests the emergence of a relationship is characterised by the establishment of boundaries and limits, as well as the establishment of familiarity and predictability. Rather than using energy and focusing on the environment, the client can have the energy to focus on what is happening in the moment. Similar to many children who require time to feel comfortable in new surroundings, the same applies to the client. Looking at the analysis results of the client's own initiative-taking, it appears that the client feels more liberated to respond to his own impulses. A solid foundation and safe environment have been established, allowing space for exactly what he brings forth to be acknowledged and accepted as it is.

The results of joint attention, which were broadly similar, coincide with the theory that children with DS may be challenged with their attention abilities. However, it should be noted that there was only one camera to film the music therapy interaction. Therefore, there may have been several moments of joint attention that were not apparent because the camera angle needed to allow both the music therapist's and client's faces to be seen.

Discussion of results in relation to new theory

This section discusses the results of the analysis in the light of different theories. Dorothea Pienaar works as a music therapist in New Zealand and has published an article on music therapy for children with DS (Pienaar, 2012). Her article was based on a questionnaire given to persons who care for or work with persons with DS. She explains how infants communicate through song and music by imitating, hitting notes, singing along, and creating a melodic duet with the person they are interacting with (Pienaar, 2012). She further explains that children with DS have good nonverbal skills from infancy but that this ability develops slowly (Pienaar, 2012). Pienaar explains:

They have more interest in people and do not respond in a typical way to interactions which involve a person and an object. This lack of referential eye-contact (moving the eyes from person to object and back again) leads to reduced opportunity for a caregiver to name an object and talk about it. (Pienaar, 2012, p. 38)

Pienaar's (2012) point of view about the challenge of creating joint attention between the child with DS, another person, and an object may explain why the analysis indicates that there is not a

significant amount of joint attention occurring in the video sequences. Pienaar (2012) describes that it can be challenging for a caregiver to focus on an object and talk about it, as the child has an impaired ability to shift gaze from a person to the object and back to a person again. Thus, there may be an impaired capacity of what Bakeman & Adamson (1984) call coordinated joint attention, where the child only sees the object that the other person is moving but does not see the person behind the movement. Bakeman & Adamson (1984) distinguish between passive joint engagement and coordinated joint attention, but the question is whether one can distinguish these two forms of joint attention. These two forms of joint attention cannot be distinguished based on the analysis results. Although the client does not seem to participate in joint attention during the actual singing in the activity, joint attention occurs when the object (balloon) moves around the room. However, the client stays connected with the music therapist and shifts his attention to the music therapist when the balloon has fallen to the ground. Therefore, this joint attention occurs only briefly. Rather than running after the object and picking it up immediately, the client stays in the relationship with the music therapist. They stand laughing together for several seconds before the object is picked up.

Some common characteristics exist between an infant's communication skills and a child with DS, such as imitation. This seems evident and frequent in the analysis of the first two video sequences, which could be an expression of the early communication patterns, as children with DS cognitively typically correspond to half their age.

Pienaar (2012) explains that one of the strengths of music therapy for children with DS is that it can support those linguistically challenged children because music therapy can help the child's expression through music, dance, and song. She further believes that "music is used as a communication tool in music therapy sessions, and relationships are pivotal in these sessions" (Pienaar, 2012, p. 38). So, does this mean that success in music therapy sessions cannot be achieved if relationships are poor? According to Carpente (2009), relationships are essential for a child's development, and the more the child trusts and feels at ease with the music therapist, the more likely he is to engage in the music therapy process and make progress. Pienaar (2012) believes that while relationships are essential for the child to use music as a means of communication, sessions can still be successful even if the relationship is not yet fully developed or is just beginning. The session can be successful on many levels and with different focus points. However, based on Carpente's (2009) and Pienaar's (2012) views on the importance of relationships in the development of music therapy, it can be argued that the higher the quality of the session, the better the relationship between the music therapist and the client is. This could be related to the clients' feeling more comfortable in the sessions and, on that basis, showing more initiative.

Kim (2006) conducted a study of ASD children in which she defines "initiation of engagement" as when the child spontaneously requests or initiates an interaction with the music therapist. This definition is like the project's focal point, "client's initiative." However, Kim (2006) believes that initiation of engagement has a further dimension which she adds to her definition, referring to when the child changes the way it plays with the music therapist with the anticipation that the music therapist will follow the child, or when the child initiates a shift in the interaction. Kim's (2006) definition clarifies what initiative itself entails, while simultaneously providing a more precise framework for defining what constitutes the child's initiative. This makes it easier for the reader to understand the concept and identify more precisely when the child takes the initiative.

On the other hand, it can be difficult to distinguish whether the child initiates by creating a change in play or is unable to imitate or respond in the same way as the music therapist, resulting in the child displaying behaviour that can be mistaken for initiating change. In that case, it would be more tangible to provide examples of gestures, such as pointing, which clearly indicate the initiation of an action, to avoid confusion about whether it is defined as initiative or not. However, the initiative has many aspects and ways it can be shown because people are different. It can therefore take time to produce a precise definition.

Kim (2006) also adds that initiation of engagement is a rare behaviour in children with ASD. As some cases of DS might have some behavioural similarities with the ASD, this may be a relevant factor to relate to the findings of the analyses of the client's initiation, which occurred only a few times during the video sequences.

Comparison of results

Kim (2006) found that improvisational music therapy effectively promotes joint attention in children. As our proposal was not focused on improvisational music therapy, an exact comparison with Kim's findings is not possible. However, both proposals (our proposal and Kim's publications) found out that it is possible to achieve forms of joint attention focusing on the interaction with the client. Kim (2006) also found that more prolonged eye contact, joy, emotional synchronicity, and initiation of engagement occurred in improvisational music therapy. This is partially different from the findings of this project. No development in eye contact, joy, and emotional synchronicity was found because these focus points were not included in this project. However, this project has in common with Kim's (2006) study that development in taking the initiative was found and that the length of the initiatives became longer throughout the sessions.

Plahl (2007) examines preverbal communication in a case of a five-year-old boy with ASD and developmental disabilities. The boy is developmentally equivalent to a 20-month-old child. She uses the category system KAMUTHE (KAtagoriensystem MUsikTHErapie), which she developed (Plahl, 2007). In her study, she categorises three types of behaviour in music therapy: musical, verbal, and non-verbal (Plahl, 2007). She focuses on the child's gaze, play/musical activity, vocalisation, and gesture. In addition, she has used these categories with both the music therapist and the child adding subcategories such as looking at an object, playing with an object, and laughing (Plahl, 2017). Some of these subcategories differ from the focus points of our project, such as the focus on speech and singing and an overall focus on the music therapist's behaviour (Plahl, 2017). However, these studies have in common that the subcategory of the child looking at an object may be similar to this project's focus point on joint attention if the music therapist is also looking at the thing simultaneously.

In terms of computer software, Paulsen (2021) uses a program called INTERACT® in her bachelor's thesis to micro-analyse her data. This program is somewhat like ELAN and is used to analyse behaviour in video recordings, but it has some different features than ELAN. In INTERACT®, the other focus points of the microanalysis are coded, which gives an overview of what is happening in the session. Paulsen (2021) has also complemented this microanalysis with a transcription of the conversation between the music therapist and the client in the video sequences. This is different from

this project's analysis, as no conversation transcription was done because the client has limited speech.

Finally, a comparison is made with Popescu's (2021) master's thesis, in which she examines the behaviour and patterns of a seven-year-old boy with ASD who receives improvisational music therapy. The results show that the boy's behaviour and patterns are changed, and even new ones emerge through the musical stimuli. A trustful relationship is built through music, where the client can explore and engage in musical activities (Popescu, 2021). These findings might address the client's development and a trustful relationship between the music therapist and the client, and this is precisely what this project investigates. Even though Popescu's study is based on a case of a child with ASD, the common denominator for the projects is that a study of a child with neurodevelopmental disorders is proposed where a change in the child's behaviour is seen in the analysis.

Discussion of the study methodology

The analysis method for the project has been developed continuously throughout the analysis process. Holck's (2007) analysis method and Plahl's (2007) analysis method has therefore served as inspiration and an example of how the analysis could be carried out in the best way possible and end up with the best possible results. Holck's (2007) four points of analysis (data selection, transcription, pattern generalisation, and interpretation) have provided a clear guide through the analysis process. It has served as a recipe for what is important to mention in the microanalysis of the video recordings. Plahl's (2007) analysis method has also provided a clear overview during the analysis process, especially in terms of how to present and organise the information for the reader. Plahl's (2007) method of analysis has also served not only as an elaboration of Holck's (2007) method, but also as a motivation and inspiration to develop an analysis method that worked well for this project.

During the transcriptions of the video sequences, it was discovered that the focus points (see analysis design) could have been even clearer to be sure that the author and the reader of the project would have the same understanding of these. Furthermore, it was noticed that some of the focus points could have been divided to create an even better understanding for further analysis. For example, one could have divided initiative into verbal and nonverbal. This would result in the initiatives being shown even more clearly.

The selection of data was quite straightforward as it was based on a specific activity. This activity was relatively short and it, therefore, seemed obvious to select approximately one minute from each session for further analysis. The video sequences from each of the four sessions made it manageable to work with the data and use the data for further analysis. However, the data material was selected on the basis that there was a development over the four sessions. Had the sequences been randomly chosen instead of the development within one activity, the results may have been more "real."

Microanalysis of the video sequences has been a good tool to work in depth with verbal and nonverbal behaviour and to investigate its meaning at a micro level. Through transcription in ELAN, an overview of this behaviour was created, and the interactions and reactions of the music therapist and the client were clarified. ELAN is an easy-to-use program with many more features than those used in the present project. Although other computer software could have performed the transcription task at

the same level or perhaps even better, ELAN's visual presentation of the transcriptions was satisfactory and made it easy to examine interaction patterns between the music therapist and the client.

As the music therapist of the case also acts as an author of this article, she is naturally affected by bias. It also means that the role of the head of the project is less objective than if the study had been conducted by a researcher who had not been in the situation and experienced the client. The head of the project is influenced by having been the music therapist in the music therapy process with the client herself because she knows him and his expressions. During the transcription of the video sequences, there is a risk that she may have interpreted the client's expression as, e.g., initiative when in fact it may have been a reaction to the music therapist's initiative. This may also have been the case for some of the other focus points.

As a music therapist working on your own case, you want to see a development in the work you have done. This desire can influence the results as one can force a development that may not have existed in an objective perspective of a researcher who had no relation to the case. On the other hand, being present in the situation and the same room as the client also plays a role. There are a lot of aspects that cannot be captured on camera, and what you feel and sense in the situation as the music therapist is as important as what you see. Especially when working with relationships, one can analyse and draw on theories about the importance of, e.g., eye contact or physical contact for the relationship, but a relationship is also about chemistry and sensing each other, and this is not captured on the camera. Therefore, the fact that the head of the project is the same as the case's music therapist can also be an advantage because this contributes to dimensions of the interaction that could otherwise not be seen but which are important to create a holistic picture of the interaction. Having said that, it coincides with the role of the phenomenological researcher, where the researcher tries to understand a given phenomenon from his/her own experience and understanding of the event. It also means that different researchers could get different results from the same event.

CONCLUSIONS

Based on the results, it is concluded that building a relationship between the music therapist and the client is essential in music therapy, as the relationship is a crucial prerequisite for the client's development through the music therapy interaction. The therapeutic relationship between the music therapist and the client allows the client to practice his communication skills. The client's tendency to mirror is reduced while the client's ability to take initiative increases. Based on this, it is concluded that the client's communicative skills are developed and strengthened due to the relationship.

Based on the secure relationship formed in this case between the music therapist and the client, it is concluded that the client takes more initiative and becomes more independent as the relationship is strengthened through the sessions. In the first sessions, it is seen that the client's participation in music therapy stems from the music therapist's initiatives. The client's involvement, therefore, decreases in frequency throughout the sessions but increases in intensity as his reactions and initiatives last longer. It is therefore concluded that the development of the music therapy sessions increases as the relationship between the music therapist and the client becomes more secure. Finally, it is concluded that the relationship has a positive effect on the client's development, e.g., the client

overcomes his tactile hypersensitivity. He goes from not wanting to touch the balloon to picking it up on his initiative. The relationship helps to motivate the client to move from needing help to pick up the balloon to picking it up voluntarily.

IMPLICATIONS OF THE STUDY

This project has drawn attention to the importance of building a good and secure relationship between music therapists and their clients and that this helps to create good preconditions for the client's development. It is essential to be aware of not only the client's expressions, but also that the client has so much potential that a music therapist must learn to identify and recognise to promote the client's strengths and address the areas that may be challenging.

During the work with this project, it has been shown that it is difficult to find literature on music therapy for people with DS. No literature could be found in Danish, only a little in English, and a little more in various other languages. The hope of this article is to contribute to the literature on music therapy with people with DS and to contribute to people recognising the many possibilities of music, as this article shows the results of change happening with this target group through music therapy.

It can be difficult to incorporate music therapy as a treatment option on par with physiotherapy, speech therapy, and occupational therapy. Hopefully, in the future, it will be possible for music therapy to become a treatment option in day care centres and schools working with children with developmental disabilities. Music therapy has enormous potential for children with physical and psychological disabilities, and the future will bring even more experiences and research in this area.

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Ελληνική περίληψη | Greek abstract

Χτίζοντας σχέσεις στη μουσικοθεραπεία: Μια μελέτη περίπτωσης με ένα αγόρι με σύνδρομο Down βασισμένη σε μια υπερβατική φαινομενολογική ανάλυση

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ΠΕΡΙΛΗΨΗ

Βασισμένο στην πράξη, αυτό το άρθρο προήλθε από την εμπειρία κατά τη διάρκεια του έκτου εξαμήνου πρακτικής άσκησης σε ένα δημοτικό σχολείο στη Δανία με ειδικά μαθήματα για παιδιά με μαθησιακές δυσκολίες. Ο πελάτης σε αυτήν την περίπτωση είναι ένα αγόρι εννέα ετών με σύνδρομο Down. Η παρούσα ποιοτική μελέτη περίπτωσης ερευνά την επίδραση των σχέσεων στη μουσικοθεραπεία και πώς μπορούν να επηρεάσουν την εξέλιξη της θεραπείας. Η μελέτη διερευνά πώς η σχέση μεταξύ ενός μουσικοθεραπευτή και ενός πελάτη με σύνδρομο Down επηρεάζει το θεραπευτικό αποτέλεσμα και την ανάπτυξη και συμμετοχή του πελάτη στη μουσικοθεραπεία. Αυτή η μελέτη προήλθε από μια ποιοτική μελέτη περίπτωσης, με υλικό που προέκυψε από τις τέσσερις συνεδρίες μουσικοθεραπείας χρησιμοποιώντας ακολουθίες βιντεοσκοπήσεων. Με βάση μια φαινομενολογική προσέγγιση, το υλικό αναλύθηκε μέσω μικροανάλυσης χρησιμοποιώντας θεματική κωδικοποίηση, οριζόντια ανάλυση και ποιοτική ανάλυση. Τα αποτελέσματα της έρευνας υποδεικνύουν ότι οι σχέσεις είναι το κλειδί της ανάπτυξης στη μουσικοθεραπεία. Ο πελάτης εκδηλώνει μεγαλύτερη πρωτοβουλία και αποκτά περισσότερη ανεξαρτησία κατά τη διάρκεια των συνεδριών. Τέλος, η μελέτη υποδεικνύει ότι οι επικοινωνιακές δεξιότητες του πελάτη και η εξέλιξη των μουσικοθεραπευτικών συνεδριών βελτιώνονται καθώς βελτιώνεται η σχέση μεταξύ του μουσικοθεραπευτή και του πελάτη.

ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ

μουσικοθεραπεία, σύνδρομο Down, σχέση, φαινομενολογική προσέγγιση