An exploration of the synergies, parallels, and divergences between ESDM and music therapy with preschool children with autism, in a music therapy student's practice.

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Abstract

This qualitative research explores the possibility of an interaction between music therapy and the Early Start Denver Model with preschool children with autism spectrum disorder. Both interventions have been shown to be effective at improving social, emotional and communication skills in young autistic children, and share some use of music and some focus on developmental goals. My findings were generated from Secondary Analysis of Data using my qualitative clinical notes and reflective thoughts from a music therapy setting and an Early Start Denver Model setting. I focused on my use of music in sessions at each setting and found three main themes in the data – building a therapeutic relationship; singing to engage, with primary and secondary focus on the music; and moment of discomfort. A large proportion of my data related to using music to build a positive therapeutic relationship with the child, which is necessary to achieve both the wider goals typical of a music therapy setting and the more specific goals of the Early Start Denver Model setting. My data also showed that the humanistic approach of music therapy and the behavioural approach of the Early Start Denver model created tension in my practice in both settings. My research concluded that there are parallels and synergies which could positively inform each intervention but there may be too many divergences to create one cohesive therapy, due to their differences in approach.

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Ethics statement

The VUW Human Ethics Committee has given generic approval to NZSM Master of Music therapy Programme ethical template for student research in NZSM 526 undertaken as observational studies, theoretical or case study research or action research (ref: #22131, 2019). This study was judged to be low risk and, consequently, will not be separately reviewed by any Human Ethics Committees.

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Chapter 1. Introduction

The aim of this research is to investigate the interaction and compatibility of the Early Start Denver Model (ESDM) and humanistic music therapy practice. The findings from this research have the potential to inform future research into the relationship between ESDM and music therapy, and potentially to inform best practice of early childhood autism interventions.

Autism spectrum disorder (ASD) typically presents as a lack of communicative and language development as well as a lack of adaptive behaviour (Rogers and Dawson, 2010a). These characteristics of autism in early childhood can affect the development of joint attention, a social skill which may be linked to language, and ultimately to being able to share reciprocal interactions with others (Charman, 2003), and perhaps even social ability in adulthood (Gillespie-Lynch, Sepeta, Wang, Marshall, Gomez, Sigman and Hutman, 2011).

Both music therapy and the ESDM are considered to be helpful in developing social, emotional and communication skills, and language development in children who have ASD (Reschke-Hernandez, 2011; Dimitriadis and Smeijsters, 2011; Kern, Rivera, Chandler and Humpal, 2013; Rogers and Dawson, 2010a; Baril and Humphreys, 2017). A recent literature review of studies focusing on music therapy in early childhood found that children with autism are the most highly represented group in both research papers and clinical description papers. The studies included in this review showed common themes of supporting intention, engagement, reciprocity, and turn-taking among young autistic children (Tuomi, Ala-Ruona, and Oldfield, 2017). Development of these skills is also targeted within the ESDM curriculum, although there is currently very little research on how music therapy and the ESDM could be integrated. Through my own experience of humanistic music

therapy training compared with the behavioural approach of ESDM, it seems likely that conflict between the two approaches will occur in my data. Nevertheless, recent research suggests that music therapy may be an effective vehicle for teaching the ESDM principles to parents of autistic children (Hernandez-Ruiz, 2018). Investigating how the ESDM principles are expressed in naturalistic music therapy may lead to a more comprehensive understanding of how these two interventions can work together to benefit children with ASD.

1.2 Background

This research is part of the requirements for my second year of the Masters of Music Therapy programme at Victoria University of Wellington. This is my first training in music therapy, after completing bachelor's degrees in both music and psychology. I approached my second-year placement options with an open mind, and took the opportunity offered by the ESDM clinic in Wellington to complete a three-day introductory course in ESDM with a view to investigating how music therapy and ESDM can work together and benefit each other. This course was primarily for a group of education psychology students who were beginning to work towards becoming certified ESDM practitioners, and joining the ESDM clinic team in Victoria University's Faculty of Education. The Masters of Music Therapy course encourages a humanistic approach while also touching on other approaches, while ESDM uses a naturalistic behavioural approach. ESDM research is overseen by Victoria University's Faculty of Education. One of my two elected placements in my first year was with the music therapist at a community based intervention centre (CBIC). CBIC's aim is to support children with additional needs from one to five years old through short but intensive weekly sessions with a music therapist, speech and language therapist, physiotherapist and an early intervention teacher. CBIC therapists are familiar with the ESDM approach, and when I later attended an ESDM

introductory workshop, I could see the similarities between the ESDM techniques being explained and what I had observed of music therapy at CBIC – engaging the child, building relationships, imitation, fostering joint attention, developing non-verbal communication, and family involvement. I thought that it would be interesting and valuable to explore the synergies, parallels and divergences between humanistic music therapy and the ESDM in more detail – to further understand where music interventions and the ESDM overlap and if each can draw on the other to the benefit of the children involved. This exploration was possible because the music therapist at CBIC is ESDM informed, although not officially trained.

If it can be shown that music therapy with autistic children shares some of the same techniques as another intervention like the ESDM, it may result in higher availability and flexibility of intervention options for autistic children; a greater range of skills taught to caregivers and families to engage with and relate to their child; and greater visibility of music therapy in general.

Change of focus in ESDM setting after lockdown

After reflection and revision of clinical notes during the COVID19 lockdown, I encountered an ethical consideration. I knew that the families I was working with in the ESDM setting could only receive one term of subsidised therapy (with a trainee therapist), and any other therapy would be significantly more expensive. I also knew that when done well, rapid progress can be made with the child making a substantial difference to them and their family. I was concerned that by trying to blend music therapy and ESDM together in my approach I was not giving the families an accurate representation of what ESDM could achieve with their child. The families knew I was a music therapy student as well and gave informed consent to have me as their

therapist, but nevertheless I felt uncomfortable especially early in the year when I was still settling into both approaches.

After reflecting during the lockdown period, I made the decision to increase my understanding of the ESDM process and focus more on improving my skills as an ESDM therapist. I put this into practice by attending online meetings with my ESDM supervisor and fellow trainees on Zoom during our lockdown, which focused on brainstorming solutions to challenges in our previous sessions, and developing our goal-setting skills. I also learned from watching videos of my supervisor's sessions, and from studying the ESDM handbook. I felt confident that I would continue thinking of ways to add music to my sessions in the back of my mind which I could put into practice when I felt more settled in the ESDM framework.

I do not regret my decision to solidify my understanding of ESDM, which also led to an increased appreciation of music therapy principles and techniques.

Biases

As stated above, this research was conducted with limited training in ESDM, although under close supervision by certified ESDM practitioners. I was also being trained as a humanistic music therapist – if I had been training as a behavioural music therapist I may have encountered fewer or different challenges in merging these approaches. A more experienced music therapist would also have had a different experience and perhaps more success.

Chapter 2. Literature review

This review will explore the use of music therapy with young children with autism spectrum disorder (ASD), as well as how the Early Start Denver Model (ESDM) can benefit those children. I sought to define ASD, music therapy, and ESDM, and discover what interactions between those three key elements of my research have been investigated in the literature. My search strategy was to use the Victoria University of Wellington's online library catalogue, entering my three key terms in various combinations to find as much literature on these topics as possible. I also searched mainly within the last ten years of published material, in order to find the most recent and relevant research.

2.1 Autism Spectrum Disorder (ASD)

According to the DSM-5, autism typically presents as persistent deficits in social interaction and communication across the majority of social contexts (American Psychiatric Association, 2013). In young children, observable signs can be lack of joint attention and eye contact, lack of emotional expression, and delayed language development (Webb and Jones, 2009; Dixon, Granpeesheh, Tarbox and Smith, 2011; Adrien et al., 1993). Although there does not appear to be a consensus among researchers about the best age for screening and diagnosis (Ventola, Saulnier, Steinberg, Chawarska and Klin, 2014), there is evidence of ASD symptoms presenting from the first year of life (Webb and Jones, 2009; Rogers and Dawson, 2010). Children can also develop typically until around 20 months old, and then lose the skills they had gained in language or social domains (Webb and Jones, 2009; Landa, 2008). The symptoms listed above can be treated as warning signs of ASD developing, and it has been shown that early intervention treatments are the best course of action (Dawson et al., 2010; Fenske, Zalenski, Krantz, and McClannahan, 1985; Landa, 2009).

2.2 The Early Start Denver Model

Behavioural early intervention treatments use applied behaviour analysis (ABA) principles to promote and generalise desired behaviours and decrease undesired behaviours. Studies have shown that behavioural interventions can have lasting positive effects on children with autism, especially in relation to language skills (Virues-Ortega, 2010). The ESDM is an early intervention with a behavioural therapy approach, incorporating developmental aspects and emphasising inter-personal relationships (Rogers and Dawson, 2010). Behavioural principles within ESDM come from Pivotal Response Training (PRT), a six-point method which aims to increase motivation to interact with adults and to learn by using effective reinforcement, utilising the child's choice, alternating maintenance and learning tasks, reinforcing any level of desired behaviour, and sharing control within an activity. The inclusion of PRT differentiates ESDM from the Denver Model used with older children.

ESDM teaching strategies include: the adult's use of positive affect which can improve social motivation; play as the primary method of delivering intervention, specifically the four-part joint activity routines within these routines many goals are met and developmental skills taught, such as imitation, and motor, cognitive and communication skills; intensive teaching, providing many opportunities for learning within a session (every 10 seconds for a certified practitioner); a positive approach to unwanted behaviour, in focusing on gaining alternative skills rather than eliminating problem behaviours; and family involvement, as the child's primary teachers and models.

ESDM's focus on interpersonal relationships is informed by the hypothesis that social motivation is lacking in autism (Rogers and Dawson, 2010a). This appears to be a cyclical hypothesis in which children with autism do not find social interaction

as rewarding as do typically developing children, and therefore do not develop a preference for interpersonal interactions. This then exacerbates the communication, social and emotional deficits that are already present (Rogers and Dawson, 2010a). In line with this hypothesis, the structure of ESDM treatment includes forming a close relationship with each child, and attempting to make every interaction fun and exciting (rewarding) to encourage and motivate the children to seek out interactions with others (Rogers and Dawson, 2010a). The ESDM also provides training in P-ESDM (parent-implemented ESDM). It was hypothesised that training parents in P-ESDM would decrease stress levels, increase self-perception of competency, and benefit the children receiving treatment, but results have been inconclusive so far (Vismara et al., 2016; Estes et al., 2013; Rogers et al., 2012).

2.3 Music therapy and ASD

Music therapy has been employed as an intervention for the symptoms of autism since the mid-20th century, targeting characteristic social and communication deficits (Reschke-Hernandez, 2011). When working with children with autism, music therapy shares the goals of the ESDM, such as developing communication, relationship, language, and emotional expression and understanding. Music is a powerful non-verbal communicator, often dealing with things that are difficult to express using language. This is why music therapy can have such benefits for people with autism who often lack language understanding and language itself - to use music with non-verbal or language-challenged clients meets them where they are, and is therefore unique from verbal therapies (Dimitriadis and Smeijsters, 2011).

2.4 How music therapy can benefit children with ASD

Autistic children tend to be motivated to engage socially in a number of ways through music therapy. One technique used is to use music to reflect a child's movements and actions, so that the child appears to be controlling the music; another

is to use ‘cause and effect’ within instrument play together – in this activity both the therapist and the child can alternate as leaders, the child stopping when the therapist does and vice versa, and the therapist following the dynamics of the child and vice versa. Re-creative musical experiences also encourage motivation within music therapy – the process of taking a familiar and preferred pre-existing song and incorporating the child into the song, often by substituting their name into the song or describing what the child is doing or seems to be feeling at the time (Wheeler, 2014).

One of the important features of music and music therapy is that of communicative musicality (Malloch and Trevarthan, 2009, in Mössler at el. 2019). This refers to the musical elements of communication between a young child and its primary caregiver. It has been hypothesised that we develop our social and emotional understanding through communicative musicality early in our lives – through rhythm, dynamics, and imitation we learn to communicate to others, but also experience being heard and responded to by others (Mössler et al., 2019). Communicative musicality also includes ‘affect attunement’, a developmental psychology principle from Daniel Stern (1985), in which he describes a mother’s process of acknowledging her child and its emotional state and responding across different modalities, in musical terms – pulse, rhythm, crescendos and decrescendos, which he also called ‘vitality affects’. Influencing these affects that often reside beyond verbal expression through music therapy can produce positive therapeutic change in individuals with ASD (Dimitriadis and Smeijsters, 2011).

According to LaGasse (2017), improvisational music therapy is an effective technique in developing joint attention – a vital element of communication commonly lacking in children with ASD. Developing joint attention is also a target of the ESDM, achieved by breaking down the task into simple steps and increasing

the complexity over time (Rogers and Dawson, 2010). As in the ESDM, improvisational music therapy can follow the child's lead, incorporating whatever the child gravitates toward or whatever they enjoy interacting with. The relationship between child and therapist is valued as the predictor and vehicle of therapeutic change and requires the therapist to be flexible and responsive (Carpente, 2017; Mössler et al., 2019). Improvised music-making can allow the child and therapist to attune to each other, and the child to recognise that someone else is present and interesting to engage with, another way in which improvisational music therapy expresses the goals and techniques of the ESDM (Kim, Wigram and Gold, 2008; LaGasse, 2017; Rogers and Dawson, 2010). Improvisational music therapy can also target other common features of ASD, such as rigidity or inflexibility – engagement in active music making can provide a supportive framework to experience change and adaption, as well as reciprocal communication (Wigram and Gold, 2006; Geretsegger, Holck and Gold, 2012).

2.5 Introducing music therapy into other interventions

Whether improvisational music therapy can be integrated with other forms of early intervention is beginning to be explored. Carpente (2017) investigated the effectiveness of improvisational music therapy with the DIR-Floortime model – 'D' represents the six levels of socio-emotional development, culminating in abstract thinking; 'I' represents taking into account the individual differences specific to each child receiving intervention treatment; and 'R' representing taking into account the relationships which support learning experiences – between the child and its parents, therapists, teachers and caregivers. Carpente (2017) found that the increase in social communication and emotional regulation that children with ASD can gain from improvisational music therapy can be generalised to a play-based therapy model. It is

therefore worth investigating the relationship between music therapy and the ESDM, with a focus on improvisational music therapy methods.

2.6 How music therapy and ESDM could be combined successfully

Despite many positive findings in the field of music therapy with autistic children, Bieleninik et al. (2017) found no significant difference when comparing the symptom severity between autistic children receiving improvisational music therapy treatment compared to enhanced standard care. One way that music therapy may successfully interact with the ESDM is through the use and adaptation of familiar songs, which are often used as 'sensory social routines' or SSRs in treatment sessions. In a study with a single participant acting as their own control, Finnigan and Starr (2010) found that although the participant did respond well to the early intervention treatment they were receiving without music, they responded much more positively when music was included. The musical element of this study was the addition of adapted familiar songs with guitar accompaniment, tailored to the child in the moment. Although this is a very small study, it shows music's potential in an early intervention environment very similar to the ESDM.

Another way that music therapy could positively influence the ESDM is through 'speech-song' or 'recitative' in opera – singing rather than speaking bits of dialogue. Paul et al. (2015) built on previous neuroscience research that showed increased neuroconnectivity in the frontal and temporal lobes of autistic brains when communication is sung compared to spoken. Paul et al. (2015) hypothesised that sung communication may act as an engaging and exciting scaffold for autistic children to build up their own communication skills. The study looked at three autistic boys, each around three years old. Each boy received both sung and spoken directives, and performance, social gesture and eye-contact were measured for each

child. In almost every category, the sung-directive condition produced highest levels of accuracy and engagement.

Bharathi, Jayaramayya, Balasubramanian, and Vellingiri, (2019) present the possibility for the music therapy technique of rhythmic entrainment to be effective in treating autism in children. They suggest that rhythm can play an important role in the development of motor control and cognitive function, as well as sensory perception and motor entrainment, in individuals with autism. Rhythmic entrainment is the process of using rhythm and music to rewire the brain, improving cortical plasticity and connectivity. It is often employed to improve patients' gait, to control heartrate, and reduce pain symptoms. Some of the most common symptoms of autism in children are stereotyped and repetitive motor behaviours, and poor motor control, which may be able to be improved through rhythmic entrainment strategies.

Hernandez-Ruiz (2018) investigated whether music therapy could be effective in teaching P-ESDM, allowing parents to use ESDM strategies regularly in the child's home environment. The results of this study were interesting – negligible in terms of increasing parental competency, but the use of music therapy seemed to increase the parent's perception of their child's autistic characteristics. Hernandez-Ruiz (2018) suggests that music therapy may show a child's abilities in a different light to their parents, which could be beneficial or not depending on expectations. However, music therapy was found to be a feasible way to introduce the principles of P-ESDM to parents. This study suggests that the principles of music therapy and ESDM might have enough similarities to be integrated, but also leaves a gap in the literature as to how successful that integration may be.

My research question is as follows: What are the synergies, parallels and divergences between ESDM and music therapy with autistic children, from a music therapy student's perspective?

Chapter 3. Methodology

3.1 Introduction

In this section I will describe the research methods and design used in this project.

3.2 Qualitative analysis using Secondary Analysis of Data

Qualitative research seeks to 'explore a particular phenomenon as it unfolds and reveals itself during the study, the aim being to explicate and understand the phenomenon' (Wheeler and Bruscia, 2016, p. 53). This was a qualitative study, as it focused on my reflections as a music therapy student and what I perceived to be the parallels, synergies and divergences between humanistic music therapy and ESDM. I used an inductive process where I set aside assumptions about what will be found in the data and instead developed patterns and themes using the categories that emerged from my data during analysis (Merriam, 2009). I engaged in Secondary Analysis of Data, a method of analysis using pre-existing data to investigate a new research question (Coyer and Gallo, 2005). In this case, my clinical and reflective notes from February to August 2020 became pre-existing clinical data once I entered the analysis stage of this project.

3.3 Data collection

The data used in this research project came from my clinical and reflective notes from my placements with the ESDM clinic and at a community based intervention centre (CBIC). I worked with two children at CBIC, and three children at ESDM.

My clinical notes were gathered over February and March 2020 until the COVID19 lockdown, and then again from the end of May until the end of August 2020. My data was written in a naturalistic style, as I was not thinking about my research question while writing clinical notes for each placement. Consent was sought from the facilities involved to use my self-reflective and clinical notes as research data. Where a child was implicated or identified in the data, information sheets and

consent forms were provided to primary parent/caregivers, with a request to use their child's session notes in my research.

3.4 Data Analysis

As part of my secondary analysis of data I used thematic analysis as described by Braun and Clarke (2006). I used data relevant to the research question to identify overarching or recurring themes, and then interpret and find relationships between those themes to answer the research question (Mills, Durepos, and Wiebe, 2012).

Braun and Clarke (2006) explains that although thematic analysis is a widely used and flexible tool within qualitative research, there is no clear description of what it entails. During my analysis I found myself straying from a qualitative inductive approach to a deductive approach, as I sought to use my overarching research question to guide me through identifying categories and themes in the codes from my data. My supervisor then introduced me to Braun and Clarke (2013) which I found a useful guide and which helped me focus on what my data presented rather than attempting to answer my research question prematurely.

In order to efficiently code the data in relation to my research question, I imported my clinical data into NVivo12 software (see Appendix C). I kept data from the two placements as separate files within NVivo12, and kept data from the two terms I was at ESDM separate as well. I decided to do this while still in the data gathering phase of the project, as I thought it could be beneficial to compare patterns in the data between the two placements, as well as over time.

As a lot of my clinical data was a mixture of session notes and reflective thoughts my first step was to focus on overt references to music within my data, as I was experiencing these contrasting placements from a music therapy student's perspective. This allowed me to group different parts of my data in a succinct and

descriptive way, from which I would be able to draw out patterns and themes to answer my overarching research question.

I began the coding process with my data from ESDM, coding both terms of data with the same group of codes. I was unsure whether to include data from the very beginning of my placements because I was still becoming familiar with the different contexts, but I felt that there was valuable data from that period that should be included. Although my placement at ESDM continued until the end of August, I did not code the data after the end of July as I felt that I was not revealing any new information beyond that point. I used all data from my placement at CBIC, and am aware that the small amount of data gathered from CBIC is a limitation of this research project.

3.5 Ethical Considerations

Information and consent forms were provided to families whose children I worked with at both ESDM and CBIC (see Appendices A and B). The information sheet outlined my position at ESDM and CBIC - as a music therapy student primarily, who is seeking to explore how music therapy and ESDM can interact when working with pre-school children with autism. The form explains that I will need to write descriptive vignettes about my work in these settings, and that I have consent from both contexts to use my clinical notes as research data. The form emphasises that any names and identifying information related to the children will be excluded from the work, and that not giving consent will not negatively affect my research. This was included to avoid putting pressure on families to participate. The form also included the possibility of this work being published outside of Victoria University of Wellington in the future, and provides the contact details of my supervisor if they have any questions or concerns about the research.

Chapter 4. Findings

In this section I will outline the findings from my data. I used thematic analysis of my categories to uncover the three main themes in my data:

- Facilitating a therapeutic relationship with the child
- Singing to engage
- Moments of discomfort

All names used from here onwards are pseudonyms to maintain the anonymity of the children and families involved.

4.1 Theme 1: Facilitating a therapeutic relationship with the child

Finding ways to relate to and connect with the children I worked with was a prominent feature of my data from CBIC and ESDM. This is important within music therapy as the strength of the therapeutic relationship is strongly linked to the outcomes of the intervention (Mössler et al., 2019). The most common ways I tried to create a therapeutic relationship were categorised in my data as:

- Following the child's interest/lead
- Reaction to music
- Using music to ease into therapy
- Assessing affect
- Matching and empathizing

<u>Following the child's interest/lead</u>

This category describes moments in the data when I used the child's interest in an object or enjoyment of an activity to shape what happened next in the session. This came about in a variety of different ways as I got to know the different children I worked with, attempting to build positive experiences together and to find what

motivated them, as well as identifying areas which we could perhaps work on during our time together.

The first example of this in my data from the ESDM context was Anna who became distracted in our session by her reflection in a glass door at the back of the room. I was trying to engage her by singing ‘If You’re Happy and You Know It’ with actions, but, “I saw at one point that Anna was transfixed by our reflections in the one-way glass, and I tried to use that interest to model facial expression in ‘If you’re happy and you know it”

She seemed more interested in this reflected interaction than she had when I was singing to her face-to-face, so I continued singing the song with facial expressions and actions, hoping that her enjoyment of the reflection would make her more likely to attempt some imitation which was the initial purpose of introducing the song.

Another instance in the data of following this child’s lead in sessions is in the use of the song ‘The Wheels on the Bus’. When we began ESDM sessions together, I asked her mum whether she had any favourite songs that I could use to help establish a positive relationship between us. Her mum said that Anna did not like songs in general, often looking uncomfortable when people sang to her and indicating that she wanted them to stop. This applied for most songs except ‘The Wheels on the Bus’. When I sang the song, the change in her demeanour was very noticeable: ‘Her whole body language and facial expressions change when I start to sing familiar songs like 'Wheels on the Bus'. She gave me a lot of eye-contact and waited for me to say 'beep beep beep’.’

As time went on, it remained a favourite song and I began to see faster progress towards her goals being made with this song than with other songs or non-musical activities, to the point where she was comfortable enough to accept physical touch

from me. Through following her lead and building on her enjoyment of this song the therapeutic relationship was strongly established, and allowed us to make rapid progress towards her ESDM goals.

Later in the year at the ESDM context, I worked with a child who did not seem motivated by music. . After the first few weeks of sessions together, following the leads and interests of this child in order to build a relationship looked quite different. He was initially very reluctant to stay in the therapy room with me for longer than two or three minutes, often not wanting to enter at all. It took a while for me to find the toys and activities that he was most motivated by, and it was not until I brought out a large stuffed monkey to play with that I saw him relax and play happily in the therapy room:

> "[He was] intrigued by the monkey toy and the oohs and ahh's in Matilda Gorilla that I sang. His whole attitude changed with including the songs today, and it seems to be the best way of re-engaging him, and distracting him from his desire for the TV to be turned on and to leave in general"

Once I was able to successfully identify and follow his interest in particular toys and songs, it was much easier for me to create positive experiences for both us within sessions, and to build the therapeutic relationship between us.

However, there were reflective moments in the data where I was aware that I did not follow his lead, which would often lead to frustration on his part and losing his cooperation in following activities:

> "He enjoyed the anticipatory slow-fast rhythm of the counting section and sang it very loudly, immediately followed by a cry to open the door to the green room. I carried on with the song, although should have explained with PREMACK

> [behavioural principle used in ESDM] that we would finish the song first and then go into the green room briefly…"

Data on following the lead of the third child I worked with at ESDM (Mack) was scarce at the start of the term because I focused a lot more on targeting ESDM goals, taken from the ESDM curriculum checklist and approved by an ESDM certified supervisor. In order to do this effectively, I tried introducing new and more varied ways of playing with toys and objects in our sessions. I initially found it hard to identify his preferences of toys and games, and instead I continued to introduce him to a variety of things in each session as I had done in his initial assessment session. In a few instances I tried transferring his actions onto drums: "I really have to think about letting the child lead here as well as in music therapy, and then inserting instances of teaching within their preferred play schema."

I was following his lead in the sense that we played with toys for as long as they kept his interest and then we moved on, to find motivating activities that would target his ESDM goals more effectively.

However, as our session progressed I did find more ways of identifying and following his interests within sessions. After an observation from my visiting music therapist, I attempted to follow his lead by using more musical narration in our sessions – sung speech observations about what he was doing in an attempt to enter his world and build a relationship. He would often pause in the middle of an activity and twist his fingers together which would absorb all of his attention, so I tried to find a way to follow him and join in his interest:

> "We started playing with pegs in a pegboard but he got distracted by his fingers so I made up a song about them – I felt like I'd made the right decision in the moment although it didn't increase his engagement at the time."

I decided to follow his interest in his fingers with an improvised song because I wanted to find a way to give his actions meaning, and to give us a way of sharing the moment and building our relationship.

Sessions with autistic children at CBIC were often centred around their interests and following their lead. As the children were continuing their therapy at CBIC, they had already established routines and favourite activities in the music therapy room. I could then facilitate these activities which was useful in establishing a therapeutic relationship with them. Once I became more familiar with the childrens' preferred songs and games, I would attempt to include variations within the activities that would target their goals somehow:

> "I encouraged Fred to come in for his session by bringing out a motivating activity – horns. He loves playing 'sleep, wake up!' …. and we have begun incorporating egg shakers with the horns to target some two-step imitation goals."

It is also clear from the data that Fred was very motivated by the big gross motor movements and proprioceptive stimulation that accompanied his sessions at CBIC - therefore it was helpful to have two music therapists present, one to play the music and one to spin him around and jump him up and down.

Another child at CBIC, Ella, was mainly motivated by favourite songs, and once I had followed her interest and learned her preferred songs to lay the foundations of our therapeutic relationship I was able to challenge her through the music by leaving gaps in the lyrics for her to fill, or using visuals from the songs to target the goal of pointing. The CBIC music therapist and I often worked together during activities where visuals and music were being utilised:

> "MT also facilitated the activity by presented visuals for Ella to point at, as we were using the song to target distal points as well as filling in words in the song. Ella is highly motivated by songs at the moment, so we offer her choices of songs through visuals of the titles, and generally target vocalizations and increasing her attention span."

Reaction to music

There were many instances in the data where the child's reaction to the music I offered was important in building our relationship. In terms of two of the three ESDM children I worked with, their reaction to music was the key to creating positive moments together. In both cases, their reactions to music meant that they could be redirected from negative states, or enabled to focus and be absorbed by the activity. In terms of Anna, there were many instances in the data where her reaction to music guided me towards building a positive therapeutic relationship, for example: "She came very close up to me as I was singing, and almost seemed like she was trying to get into the song!"

Because of Toby's strong aversion to being in the therapy room as he dislikes small spaces with closed doors, it took time to find activities that he responded to strongly and positively. Once I discovered his strong reaction to familiar songs and music I felt more able to slowly build a relationship that would convince him to join me in the therapy room for longer periods of time: "His whole attitude changed with including the songs today, and it seems to be the best way of re-engaging him."

In the CBIC data, the two children I worked with displayed positive reactions to music but in different ways. Ella loved familiar songs and showed her motivation through movement and eye-contact: "she danced around, filled in the gaps, knew

names and order of the dogs in the song. She gave lots of eye-contact during this song and was very excited"

Another instance in the data shows her positive reaction to music through persevering with a very long song with a lot of words, attempting to fill in gaps in the lyrics while she was still learning the song. My data shows less exaggerated reactions to music in the CBIC data compared to the ESDM data.

Using music to ease into therapy

This category only appeared in the ESDM data, where at times in the data it seemed that I was using music to ease a child into the therapy session, sometimes both literally and figuratively. This category appeared most often in the data around Toby's sessions, which could be because he was the most reluctant to enter the therapy room of all three children in the ESDM data, and because he also had the most positive reaction to music which would seem to override almost every protestation:

> "I decided to try and lure Toby into the room with Dr Knickerbocker – he was smiling and singing along to the counting portion while outside the room, but when I guided him into the room and closed the door he was grizzly and was trying to get past me to open the door, but was still stamping his feet along to the instructions of the song!"

By starting our sessions with a favourite song, my aim was to create and maintain feelings of fun and positivity around our relationship, and eventually around being in the therapy room as well.

I reflect in the ESDM data that I developed a habit of improvising sung narration or instructions often when the child is stuck in a loop during an activity or struggling

with a task. This habit was common in the data when referring to sessions with Mack. As stated above, I found it hard to identify Mack's preferences when it came to toys and activities, and I did not see an obviously positive or negative response from him when I sang familiar songs. After advice from my visiting music therapist, I began to improvise songs about the solution or sing encouragement when I saw that he was stuck in a particular schema or struggling with a toy or activity. It was beneficial from the perspective of our growing therapeutic relationship not to immediately interfere with his play by physically redirecting him. It also fit within ESDM's method of becoming a successful play partner, allowing us to ease into targeting therapeutic goals.

Matching

I knew at the start of my placement that being able to match a child's emotional state would be a key component of engaging with them, building a relationship with them, and bringing them into the optimal state for learning. The idea of matching someone is a key principle of music therapy, and ESDM therapists need high levels of sensitivity and responsivity to the children they work with in order to qualify.

Early in the year, I reflect in my data that I would feel better able to match a child's emotional state and hold space for them to re-join me if I had an instrument with me. I reflected in the data that my next thoughts around this would be how to hide the instrument when not in use (or 'control the materials') as is recommended in ESDM techniques. I decided against bringing in an instrument initially, as I was not confident in my ability to control the materials, but I found other ways to match the children I worked with in ESDM.

Data from the end of the ESDM term with Anna shows instances where I matched her vocalisations to encourage her to continue, and varied the activity by varying my

pitch and intonation which she attempted to imitate. By matching, extending and varying her vocalisations I was building on our therapeutic relationship to show her that she was being heard and that I wanted her to continue:

> "Lots of back and forth babble to the baby, brilliant!! And responding to me imitating her changes in intonation…We used the microphones today, and Anna spent about 10 mins walking around and vocalizing to herself – I was mainly reinforcing and copying her, but I think there was some delayed imitation of 'wah' sounds and pitch intonation."

The data also shows instances of matching in sessions with Mack, as I tried to get to know him and find out what he was motivated by. In one session he began slapping his knees with hands so I brought the bongos close to him and began to hit them in the same rhythm hoping he would join me. The data also shows that I would match and extend his vocalisations in order to encourage him to continue. However, the most common instance of matching Mack in the data was by attempting to join him through music by singing as he twisted and watched his fingers.

The importance of being able to match a child from a music therapy perspective is shown in the data from CBIC with Fred, who loved instrumental improvisation especially on the drums. I had chosen to play the guitar but it was not the right instrument to be able to match and hold what Fred was playing: "Really helped having MT on the piano to create a musical container for more aggressive play that drowns out the guitar."

Following a child's interest or lead, observing their reaction to music, using music to ease into therapy, and matching their emotional state all emerged from the data as contributing to building a therapeutic relationship with the children from both CBIC and ESDM contexts.

4.2 Theme 2: Singing to engage

In coding my data I focused on instances of music making within sessions. It became apparent that the most common way I included music in sessions at both placements was by singing in various ways and with different purposes. However it seemed that the overarching purpose of singing in sessions was to engage the child. Merriam-Webster (2020) defines 'engaging' as 'drawing favourable attention or interest'. Being able to attract a child's attention in a positive way is essential to building a therapeutic relationship in both music therapy and ESDM therapy, while attracting and maintaining an autistic child's attention is a key component of ESDM therapy. The data also showed that at different times, I used singing to engage as both the primary and secondary focus in the moment, in relation to ESDM goals and strategies.

4.2.1 Singing to engage as primary focus

I define 'primary focus' as moments in the data where I focused on engaging the child with singing in preparation for targeting ESDM goals and strategies. The categories I uncovered were:

- Attracting attention
- Encouraging interaction
- Music to signify routine
- Encouraging imitation

<u>Attracting attention</u>

A key component of successful delivery of ESDM is to attract and maintain the child's attention. Once a child's attention is attracted positively, sensory-social and joint-activity routines can be developed to target goals and behaviours.

In the majority of the first term data, I was exploring the most effective ways to attract the child's attention within a session, and describe few instances of attracting attention by singing alone. Singing in the data was often accompanied by object-play, and although this allowed me to enrich ESDM with a music intervention, I found it difficult to balance the two approaches as I was not yet fully comfortable with the necessary step of controlling the materials being played with:

> "I got a toy barn down and a box of animals. I tried singing 'Old MacDonald' with animal noises, but X was completely focused on the animals. I find it hard to know how to get attention back onto me without taking the toy and upsetting the child."

The most successful moments of singing to attract attention in the early data occurred when I did not combine it with object play, as described in the examples above when attracting Anna's attention by singing 'The Wheels on the Bus'. In these instances of singing to engage Anna during sessions, my focus was on the song's ability to hold her attention in a positive way, so that I could then introduce some variations to the activity in order to target her ESDM goals.

In the data and reflective notes from the second term of ESDM, I also found that the most effective way of attracting Toby's attention was by following his interest in certain songs. It is clear from the data that once I discovered his love of familiar songs I was much more able to engage him positively, and I had more success when targeting his ESDM goals within those songs:

> "Sang 'Dr Knickerbocker' to entice Toby into the room, one of his favourites from his Spotify playlist. He was… watching me while I was singing and modelling actions, and filling in the gaps I left for him between protests."

Music to signify routine

Music to signify routine is a common music intervention strategy also present in ESDM, as the ESDM clinic used 'Hello', 'Goodbye' and 'Tidy Up' songs within sessions. My data from both terms showed strong responses to the 'Tidy Up' song from Anna, Toby and Mack, who learned what to expect over the course of the term. I argue that music is the primary focus in this routine – although tidying up with minimal protestation is an ESDM goal, it is the music that helps to make finishing an activity tolerable and even enjoyable: "He is very responsive to the 'Tidy Up' song, and mum reports that he sings it at home and that it is very effective."

Another effective example of music to signify routine is present in the data with both Toby and Mack, in the form of a song used with a ball-popping toy, to ask the child to locate the popped foam ball (nose of the pig) and return it to the toy: "Mack responded really well as he knows this routine by now. No bouncing the ball on the floor today, just straight into the pig which was awesome! Strength of song as routine?"

The data also showed that Toby was very responsive to a song paired with a bean-bag activity where I pulled him along the floor and spun him around, which made it very easy to incorporate communication goals when we came to a stop.

Encouraging motor imitation

In the data, instances of encouraging motor imitation to achieve an ESDM goal were often secondary to the enjoyment of the familiar song being sung. In the first term, I focused mainly on the actions to 'The Wheels on the Bus' to target imitation through music with Anna, although she also began to imitate me waving during the 'Hello' and 'Goodbye' songs. Using her motivation for 'The Wheels on the Bus' not only

resulted in some imitation of actions, but over time she became increasingly comfortable with receiving physical touch from me as she enjoyed having me control her hands and arms in the 'open and shut' verse of the song. It seems from the data that Anna improved her motor imitation skills, as well as her tolerance for receiving physical touch, as a by-product of engaging with her through her favourite song. The data shows a similar pattern with Toby – he showed most success at motor imitation within his favourite songs like 'Dr Knickerbocker', and 'Heads, Shoulder, Knees and Toes".

4.2.2 Singing to engage as secondary focus

I describe 'secondary focus' as moments in the data when I used singing to add support or add emphasis to ESDM strategies and techniques. This category was most frequent in data with children who did not show a very high interest in familiar songs. The categories I uncovered were:

- Encouraging awareness of partner
- Musical narration and singing instructions
- Encouraging communication, language and imitation

<u>Encouraging awareness of partner</u>

In the data from ESDM I used singing to encourage awareness and interaction with me, but often independent from other ESDM strategies and without a strong focus on goals – in the first term, building a positive relationship with the child (becoming a play partner) seemed to be my main focus. However, most of the data in this category is from the second term of ESDM, which describes moments when I was already using ESDM strategies and targeting goals within the session. The data shows that I would employ improvised singing to try to increase the child's engagement with me and their motivation within the activity:

> "[I] sang the 'Five little fingers' song when he got distracted by them to give it purpose and to try and increase his awareness of me…I sang a crescendo as he described the food in front of him, and did the same for the hamburger we played with next. It may have kept him engaged with the toy longer but it is hard to tell."

I did this to a similar degree with both Toby and Mack, when I saw that they were struggling with an activity, or when I wanted to become involved by building suspense, rewarding sounds or tickles, or offering help.

Musical narration and singing instructions

My use of musical narration within the data was very rare during the first term of ESDM, but increased during the second term after observation and feedback from my visiting music therapist. Although I reflect in the data that I found it hard to tell if it was helpful during sessions, it made me more comfortable as a music therapy student to have more music in the sessions and to realise that the scope for music was much wider than I had previously thought:

> "Tried more narrative singing today but didn't seem to captivate his attention - maybe it's not about the child's response to the music as just using music… began singing 'reach for the peg, can you reach for the peg' to put emphasis on the task, also sang about the colours of the pegs…sang the 'Five little fingers' song when he got distracted by them to give it purpose and to try and increase his awareness of me."

In terms of singing instructions, I reflected in the data that I would often introduce improvised songs about an activity when the child was being challenged or struggling with some aspect of it. Often the lyrics would be the solution to the activity, or what the child needed to do to achieve their goal. The data from both terms of ESDM showed a lot of success with the 'Tidy Up' song and the ball-popper

song, which are both combinations of routine and instructions. However, moments of sung speech in the data that focused on instructions did not appear to be any more effective than general musical narration.

Encouraging communication and language

When working with Anna, adding musical elements to encourage her language and communication seemed to have a positive effect in the data. She returned to therapy sessions after the lockdown period (from March – May 2020) with a greatly increased motivation to speak and was vocalizing a lot more than she had done previously. This gave me many more opportunities to extend and vary her vocalisations in my vocal responses to her, adding melody, exaggerated pitch variations, and modelling different consonant and vowel sounds.

When working with Toby, I was able to use his favourite songs to encourage language by leaving gaps in the lyrics for him to complete and to push for multiple-word phrases. In the data I also worked on pairing gestures with words to increase Toby's communication, but progress towards this goal was slower than language even when using familiar songs and motivating activities like the bean bag as previously mentioned.

Working on Mack's communication in the data consisted of repeating, extending and varying the pitch of his vocalisations in my vocal responses to him as in the case with Anna. I also tried adding different rhythmic patterns to his consonant sounds in order to attract his attention and engage him, but progress in this area was also slow. As described above, there are some examples in the data of using sung instructions to encourage physical communication goals like reaching and pointing, but these instances of music were to support the ESDM techniques of the hierarchy of prompts which made the physical goal clear to the child.

Conclusion

The data shows that my use of singing to engage children in the ESDM context was at different times both the primary focus and the secondary focus within sessions, compared to ESDM goals and techniques. Music was the primary focus most often when I utilised their motivation for familiar songs. Through their eagerness to engage with me in those songs I was able to target some ESDM goals or incorporate ESDM teaching strategies like the hierarchy of prompts. When music was secondary to the ESDM goals and teaching strategies, I was able to try and use music to add motivation and interest to activities or to support the goal being targeted, as well as feel more comfortable myself as a music therapy student in the ESDM context.

4.3 Theme 3: Moments of discomfort

In the data from both placements, I recorded moments when I felt some conflict between the two approaches I was working with this year. As ESDM is rooted in behavioural psychology and my music therapy training has so far been humanistic, some conflict between the two was expected. The categories I used to describe these moments in the data were:

- Two approaches conflicting
- Following one approach over another

Two approaches conflicting

One conflict that arose early in the ESDM data was not having an instrument with me in sessions. Although I tried to use my voice as much as possible, I reflected in my data that having an instrument in my sessions may be helpful during moments when the child does not respond positively to my voice, or is not willing to join me in an activity. From the data, my main concern about having an instrument (such as a guitar) with me in sessions was that it would be *'too hard to hide'* (reflective notes).

This is because one of the primary strategies in ESDM for helping a child reach the best state for learning is to reduce distractions in the environment as much as possible, and to control the materials you are working with. There are instances in the data when I successfully targeted ESDM goals by using smaller instruments that could easily be stored in a cupboard with the other resources, such as egg-shakers, xylophones and bongo drums. However, my reflective notes show that in moments when the child was not responding to my voice, I felt that being able to play a good quality instrument could have helped to contain and connect with the child:

> "Would also be interesting to try bringing in my own drum (more resonant, better quality) for when he is in these moods – to match his emotion as well as creating learning opportunities. I wanted to match his emotion in the session today, to show him that he is being heard and that I understand his frustration."

In the data from the second term at ESDM, I made the decision to focus on improving my efficacy as an ESDM therapist to provide better results for the families involved. Initially, this decision created conflict with my idea of what a music therapist was, and forced me to look closer at how I used music in my sessions:

> "I also need to be conscious of what I am TEACHING in these positive musical moments, simply engaging in music together is not enough, I need to be targeting goals and making progress – if I do not need to prompt anything from him, what is he learning?"

It is clear from the data that focusing more on ESDM structures and strategies made me feel more competent in sessions. This made me more confident about increasing my use of music within sessions without compromising the quality of my ESDM teaching, and the data shows increased reports of singing to engage through musical narration and singing instructions at this point in the term.

However, another conflict between ESDM and music therapy emerges in the data when I was reminded of the 'one-up' principle for language development by an ESDM mentor. The 'one-up' principle is a scaffolding technique, "that the therapist's mean length of utterance (MLU) should equal the child's MLU+1" (Rodgers and Dawson, 2010, p.145). Until this point, I was singing improvised songs around activities to build routines which would be helpful in targeting goals. After this feedback, I again had to reconsider how I could use music in my sessions:

> "Felt very conscious of the latest feedback I had been given by ESDM supervisor and tried to keep more focus on ESDM rather than music….. wanted to sing [Lion Sleeps Tonight] but stopped because of language rule feedback…I tried to mirror and extend his vocalisations, although I am now more aware in the back of mind that feedback from ESDM therapists has been to avoid parroting back to the children, so I wonder whether this falls under that category."

There is nothing in the data from the second term of ESDM to suggest that I still felt conflicted about not having a resonant instrument with me in sessions. It may be because although I felt more able to control my materials in a session but may also be due to the different personalities of the children I worked with.

<u>Following one approach over another</u>

In the data from the first term of ESDM this category only appeared once, when I decided not to use sung-speech at a particular moment because I felt it did not suit the child's high affect at the time. This may be because I did not feel fully grounded in either approach at that point in the year. Due to my lack of confidence as a therapist in either discipline there were many moments in the data from the first term of ESDM where I reflected on the potential for more music within the sessions – more improvised songs, song-writing to target goals, musical narration, and missed

opportunities for musical engagement: “She put her head right into the box and vocalised which I didn’t pick up on – she could have been enjoying the reverberations!”

Because I had decided to focus more on following ESDM structures and techniques in the second term, the data from this period reports more moments of consciously choosing to follow an ESDM approach rather than what I perceived to be a music therapy approach:

> “BUT by ESDM reasoning, I can’t expect him to be able to join in songs and games unless he achieves the previous goals first…in this context I use music as a support and a tool, rather than integral to achieving the goal.”

This statement from the data is very definite, but also slightly misleading – it implies that a child cannot interact with songs and games unless previous goals have been achieved. However, the feedback I received related to learning language and using the ‘one up’ rule as a scaffolding technique.

The majority of the data from term two of ESDM focuses on using music to support ESDM, but there was one instance when I felt that I overcomplicated an activity by unnecessarily including an object rather than following the music:

> “I sat him on the ball and bounced him as Humpty Dumpty but he didn’t seem to enjoy it hugely and would rather just repeat the rhyme. Interesting to think that by focusing on ESDM (introducing the ball to make it ‘more motivating’) I lost the moment in which we could have really engaged in the song together and created a routine without props.”

The child was already motivated by the music and although objects can be incorporated in SSRs it is not required – rather they are tools to increase engagement with the therapist.

Conclusion

As a humanistically-trained music therapy student attempting to work within a behavioural intervention model I was unsurprised to uncover themes of conflict and following one approach over another at different times. However, it was positive to see from the data that as time progressed, I found ways to combine the two approaches, lessening my discomfort and highlighting the benefits of both.

Chapter 5. Discussion

This section will discuss my themes and how they relate to the existing literature on working with autistic children.

Two of the three themes developed from the data analysis address foundational elements of therapeutic treatment– connecting and engaging with the individual, and forming a therapeutic relationship. It is unsurprising that a large part of my data was concerned with these elements as I was a student in both music therapy and ESDM practice learning how best to achieve connection and relationship. Because I was working specifically with autistic children, trends of relationship and engagement were to be expected in the data, as these are the general areas where autistic children tend to fall behind their typically developing peers.

5.1 Building relationship and singing to engage

The first theme of 'building a therapeutic relationship with the child' is a significant one, when we consider how important that relationship is to the progress of the child (Mössler et. al, 2019). The effect of a close and positive relationship between the therapist and the child is also emphasised within ESDM training (Rodgers and Dawson, 2010). When I decided to focus on improving my ESDM skills after lockdown, one of the changes I made was to spend more time being the child's 'play partner'. I wanted to take more time to establish the relationship before attempting to target goals and putting demands on them. I also chose fewer goals to focus on for each child, which helped me feel that I could take sessions at a slower pace than during the first term.

A common and powerful musical feature within my first and second themes was the use of familiar songs or melodies to engage and motivate the children. In each case, once a familiar or preferred song was identified the child appeared to become much more engaged and more willing to have me join in their play.

Identifying and interacting within favourite songs appeared to establish a common ground from which to build our relationship, while also increasing motivation to achieve goals. Re-creative musical experiences are shown to be effective in the literature on music therapy with children with autism (Wheeler, 2014; Finnegan and Starr, 2010). My findings match the literature in that using familiar music can target communication, shared attention and problem solving, and can increase motivation to engage in autistic children.

There was a significant difference between how I tried to establish a relationship with Anna in the first term of ESDM and with Toby and Mack in the second term of ESDM. In my work with Anna, my data shows that I spent a lot of time in sessions trying to find ways to incorporate music that engaged her. Very few of these attempts were successful until I discovered her love for 'The Wheels on the Bus' and I tried to use this song more frequently to increase our moments of positive engagement. The data shows that I was uncomfortable during other instances of singing and music with Anna, because she was not engaged at all and at times actively protested. Her attitude to my singing in particular changed after lockdown, as she came into our catchup sessions with an increased motivation around language and communication. This resulted in much more imitation of varied intonation and speech-sounds. It also strengthened our therapeutic relationship in a way, because I felt encouraged by her responses and that we were making good progress towards her goals.

In terms of building a relationship with Toby and Mack in the second term, I focused on being a play-partner first which meant initially observing in the background while they explored the toys and objects, and slowly introducing myself into their play. This is when singing to engage had a secondary focus in my sessions. Because I wanted to improve my delivery of ESDM, I did not start the term with much music

making in sessions. On reflecting on my work with Toby, I believe it is likely that we would have established a relationship sooner and made faster progress if I had made music a stronger feature of our sessions. He became so captivated by songs and movements within them whenever I sung that I may have been able to resolve some behavioural challenges sooner and more effectively by including music in the ESDM approach to behaviour goals.

In terms of Mack, his family reported that he did not have much interest in music in general, although he did like to watch some specific children's songs on YouTube. I did not observe much response either positive or negative when I sang in early sessions, so I continued to focus mainly on ESDM strategies in our sessions. I sought advice from my visiting music therapist about how to include more music in my sessions with Mack, and I began to use more musical narration and sung-speech with Mack. In working with Mack and in the CBIC placement, I often felt that the music I should be including had to be structured to be successful which could sometimes result in a mental block during sessions, and I mention experiencing 'freezing' during sessions in my data from CBIC. However, music associated with specific activities has been shown in the literature to be very effective for children with autism (Kern, Wolery and Aldridge, 2007), and was shown in my data through the ball-popper, tower-building, and beanbag-sliding songs used with Mack and Toby. ESDM also recognises the importance of music to signify routine, bookending sessions with 'Hello' and 'Goodbye' songs, and using a 'Tidy-Up' song to aid transitions between activities. While pairing a song with an activity was successful in cases described above, these activities did not appear consistently in sessions. In comparison, I used the 'Tidy-Up' song in almost every session with all children – the data showed that

the children grasped the task very quickly in response to the song and my modelling, and Toby began singing it at home.

5.2 Conflict

The data categorised in my 'Moments of discomfort' theme came initially from being unsure how to approach and structure my sessions. In the first term I thought that the best way to do that was to use as many familiar songs as possible, which would enable me to build a relationship with the child and target goals simultaneously. I started the placement with an assumption that children in general enjoyed and were motivated by music. However, I realised within the first few weeks that I was allowing my use of music in sessions to be dictated by the reaction of the child, which was initially strongly negative. I was hesitant to use much prolonged music in sessions with her because I wanted to keep our relationship positive. Once I discovered that she did enjoy specific songs I tried to use them as much as possible in sessions, to target goals and build the therapeutic relationship. As described in the findings, I was also hesitant to bring my guitar into sessions because I was not confident that I would be able to 'control the materials' - I assumed that the instrument would distract the child and that it would be difficult to move on to another activity with the instrument visible in the room. With hindsight and more confidence in my ESDM skills, I know that I could have created a joint activity routine around ending the activity and putting the guitar away before moving on to something else which could have allowed many learning opportunities and ways to target goals.

5.3 Improvisation

While research into music therapy and parent-delivered ESDM acknowledges music improvisation as a useful tool (Hernandez-Ruiz, 2018), the value placed on instrument play and improvisation between ESDM and music therapy could be seen

as a key difference between the two approaches. This may have been a large factor underlying the conflict I felt about bringing instruments into sessions. Music in the form of songs and rhymes are acknowledged as strong routine signifiers in ESDM, as shown by the 'Hello', 'Goodbye' and Tidy-Up' songs. The ESDM guidebook also encourages the use of songs to develop gestural imitation and language. ESDM uses a behavioural approach to learning, and songs or rhymes that have exciting endings are often used as part of the A B C teaching format – action, behaviour, consequence. For example, teaching action imitation within 'Row Your Boat', with the consequence being an exaggerated engaging 'scream' and perhaps tickles.

There were musical instruments already being used at the ESDM clinic - a small plastic drum with two beaters, and two xylophones as part of a box of special resources which swapped between the two therapy rooms each week. I also brought in colourful egg shakers and a bongo drum which stayed in the room I worked in. I experienced some success in terms of engagement, matching and imitation with these instruments. Anna in particular enjoyed interacting with me on the xylophones. However, often when it seemed that we could continue playing the xylophones together for a longer period of time, my thoughts would return to her ESDM goals and teaching strategies. I was concerned with what we were tangibly achieving in those moments and how we could show progress towards goals, rather than focusing on the social and communicative benefits that musical improvisation has for children with autism. The positive effect of music improvisation on children with autism and its compatibility with ESDM goals is stated in the literature (LaGasse, 2017; Kim, Wigram and Gold, 2008). It may be that a more experienced ESDM practitioner could include music improvisation into their sessions more successfully.

The method that increased most in my data was sung-speech (Paul et al., 2015), in the form of musical narration and singing instructions. I used these methods to encourage the children's awareness of me as a play-partner, to increase engagement, and as a support to achieve activities and goals. I received feedback relating to the 'one-up' language scaffolding rule that I was using too much language in my improvised narrative and instructional songs. This was frustrating at the time, but I soon realised that songs of one word were used very effectively at CBIC and could be transferred to the ESDM setting.

Reflecting on the data relating to this feedback, I would like to clarify that the ESDM curriculum checklist assesses childrens' abilities across all four levels and does not require strict progression through all skills from one level to the next. However, I was encouraged to go back to the checklist by my certified ESDM supervisor at the time, and to consider more developmentally appropriate ways of engaging with the child.

5.4 Parental presence in sessions

One thing that came up in my data on multiple occasions was how the children's parent being in the room during the ESDM sessions affected me across two terms of one-to-one sessions. During my placement at CBIC, parents were always present and were often part of the session. They helped to redirect their child during activities or offered information to use during the session, or played interactively with their child facilitated by the music therapist, depending on the child's goals.

When I began working with children in the ESDM model, I felt unsure and conflicted about the parents' presence in the session. In the three-day introductory training course, we had been advised to encourage parents to act as furniture within sessions – there for the child to refer to or seek reassurance from but observing rather than

participating or contributing. As a trainee in the ESDM intervention I initially felt uncomfortable with this arrangement as it seemed to immediately place me in the role of 'expert' when working with their child. Especially in the first term, I welcomed suggestions and input from the parents present in sessions. Some told me that routines from ESDM were being used at home, such as the 'Tidy-Up' song. This links to the literature on previously explored ways of incorporating music therapy and ESDM (Hernandez-Ruiz, 2018). In Rogers & Dawson (2010), parents are encouraged to learn and practice intervention techniques with their children as much as possible, as they are the child's primary teachers. There is also P-ESDM, a branch of the intervention delivered primarily by the parents with guidance from certified practitioners. However, encouraging us to have parents act as 'furniture in the room' may have been to help us, as novices, practice building a relationship with the child while developing our intervention skills.

5.5 Miscellaneous findings from the data

It is clear that throughout this year, my perception of my competence as a music therapist and my lack of confidence in practicing has been strongly present in my reflective notes. This is to be expected as a humanistic music therapy student working in a behavioural setting, and simultaneously working as an ESDM trainee. As a first year student who was not completely sure that music therapy was the right path for her, it seems like a strange decision to have taken on another intervention training in a different model at the same time. When I put my name forward for this cross-over experience I was looking for structure and a way to measure the difference I was making, which I lacked in music therapy. Although this experience has been challenging, I can see my reflections on my confidence and competence become more positive over the course of the year. I have grown in my appreciation of the

flexibility of music therapy with young children, while also learning vital skills to improve attention and engagement when working with autistic children.

Another idea that reoccurred in the data was that of ‘holding musical space’. In the ESDM context at the start of the year I found myself wanting to be able to ‘hold musical space’ somehow, as a way in which to interact with the child musically. In hindsight this came from not knowing how to address behavioural challenges in sessions and wanting to allow the child to express themselves in a safe space which they could then also engage with afterwards. An example of this would be of Fred in the CBIC context improvising on the drum set and the music therapist and I creating music around him, to contain his energy and give his playing context within a larger improvisation.

5.6 Answering my research question

It is clear from this discussion that all three elements of my research question are present in the findings from my data. There are parallels between the two approaches in the way they build the therapeutic relationship. Both recognise the importance of attracting the child’s attention and following the child’s lead, as well as using matching (called ‘sensitivity and responsivity’ in ESDM), music to signify routine, and to encourage awareness of and interaction with others around them. Both ESDM and music therapy in the CBIC context use developmental approaches, so in that sense both can target similar goals around imitation, communication, behaviour, language, and emotion regulation.

It is also clear from the findings and the discussion that there are many examples of synergies between the two approaches – where one approach can inform or benefit the other, as described in this vignette of work with Ella at CBIC:

5.6.1 Synergy vignette – Ella

Ella had been attending CBIC and receiving music therapy for at least a year before I arrived on placement. She had a diagnosis of autism spectrum disorder and was also receiving ESDM therapy. She was around four years old and seemed like a generally happy child, although very energetic and hard to keep in one spot. She had some language but did not speak often and usually only one or two words at a time.

As she had already been receiving music therapy at CBIC she had established favourite activities with the music therapist there. The most motivating activity for her at the time was to sing or interact with familiar songs played by the music therapist. Encouraging language was a goal for Ella during sessions, and this was mainly targeted by leaving gaps in the lyrics for her to fill in, with the aim that she would eventually sing along with the song. She would often move around the room dancing or running while I or the therapist sang the song, but whenever we paused for her to join in, she knew exactly what the correct words were, even to songs that were still new to her.

Because she had quite a narrow focus on songs at this time, we had to find more ways to challenge her within sessions. Being able to refer to Ella's more specific ESDM goals in our music therapy sessions was very helpful in this regard, because they broke down overall communication and language goals into smaller steps that we could try and target through her love of hearing familiar songs. Ella was almost as motivated by seeing pictures that represented her favourite songs as hearing the songs themselves, and by using these props we were able to target her more specific goal of pointing while also encouraging her enjoyment of music and expanding her repertoire of songs. These visuals worked well for choosing between songs, also in

transitions between activities by putting the visuals into a container when finished with.

One song that Ella loved described many different spooky Halloween characters. We recreated the song on the piano as it matched the dark and scary mood of the song better than a guitar. We paused in the song to encourage Ella's language skills, and also created visuals of each character to target pointing, eye-contact, and to provide more motivation within the song.

The ways ESDM can be used within a developmental music therapy context are clear in this vignette. Including a visual element is a generally useful tool when working with children and is not specific to either ESDM or music therapy. However, by adopting a more object-focused approach within her music therapy sessions, we could use strategies emphasised in ESDM – bringing the visuals up to eye-level to encourage Ella to make eye-contact; encouraging her to reach and point to the visuals by having them out of reach before giving them to her; as well as leaving gaps in lyrics for her to complete, which could also be seen as the first step in the ESDM hierarchy of prompts.

This vignette also highlights another way in which developmental music therapy could benefit from ESDM – in goal setting. Music therapy goals can be quite general, often targeting improvements in communication, social interaction, emotion regulation, gross and fine motor movements, and cognitive ability. What is specifically targeted in these different domains is usually decided in consultation with the child's family and the goals of other specialists or early childhood teachers (Adler, 2006; Furman and Humpal, 2006). In contrast, ESDM therapists use the ESDM curriculum checklist to set goals for the children they work with. The checklist 'provides developmental sequences of skills in a variety of developmental

domains…developed specifically for young children with ASD and reflect[s] their typical developmental profile' (Rodgers and Dawson, 2010). Every domain covered by the curriculum checklist at each of the four levels is broken down into different specific goals that must be met before the next goal can be targeted. Because each domain covered by the ESDM checklist is broken down to a high degree within each developmental level, these more specific and measurable goals can be useful for a music therapist. It may be that including more specific and measurable goals whose progress can be tracked and then tangibly achieved could be beneficial to both families and music therapists. Another way in which knowledge of the ESDM curriculum checklist could be beneficial to music therapy practice is in its developmental structure, which could provide helpful solutions for when a child is not making progress towards a goal that is too advanced for their developmental level.

My work with Toby in the ESDM context shows how important it is to include music in sessions, and not to confine it to a particular role but to use it whenever possible:

5.6.2 Synergy vignette – Toby

Toby began attending ESDM sessions in the second half of the year. He was around three years old and had a diagnosis of autism spectrum disorder. He had a wide vocabulary but little functional language, but was a very confident child and interested in his environment.

It became clear soon after starting therapy sessions together that Toby did not like being a small room with the doors closed. He was very reluctant to enter the room, protesting vocally and physically, and would bang on the doors and pull the door handles in an effort to open them. Because this was a barrier to targeting goals and

making progress in therapy, tolerating periods in the therapy room while engaged in an activity had to be Toby's main goal.

During the first few sessions, I tried to find activities that engaged and motivated Toby. We spent most of our sessions in the break-out room beside the therapy room where he would happily engage with me in playing with a large gym ball or with toys or games from the therapy room. I relied on his mum or dad to help me get Toby into the therapy room to start each session in an effort to increase the time he would happily spend there. However, on one occasion his mum was stopped by another staff member to talk, and I had to find a way to bring Toby into the therapy room myself. I tried to entice him in with toys and games that we had played with before, but when nothing worked and he was still hiding from me across the foyer, I decided to try using a song. I saw a stuffed monkey toy and brought it to him, singing 'Matilda Gorilla'.

The change in his affect and attitude when I was singing was huge. He was interested in the monkey, and seemed energised by the song, turning to face me with a wide smile. Once I had made this discovery, I tried to start every session with a familiar song to help him enter the therapy room. Over time he began to come into the room independent of mum or dad if we were singing a preferred song. Even on days when he was under the weather or tired and wanted to leave the room, his would appear to join in the music involuntarily – on one tricky morning when he wanted to go back to the car, I was trying to engage him with 'Dr Knickerbocker', and although he was still protesting he joined in the actions to the song and sang along to the counting section with a smile, before continuing to protest to leave. Realising Toby's strong motivation to engage in familiar songs was the key to start to build a positive relationship and a positive experience in the therapy room.

At the beginning of this term, I had made the decision to focus on ESDM strategies, and to include music where I could when I felt more comfortable. However, this was clearly the wrong approach in Toby's case, and if I had not discovered Toby's love of songs my ability to build a positive relationship with him, and therefore our progress towards goals, would have been much slower.

5.7 Strengths and limitations

The main limitation of this research is my position as an un-certified ESDM practitioner and a trainee humanistic music therapist. A more experienced music therapist may have experienced less challenges than I did in merging these two interventions. Another limitation of my research was the amount of data collected from CBIC compared to the amount of data from ESDM as I was at the ESDM clinic for one month longer than CBIC. My clinical notes from ESDM were much more detailed because almost every session was filmed, enabling me to take notes and reflect on the session afterwards in a lot of detail. I wrote the session notes for CBIC during the day, then took my own personal notes in my own time, which often resulted in my notes being sparse.

Another limitation of this research was the lockdown period from March-May 2020 due to COVID19. Although I was able to keep doing theoretical work and some online music sessions, it did mean that I spent less time at CBIC than was initially planned. In terms of the two families I worked with in the first term, one decided to make up the lost therapy hours by receiving parent coaching instead. I did not include that data in my research as I only had notes from four sessions with that child. The second family (Anna's) decided to make up the missed sessions in the two weeks immediately after lockdown, resulting in an intense period of work together with both Anna and I making a lot of progress.

A strength of this research project is that it may result in further collaboration between ESDM and music therapy.

5.8 Future research

Future research that may stem from this project could investigate the ability of more experienced ESDM and music therapy practitioners to merge the two approaches in their work; the ways in which improvisation is used within ESDM sessions and whether including more musical improvisation is possible; further investigating how key ESDM strategies could be incorporated into developmental music therapy with autistic children.

Chapter 6. Conclusion

This research shows that there are ways in which ESDM and developmental music therapy can influence and benefit each other. I found from this research that the motivating power of music when used with young autistic children is acknowledged in both approaches, and music therapy may be able to assist ESDM in utilising music more in sessions. Including more musical improvisation may be beneficial, as well as targeting a wider range of goals through play with familiar songs. As a student of both approaches, I found conflicts and divergences between the two approaches which made expressing music therapy principles of improvisation, flexibility and interacting through music difficult. However, I do think more skilled ESDM therapists would be able to include more music therapy values into their practice without compromising ESDM principles. I have also seen an experienced music therapist incorporate ESDM strategies into her work successfully. I believe that ESDM could inform developmental music therapy in a positive way, especially in terms of goal setting and providing tangible developmental progress markers.

Having completed this research I am confident that music therapy and ESDM can positively influence each other, although the fundamental differences between behavioural and humanistic approaches suggests that one cohesive combination may not be possible.

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Appendix A: Research information sheet

Music Therapy Research Information Sheet

Title of research: 'An exploration of the synergies, parallels, and divergences between ESDM and music therapy with preschool children with autism, in a music therapy student's practice.'

Researcher
Holly McPhee
Masters of Music Therapy student at Victoria University of Wellington

Supervisors
Penny Warren
MMusTh, Teaching Fellow at Victoria University of Wellington
pennywarrenmt@gmail.com

Dr. Daphne Rickson
Associate Professor of Music Therapy at Victoria University of Wellington

Dear [parent],

I am a student at Victoria University of Wellington in the Masters of Music Therapy programme.
I would like to invite you to take part in my music therapy research project, exploring the interaction between music therapy and the Early Start Denver Model (ESDM) when working with children with autism.

I want to understand the similarities and differences between these two models, which may further the understanding of each and help each inform the other in future.

As part of the programme I am required to carry out a research project based on my research question. I will be using a method called Secondary Analysis of Data for this project, in which my existing clinical notes from my placement with the ESDM team will be analysed as data. I hope to find themes within my data that will help to answer my research question and will present my findings in the form of a thesis. It is also a requirement of the programme that my thesis must use descriptive vignettes that illustrate my work throughout the year.

Examiners both internal and external to Victoria University of Wellington will examine my work in 2021, and the thesis will then be published in the University library in both hard copy and online forms. All information relating to this research will be kept by the University for 10 years before being destroyed.

I have been granted consent by the ESDM clinic to use my clinical notes as research data for my project. I would like to request permission for session details with your child to be used within a descriptive vignette of my work. Your child will be anonymous in the vignette and any identifying details will be excluded, in accordance with University ethics. It is also possible that this thesis will be published outside of the University in future, therefore I also request consent from you to allow this publication. In this event, your child will remain anonymous and unidentifiable.

Participation in this project is voluntary, and if you do not give consent it will not affect my research.
Please take your time to read this information sheet and contact me or my supervisor Penny Warren if you have any questions or concerns.

Once you are satisfied with the information you have been given, please sign the enclosed consent form, sending a copy to me and keeping a copy for your own records.

With kind regards,

Holly McPhee

Appendix B: Research consent form

Music Therapy Research Consent Form

Title of research: 'An exploration of the synergies, parallels, and divergences between ESDM and music therapy with preschool children with autism, in a music therapy student's practice.'

Researcher
Holly McPhee
Masters of Music Therapy student at Victoria University of Wellington

Supervisors
Penny Warren
MMusTh, Teaching Fellow at Victoria University of Wellington
pennywarrenmt@gmail.com

Dr. Daphne Rickson
Associate Professor of Music Therapy at Victoria University of Wellington

1. I have read the Music Therapy Research Information Sheet sent with this consent form and have had any questions or concerns answered to my satisfaction.

2. I understand that all identities within the research data will be anonymised, and that all information relating to this research will be confidential. This research will be securely kept by Victoria University of Otago for 10 years before being destroyed.

3. I understand that the research project will be presented by the researcher as a thesis toward a Masters of Music Therapy qualification.

4. I give consent for details of therapy sessions with my child to be included in this project in the form of an anonymous descriptive vignette.

5. I understand that this project will be published and kept in the Victoria University of Wellington library, and may be published outside of the University in the future.

6. I wish to receive a copy of the research project YES / NO

I, ……. have read and agree with the above statements.

Signed:…… Date:……..

With kind regards,

Holly McPhee

Appendix C: Examples of coding in Nvivo