Article

‘What sound can you make?’ A case study of a music therapy group for children with autism, learning disabilities and challenging behaviours

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ABSTRACT

Children with autism have historically received individual music therapy sessions; however they can also benefit from small group work where they can have a shared musical experience. This case study describes a practical example of a group for children with autism who also have learning disabilities and challenging behaviour, combining psychodynamic music therapy with a behavioural approach (TEACCH). On one hand my therapeutic stance is influenced by psychoanalytic writings that draw on the understanding that music can re-create mother-infant interactions and holding and containing environments. On the other hand, TEACCH is a behavioural system employed by schools in which strategies and techniques are used to adapt the environment and enable children with autism to learn and develop. This system uses photographs and visual communication to aid children in understanding their environment and depends on schedules and routines to help children learn. The case study describes how the music therapy group provides an opportunity for the children to interact socially, further developing their communication and social interaction skills.

KEYWORDS

music therapy; autism; group work; psychodynamic; TEACCH; learning disabilities; challenging behaviour; social interaction

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INTRODUCTION AND EXAMPLES OF RELATED LITERATURE

This case study describes a music therapy group which took place in a special needs school in the UK for children with autism and additional diagnoses of learning disabilities and challenging behaviour. The aim of this paper is to demonstrate a practical example of a group for children with autism (and additional diagnoses), showing how group experiences can be positive for these children and provide opportunities for development of social interaction and communication. This case study gives an account of some of the group processes and takes information from clinical notes and video recordings. The case study also focuses

on individual education objectives which are devised for each child; in this way there is an implicit tension between descriptions of the individual and group responses in this study.

This case study is based on an unpublished MA dissertation which I completed in 2011 as a top-up qualification in music therapy at Anglia Ruskin University in the UK, having already qualified as a music therapist in 2001. The original case study investigated how improvised music created a shared experience between four children in a music therapy group. In the MA project I was particularly interested in the *quantity of responses* the children made at different times in the therapy, and what this could indicate about how they were experiencing music therapy. This focus emerged from the idea of using video analysis of music therapy sessions to analyse patterns of interaction, between clients and between client and therapist (Holck 2007).

In my experience, groups can provide a unique and beneficial environment in which children can interact with peers and adults through music. In the past it has been relatively unusual for children with autism to attend groups, and most historic case studies describe individual sessions. Nordoff and Robbins (1971, 2007) wrote many individual case studies about autistic children. One of the most well-known is that of Edward, in which Nordoff and Robbins describe how the boy grows to trust the therapists and uses his voice to interact. Farmer (1985) and Agrotou (1988) also describe case studies using music therapy which helps children with autism to develop communication skills such as eye contact, language, an increased sense of self and tolerance of others. Other case studies include: Warwick (1995), Bailey (2001), Brown (1994, 2002), Howat (1995), Mahlberg (1973), Saperston (1973), and Stevens and Clark (1969). All of these case studies suggest that individual music therapy can be beneficial for children with autism.

Groups however can also provide an important space for the development of social skills, and there are some examples of group case studies. Nordoff and Robbins also worked with children in groups (1971, 1983, 2007), and described groups as having a powerful uniting effect. Alvin and Warwick (1991) worked with a group of autistic and normally developing boys, working on integration and social interaction with peers. Walsh-Stewart (2002) ran a group for children with autism which used psychodynamic music therapy in combination with a TEACCH programme (UNC School of Medicine 2010), describing how the children developed further communication skills. All of these groups and others (e.g. Bull 2008; Burrell 2005; Carter & Oldfield 2002; Muller & Warwick 1993; Nicholls 2002; Oldfield 2006; Woodward 2004) demonstrate the usefulness of group work for children with autism in that they can benefit children in a variety of areas such as attention span, communication, language development and social interaction.

The clinical work presented in this case study was developmentally and psychoanalytically informed, drawing on child development and psychoanalytic ideas such as the writings of Klein (1987), Priestley (1994), Winnicott (1971) and Alvarez (1992). When carrying out this clinical work I was particularly influenced by Alvarez's (1992) idea of 'reclaiming the undrawn child' which she described in her book *Live Company* and her description of work with Robbie – a boy with autism who Alvarez worked with over a long term period. In working with children with autism, employed as a music therapist in special needs schools, I have often used the idea of first joining in with the children's world and then attempting to draw them out into social interaction and relationship. For example, at first vocalising with a child, using their sounds, and then adding other sounds of my own to try to draw them into a vocal dialogue. This is similar to Alvarez's idea of joining in with the child's world. I was also influenced by Bryan's (1989) case study who wrote about shared experience in her music therapy group, how the group members became connected into the whole without losing their uniqueness. This case study influenced my thinking about 'shared experience' and how making sounds together might provide an opportunity for the children in my group to connect with each other.

After outlining the school context and profiles of the individual children, this paper describes how the group was run and the children's responses in the sessions. This is to illustrate how the children responded to each other, myself and other staff members present in the sessions, through vocalising, using instruments and social interaction behaviours.

SCHOOL AND MUSIC THERAPY CONTEXT

The group setting took place in a UK residential school for children with autism and additional diagnoses of learning disabilities and challenging behaviour. The children are referred by local education authorities because they are not benefiting from home and day school

environments, or because their behaviours have become too difficult to manage at home and they need a higher level of support and staffing. The school provides a one-to-one staffing ratio and twenty-four hour care for every child. I had worked at the school as the only music therapist for three years before I began this group, while I had previously worked at several other schools as a music therapist. I worked as part of a multidisplinary team, together with speech and language therapists, clinical psychologists, occupational therapists and nurses.

Music therapy had always been part of the school, and the founding Chief Executive Officer (CEO) originally trained as a music therapist with Nordoff and Robbins – the founders of Creative Music Therapy (Nordoff & Robbins 2007). Over the past years a variety of music therapy approaches have been applied in the school, including creative, social and behavioural approaches. During the time of writing this case study, I was employed for three days a week and provided sessions for children with music therapy on their statement of special educational needs. Music therapy was funded by education authorities through the government. The case load was around ten to fifteen children per week, with individual and group work. Music therapy was valued at the school and seen as providing an important contribution to the children's school day.

PROFILES OF MUSIC THERAPY GROUP MEMBERS[1]

The music therapy group described in this case study consisted of four children all aged between fourteen and fifteen. They were referred by their teacher who had observed them in the classroom attempting to interact with each other. All the children were in the same class and no other children attended that class. The aim of the music therapy group was to focus on their communication and social interaction skills developing individual objectives for each child. Two boys and two girls attended the group: Ray, Oscar, Catherine and Anna. All of them (apart from Anna) had been referred to the school because they needed twenty-four hour residential care and had challenging behaviours related to anxiety, which made it difficult for them to live in a usual home and school environment. Anna had been referred by her parents who lived near the school, and she was a day student living at home – something that was unusual in the school. All the children had been at the school for around five years.

Ray

Ray was fourteen years old and had extremes of anxiety; he would often hit out and become highly agitated if he did not understand a situation. He had made good progress in school, using PECS (2013), which is a picture symbol communication exchange system. He had good receptive language skills and some expressive language on a two to three word level. Ray used an individual TEACCH schedule to guide him around the school and residential home; this was successful in reducing his anxiety. He often related well to staff and sought out interaction with staff that he liked, however at other times he was isolated and would withdraw from others around him choosing not to communicate.

Oscar

Oscar was aged fifteen, seemed relatively settled at the school and related well to staff and other children. His anxiety was less pronounced than Ray; he often self-regulated his anxiety by flicking his fingers and humming. He had expressive and receptive language skills, also on a two to three word level. He was referred to encourage more interaction with others and also to help him initiate more for himself in less structured situations.

Catherine

Catherine was aged fourteen and had good receptive and expressive language on a two to three word level. She often became anxious about moving from one part of the school to the next. She commonly would sit still on the floor and refuse to move for long periods of time and it was difficult for staff to find a way to motivate Catherine to move around the school. However, she did respond very well to music and I helped put in place a transition plan by providing her with an i-Pod as a reward for getting up and moving to her next class. This worked well for Catherine and her response to music on the i-Pod was one of the reasons she was referred to music therapy, to see if live music would help her to interact more with staff and other children.

[1] Written permission from children's parents and the school has been granted for this case study. To ensure confidentiality all names and identifying information have been changed.

Anna

Anna was fifteen, a day student and had fewer challenging behaviours than the others. However, she was very passive and often did not initiate communication, withdrawing into physical movements such as rocking or tapping objects on her teeth. She was extremely silent, and hardly used her voice to make sounds or communicate. She did not seek out interaction with staff or other children and would sit for long hours engaged in one activity, such as tapping her fingers.

THE FORMAT OF THE GROUP SESSIONS

The group ran for twenty-six weeks, with each session lasting forty minutes. Three members of staff, including the class teacher, attended the group to assist the children due to high levels of challenging behaviours. The class teacher acted as a reflective assistant, meeting with me for a discussion each week and the two other support staff helped in practical ways with holding instruments and accompanying the children when they needed to leave the room.

This was very much in alignment with Bull and Roberts' (2005) model of co-working with school staff, in which assistants are divided up into those who provide practical support (such as holding instruments) and those who become part of the reflective process. In this group the class teacher was the 'consistent reflective assistant' and two other staff varied since it was difficult to get the same staff each week because of working patterns and shifts.

I devised a simple repetitive format for the sessions, which would help the children know what to expect every time they came to music therapy. The format was as follows:

- A drum was passed round the group and I sang hello using the acoustic guitar.
- A selection of percussion instruments was placed in the middle of the room and I improvised using voice, bass guitar or piano.
- The group packed away the instruments into a bag.
- A goodbye song was sung to each group member individually.

A holding, containing environment (Winnicott 1971) was created for this group: the time was always the same and the instruments I used only changed a little. I also used repetitive music, using the same hello and goodbye songs and a melodic riff. I improvised on these songs and music, using them as a framework for improvisational voice, acoustic guitar and bass guitar. The riff I used is illustrated in Figure 1.

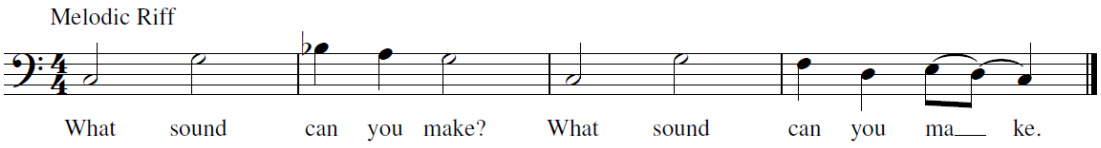

Figure 1: Melodic riff in C major

The school used TEACCH (UNC School of Medicine 2010) and PECS (2013) as part of a total communication system, and this was also used in music therapy. A simple TEACCH schedule was employed, which remained the same every week, consisting of picture symbols for saying 'hello', 'play the instruments' and 'goodbye'. When the hello section of the session was completed the picture symbol was moved from the 'let's do' to the 'finished' part of the chart and this was repeated for each part of the session. This provided a visual support for the children, which showed the start, middle and end of the session (see Figure 2).

For the purposes of this case study I divided the therapy into periods, corresponding to the three terms of the school year:

- Term one: Assessment (sessions 1 to 6) and beginning of therapy (sessions 7 to 11).
- Term two[2]: Middle period of therapy (sessions 12 to 15).
- Term three: Middle period continued (sessions 16 to 21), before half term holiday.

[2] Term two was unusually short because of school closure due to weather disruption.

- Term three: Ending period of therapy (sessions 22 to 26), before summer holiday.

Figure 2: The TEACCH schedule

Assessment: Sessions 1 to 6

A group assessment was carried out and spread over five sessions, which were recorded onto video. The assessment was carried out in a group setting but focused on individual educational objectives; this was because the school system required evidence of individual progress and objectives to be shown for each child. The assessment was based on the model devised by Wigram (2002) for children on the autistic spectrum. This model sets out a method for analysing children's responses, by recording what happens in the session, how the children respond and how this relates to expectations in the therapy (i.e. objectives). So for example if a child starts to turn-take using their voice, this might mean that development of communicative vocalising could be an appropriate expectation or objective. In this way individual objectives were created for each group member as follows:

- Ray: communicative behaviours, vocalising and relating closely to others.
- Oscar: shared experience, motivated interaction and relating closely to others.
- Catherine: communicative behaviours and vocalising, movement to music, self-expression and relating closely to others.
- Anna: communicative behaviours (such as eye contact) and vocalising, relating closely to others.

Beginning of therapy: Sessions 7 to 11

In the seventh session, I used the acoustic guitar, singing gently to each child and the staff supported the children by sitting quietly and offering them instruments. The children responded by sitting calmly and still. Oscar played the drum and harmonica and at the end sang goodbye. Ray played the frame drum, was unsettled and walked round the room humming to block out sounds. Anna played two egg shakers, tapping them on her teeth.

There was a very flat, uncreative feeling to the seventh session. Even though there was a lot of activity, the children were waiting for my direction and it seemed hard to find creativity and playfulness during the music making. Alvarez (1992) considers the absence of play in children with autism and how this can manifest itself in the countertransference of the therapist through feelings of boredom. I recognised this feeling in myself, although I would describe it more as feeling of being stuck and uncreative. I have experienced this at other times when working with people with autism and recognised the feeling. The group was stuck and stilted and I needed to find a way to create connections and creativity and help the group members initiate and become enlivened. The group was a brand new situation to the children, so they needed time to settle and get used to the sessions. In addition, they were used to being directed by adults and told what to do. I deliberately wanted to create a space in which they were not directed but had more freedom to respond how they wished. I thought this would create a good alternative space to the classroom and create opportunities for the children to respond and interact in ways which they were not doing in other settings. I also felt it was important to define the music therapy service as providing a different sort of space from that of the highly structured classroom. This idea was well-supported in the school and music therapy was valued for providing a freer space (within a framework) in which the children could explore creativity and spontaneously respond.

It took around two months for the children to start to interact, make choices and initiate for themselves. In session 8 there was a shift in their responses; Ray started to vocalise more and initiate picking up the instruments and Anna also started to vocalise more, making high-pitched melodic phrases.

Middle period of therapy (term two): Sessions 12 to 15

Throughout sessions 12 to 15 the children seemed to increase their amount of vocalising week by week. As explained, in my original MA project I was particularly interested in the quantity of responses the children made at different times in the therapy. Therefore, I looked for any increases in the children's vocalising happening at the same time as my improvised music. I then talked with classroom staff about the meaning behind their vocalisations. For some of these children an increase in vocalisation could mean more engagement with the therapy and for others it could mean less engagement. In particular Ray and Anna were very vocal. During session 15 Ray sang the words, *"What sound?"* from the melodic phrase I had been singing and improvising with for several weeks. Figure 3 shows the vocal riff I sang in D minor and an extract from Ray's vocal responses.

Middle period of therapy (term three): Sessions 16 to 21

Between sessions 16 to 21 Catherine became very motivated to walk to the room and in fact was the first one to arrive in session 19. She had previously been having difficulty becoming motivated to walk from the playground to the music therapy room and had taken several weeks to start to come on time and get used to the idea of attending. At the start of

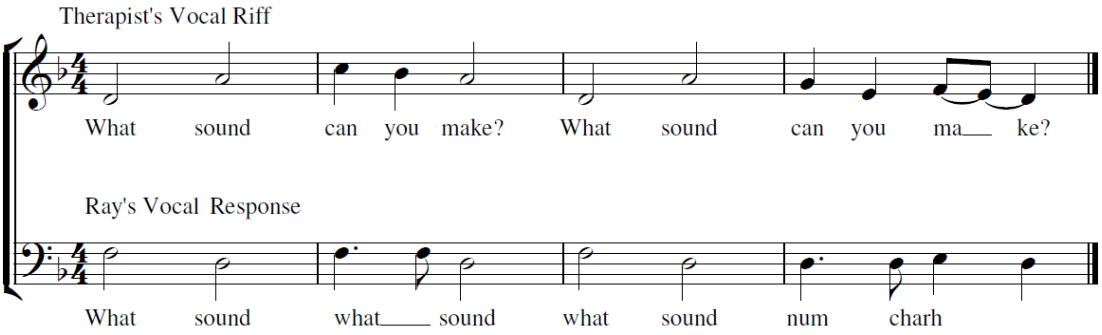

Figure 3: Therapist's vocal riff in D minor followed by Ray's longer, vocal response

session 16 she initiated reaching out for the drum and played before the others arrived. As I sang 'hello' she moved her upper body to the music, as if dancing in her chair. She also made tiny rhythmic vocal sounds to the fast pulse of the music. Later in the session she picked up the shakers and hit them together in a rhythm consisting of two crotchets and a quaver. Simultaneously, Oscar started to play in a more sustained manner on the guiro; Catherine's playing seeming to encourage Oscar. Gradually the group started to take more responsibility and initiate activities for themselves; this was as simple as picking up instruments for themselves or picking up the bag to pack away the instruments. In session 21 everyone in the group spontaneously helped to pack away the instruments, staff and students together; there was a real feeling of togetherness and I wrote in my clinical notes:

> "Packing away has become a real joint event with everybody taking part spontaneously" (Clinical notes, July 2010).

Ending period of therapy: Sessions 22 to 26

Over the last period of therapy there was a very hot weather spell which affected everyone. The temperature was 32^{o} Celsius outside, although it was slightly cooler in the music room. The effect on everyone was tangible; the group members moved around at a slower pace and it was more difficult to concentrate. During session 22 the students were very quiet and did not interact much, as if each one was trying to find an individual way of coping with the heat. I used a visual and verbal countdown to communicate the end of the therapy. The countdown was used three weeks before the

finishing date; Figure 4 shows the photograph count down, with pictures of myself for each remaining session.

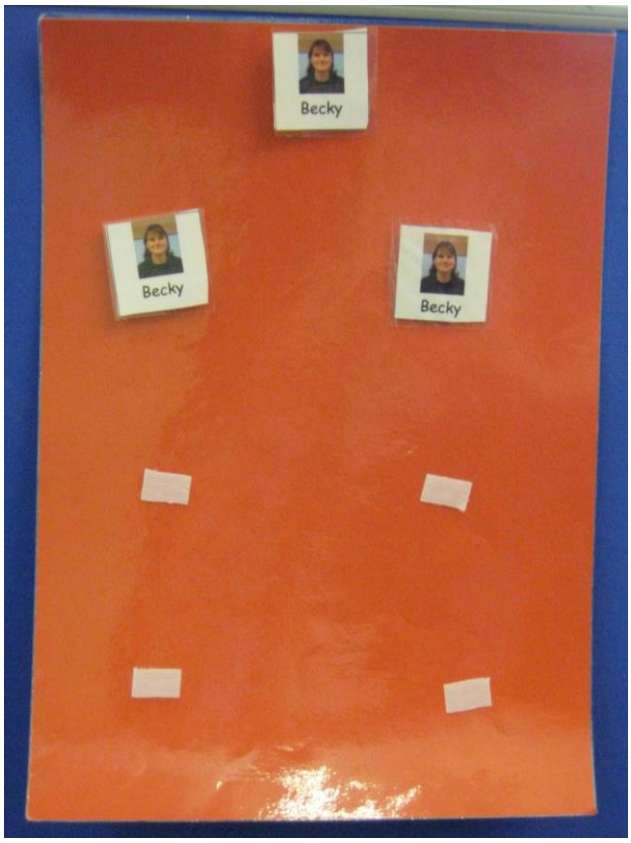

Figure 4: Photo countdown

The first time I used the countdown there was a notable decrease in responses from some of the students. Since I was interested in the number of responses the children made at different times in the therapy and what this could tell me about how they were experiencing music therapy, I asked the question: *"Did less vocalising mean they were more or less engaged?"* For example, in Anna's case, less vocalising did seem to indicate that she was less engaged, since in the middle period of therapy she had been very vocal in response to other sounds in the room. The staff and I felt sad to be finishing the work and this may have had an effect on the children.

During the last session certificates were given out to each individual, stating what they had achieved during the group. This generated a general feeling of excitement and the children seemed to recognise that a different activity to the usual goodbye routine of singing to each other was taking place. After Catherine had been given her certificate she clapped spontaneously, and there was a positive feeling between everyone in the room. This seemed like an important moment for the group; we were acknowledging that the children had achieved something in coming to the sessions for the whole school year (attendance and getting to class was often difficult for these children because of anxiety), and that staff and children had been able to relate together through the improvised music-making.

CHILDREN'S RESPONSES

I kept a record of the children's responses in my clinical notes and by analysing the video-recordings of the sessions. For sessions which I felt had been important (i.e. with changes in responses), I watched the video back and took notes. For the purposes of this case study I focused on one type of response for each child, and chose the response that seemed to have the most significance for that child. In other words I have chosen a type of response for each child which was a communication area they needed to develop. For Anna this was use of her voice as she was hardly using it at the start of the sessions, for Catherine moving more to music (she often did move to music and this was a starting point with Catherine to develop interact with others in the group), for Oscar initiating playing instruments (he was often very passive and waited for others to act for him) and for Ray using his voice for communication (using language and singing to interact, rather than humming to block out other people). Figure 5 illustrates the sessions in which each child presented this particular type of response.

Ray's vocalising

Ray was very vocal from sessions 8 to 23 (as shown in Figure 5). His quality of vocalising changed and decreased in frequency slightly over the course of the therapy. This was actually perceived as a positive change, since at first Ray seemed to be using vocalising to block out other sounds in the room, putting his fingers in his ears and humming (for example, session 15). His vocalising mostly occurred when he was playing a solo or when the other children were playing a solo. However, there was a difference in sessions 15 to 23 when he started to vocalise in a different way during the whole group improvisations. In my clinical notes I had written that his vocalising changed from humming to melodic babbled phrases. His sounds seemed to become more communicative and contain more words and melodic phrases. The music extract in Figure 3

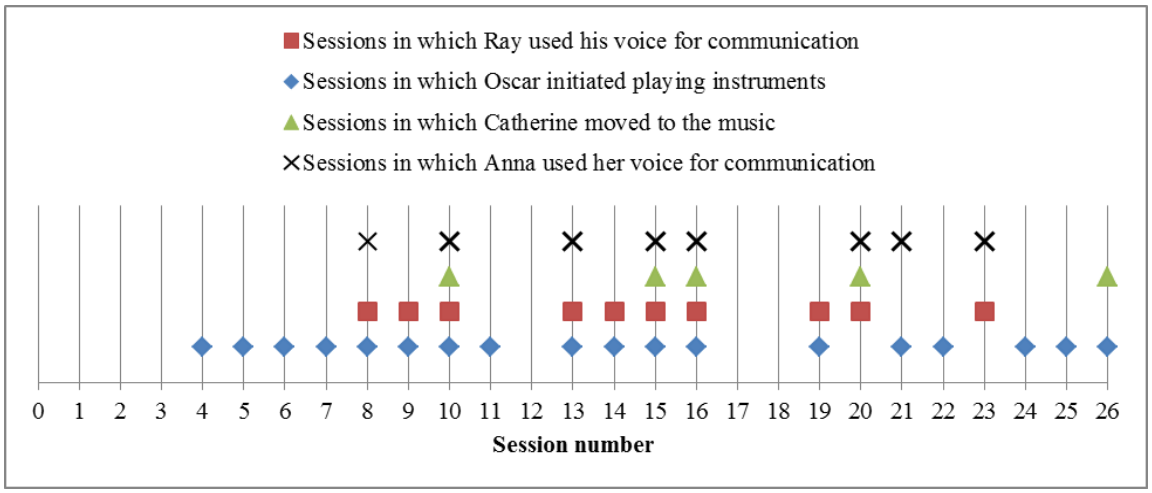

Figure 5: Session number and children's responses

shows one of Ray's melodic phrases and also what I was singing at the same time. Here, his vocal sounds seemed to be in response to my song. I have often observed children with autism using vocal sounds to block out other noise, perhaps because of being physically sensitive. It is important for the therapist to know both what and how much to play with these sorts of responses. In the case of Ray I used chords on the guitar and vocal harmonies to join in with his humming. This may have helped him to gradually relax and feel safe in the group and so able to start to join in more vocally rather than just block out sounds.

Oscar's initiating

In school, Oscar was constantly looking for direction from staff and music therapy was an opportunity to help him make his own choices and initiate. In the sessions I agreed with staff that we would not give him any direction even if he asked for it. Oscar quickly seemed realise that he did not have to wait to be prompted and in session 3 asked verbally to play the ukulele. After this he began to initiate picking up instruments and playing without being directed. He frequently initiated playing the harmonica (sessions 6, 8, 10, 13, 14, 19, 24 and 26) and he also played the guiro (sessions 11 and 19). However, his playing often took on a perseverative quality, repeating the same movement over and over again, and I wondered if he was playing because he thought that was the 'rule' and what he was expected to do. However, he did continue to play throughout the sessions and often joined in singing the hello and goodbye songs.

Catherine's movements

I chose to look at how Catherine was responding in the sessions through movement. Movement was an issue for Catherine and she did not like moving from one place to another and often preferred to sit still in the same place for long periods of time. I kept a record of her movement responses, recording how many instances there were of Catherine swaying or dancing to the music, how many times she walked round the room, or made rhythmic movements in her chair. Catherine spontaneously moved to the music and her movement and her responses often occurred at the same time as vocalising and instrumental responses from the other children (sessions 10, 15 and 16). Catherine's moving was in response to the group's sounds, and as the group became more 'noisy' the more she moved.

Sachs (2007) writes about the connection between movement and music, that music can sometimes help people with autism to create connections in their movements and perform sequences of movements more easily. He also writes about music's ability to elicit spontaneous movements in the listener, especially where a pulse is present. Both of these ideas could apply to Catherine; perhaps the music helped her to organise and sequence her movements, and also to move spontaneously.

Anna's vocalising

Anna was silent up to session 7 and then between sessions 8 and 23 she increasingly started to vocalise. She made quiet, high pitched, melodic

sounds, often after other children had vocalised and also when I sang directly to her. Her sounds were in response to other sounds in the room, for example vocalising in response to a drum in session 10, and turn-taking vocally with me in session 21. She seemed to be starting to use her voice for communication. This was a big change for Anna, who had previously been silent in the sessions and in the classroom. She started to vocalise more with staff in the classroom after the music therapy sessions. Her class teacher wrote:

> "I am pleased to see, that music therapy sessions seem to have positive impact on Anna's behaviour in school. I am noticing that Anna is much more interested in vocalising sounds, copying voices and she tries to interact with staff in that way, trying to get attention".

Other case studies in music therapy literature suggest that music therapy can encourage children with autism to use their voices for communication (Bryan 1989; Farmer 1985; Oldfield 2006). In Anna's case, I vividly remember a moment in a session when I was singing hello to her and she suddenly looked me straight in the eyes and vocalised. Anna seemed to realise at that moment that I was singing to her and that her sounds could have an impact on me. The pace, timing and contours I used to sing to Anna reflected her sounds and movements and this gained her attention. This links to two points:

i) Spontaneous music making can re-model early mother-infant interactions.

ii) Because of the re-creation of the early mother-infant interactions, Anna suddenly seemed more aware of herself and of me.

Agrotou (1988) describes a similar case, as does Levinge (1990) in which both clients became more self-aware through the use of improvised music making.

CONCLUSIONS

This case study has described a music therapy group for children with autism and additional diagnoses of learning disabilities and challenging behaviour.

Through a practical example of a group for children with autism (and additional diagnoses), this paper shows that group experiences can be positive and provide opportunities for development of individual goals in social interaction and communication. The case study has been theoretically influenced by the psychoanalytic writings of Winnicott (1971), Klein (1987), Alvarez (1992) and Stern (1985), drawing on the understanding that music can re-create mother-infant interactions and create a holding and containing environment (Winnicott 1971). The case study also shows how combining the behavioural approach of TEACH with psychoanalytic ideas can be a useful approach when working with children with autism.

I have focused on each child, and how they responded as individuals within the group. I have not described in detail group interactional processes since the objective of this clinical work was to focus on individual educational objectives, which are listed earlier in this paper. Despite the methodological weaknesses of this case study, I hope to have shown that music therapy groups have the potential to provide a unique and beneficial environment for children with autism, providing an opportunity for them to interact with peers and adults through music.

In the case study the children were most responsive during the middle period of the therapy (term two: session 12 to 15). This was the time when the routine of the school year was most firmly established. Perhaps this is the most productive point in the school year; in the middle of the year when everyone has got to know each other, and the classes are most established, especially in a school for children with autism. The children seemed to relate strongly to the music, instruments and safe space of the therapy room, being keen and motivated to come and often reluctant to leave (which was unusual for these children). They also appeared to respond to each other: Many times during the group work there was a tangible feeling of group togetherness. This paper shows how music therapy groups can create a very different experience for children with autism, who are often isolated and unable to connect with others. Because of the non-verbal element and focus on communication through music, music therapy groups can bring a different dimension for individuals who struggle in the classroom with their peers, and give them the opportunity to develop communication and social interaction skills and connect and form relationships with others.

REFERENCES

Agrotou, A. (1988). A case study: Lara. *British Journal of Music Therapy, 2*(1), 17-23.

Alvarez, A. (1992). *Live Company: Psychoanalytic, Psychotherapy with Autistic Borderline, Deprived and*

Abused Children. London: Routledge.

Alvin, J., & Warwick, A. (1991). *Music Therapy for the Autistic Child*. Oxford: Oxford University Press.

Bailey, S. (2001). *Negotiating control and facilitating empowerment: Individual music therapy with two children with autism*. Unpublished MA dissertation, Cambridge: Anglia Polytechnic University.

Brown, S. (1994). Autism and music therapy: is change possible and why? *British Journal of Music Therapy, 8*(1), 15-25.

Brown, S. (2002). Hullo Object! I Destroyed you! In L. Bunt & S. Hoskyns (Eds.), *The Handbook of Music Therapy* (pp. 86-95). Hove: Brunner-Routledge.

Bryan, A. (1989). Autistic group case study. *British Journal of Music Therapy, 3*(1), 16-21.

Bull, R. (2008). Autism and the Family: Group Music Therapy with Mothers and Children. In A. Oldfield & C. Flower (Eds.), *Music Therapy with Children and their Families* (pp.71-88). London: Jessica Kingsley.

Bull, R., & Roberts, C. (2005). The Odd Couple: A Model of Co-Working with Non-Music Therapists. In BSMT/APMT Annual Conference Proceedings "*No Man is an Island*, *Groups, Partnerships and Teams in Music Therapy"* (pp. 23-25). London: British Society for Music Therapy Publications.

Burrell, M. (2005). Reflections on the Links Between Education and Therapy Through Music and Movement with the Early Years and Their Parents. In BSMT/APMT Annual Conference Proceedings "*No Man is an Island*, *Groups, Partnerships and Teams in Music Therapy"* (pp. 27-30). London: British Society for Music Therapy Publications.

Carter, E., & Oldfield, A. (2002). A music therapy group to assist clinical diagnoses in child and family psychiatry. In A. Davies & E. Richards (Eds.), *Music Therapy and Group Work, Sound Company* (pp. 149-163). London: Jessica Kingsley.

Farmer, S. M. (1985). Theophilus Attah - a case study. *British Journal of Music Therapy, 16*(2), 2-9.

Holck, U. (2007). An Ethnographic Descriptive Approach to Video Microanalysis. In T. Wosch & T. Wigram (Eds.), *Microanalysis in Music Therapy Methods, Techniques and Applications for Clinicians Researchers*, *Educators and Students* (pp. 29-40). London: Jessica Kingsley.

Howat, R. E. (1995). Elizabeth: A Case Study of an Autistic Child in Individual Music Therapy. In T. Wigram, B. Saperston & R. West (Eds.), *The Art & Science of Music Therapy: A Handbook* (pp. 238-260). Chur: Harwood Academic Publishers.

Klein, J. (1987). *Our Need for Others and its Roots in Infancy.* London and New York: Routledge.

Levinge, A. (1990). The use of I and me: Music therapy with an autistic child. *British Journal of Music Therapy,* 4(2), 15-17.

Mahlberg, M. (1973). Music therapy in the treatment of an autistic child. *Journal of Music Therapy, 10*(4), 189-193.

Muller, M., & Warwick, A. (2003). Autistic Children, the Effects of Maternal Involvement in Therapy. In M. Heal & T. Wigram (Eds.), *Music Therapy in Health and Education* (pp. 214-234). London: Jessica Kingsley.

Nicholls, T. (2002). Could I Play a Different Role? Group Music Therapy with Severely Learning Disabled Adolescents. In A. Davies & E. Richards (Eds.), *Music Therapy and Group Work, Sound Company* (pp. 231-246). London: Jessica Kingsley.

Nordoff, P., & Robbins, C. (1971). *Therapy in Music for Handicapped Children.* London: Victor Gollancz.

Nordoff, P., & Robbins, C. (1983). *Music Therapy in Special Education*. St Louis, MI: MMB Music, Inc.

Nordoff, P., & Robbins, C. (2007). *Creative Music Therapy A Guide to Fostering Clinical Musicianship*. Gilsum, NH: Barcelona Publishers.

Oldfield, A. (2006*). Interactive Music Therapy – A Positive Approach, Music Therapy at the Child Development Centre.* London: Jessica Kingsley.

PECS (2013). *Pyramid educational consultants*. Retrieved from: www.pecs-unitedkingdom.com

Priestley, M. (1994). *Essays on Analytical Music Therapy.* Phoenixville: Barcelona Publishers.

Sachs, O. (2007). *Musicophilia, Tales of Music and the Brain.* London: Picador.

Saperston, B. (1973). The use of music in establishing communication with an autistic mentally retarded child. *Journal of Music Therapy, 10*, 184-188.

Stern, D. (1985). *The Interpersonal World of the Infant.* New York: Basic Books.

Stevens, E. & Clark, F. (1969). Music therapy in the treatment of autistic children. *Journal of Music Therapy, 6*, 93-104.

UNC School of Medicine. (2010). TEACCH Autism Program. *UNC Health Care*. Retrieved from: www.teacch.com

Walsh-Stewart, R. (2002). Combined Efforts Increasing Social-Emotional Communication with Children with Autistic Spectrum Disorder Using Psychodynamic Music Therapy and Division TEACCH Communication Programme. In A. Davies & E. Richards (Eds.), *Music Therapy and Group Work, Sound Company* (pp. 164-187). London: Jessica Kingsley

Warwick, A. (1995). Music Therapy in the Education Service: Research with Autistic Children and their Mothers. In T. Wigram, B. Saperston & R. West (Eds.), *The Art & Science of Music Therapy: A Handbook* (pp. 209-225). Chur: Harwood Academic Publishers.

Wigram, T. (2002). Indications in music therapy: Evidence from assessment that can identify the expectations of music therapy as a treatment for autistic spectrum disorder (ASD); meeting the challenge of evidence based practice. *British Journal of Music Therapy, 16*(1), 11-28.

Winnicott, D. W. (1971). *Playing and Reality.* London: Routledge.

Woodward, A. (2004). Music therapy for autistic children and their families. *British Journal of Music Therapy, 18*(1), 8-14.

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