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# Music therapy and children with a language impairment: Some examples of musical communication in action

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## Abstract

Children with a Language Impairment frequently experience additional difficulties with social interaction, emotional regulation and self-esteem. This article illustrates some ways in which music therapy addresses these secondary effects of language impairment, using examples from small group music therapy with two boys aged 5 years with Mixed Expressive-Receptive Language Disorder. Improvised drum games (non-verbal interaction), kazoo-vocalization (quasi-verbal interaction) and the therapist's musical/verbal narration of the children's play were used to offer musical alternatives to normal verbal interaction with the aim of increasing fluency, decreasing aggressive/frustrated behaviours and raising self-esteem. Video analysis of sessions indicates that competitive/aggressive play decreased during the course of music therapy, as did episodes of high-pitched screaming (indication of frustration). Cooperative play increased as did the frequency of attempts at verbal interaction. This suggests that in terms of social communication, positive changes in relationship patterns and increased spontaneous speech and cooperative play occurred during music therapy for these children with a language impairment.

## Keywords

*behaviour change, improvisation, language impairment, music therapy, non-verbal communication*

Children with a Language Impairment (LI) frequently experience additional difficulties with social interaction, emotional regulation and self-esteem. Van Daal, Verhoeven, and Van Balkom (2007, p. 1139) report that "language impairment is often associated with behaviour problems." In their sample of children with a language impairment, 40% showed behaviour problems at 5 years of age. Mackie and Law (2010, p. 397) similarly state that "the relationship between mental health, behaviour and language development is widely recognised in the

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literature." Their study found that 95% of a sample of children aged 7–11 years and identified as having behaviour causing concern at school also had significant difficulties with at least one aspect of language skills. These behaviours, including withdrawn behaviour, somatic complaints, thought problems and aggressive behaviour, can be considered secondary effects of a language impairment and of communication disorders generally.

Music therapy is well established as an intervention for children with communication disorders, including Autistic Spectrum Disorders (Oldfield, 2006, Wigram & Gold, 2006). Musical improvisation techniques such as those described by Nordoff and Robbins (2007) and Alvin and Warwick (1992) can be used by music therapists to engage children with communication difficulties and help develop their communication skills. Training in musical improvisation and an understanding of disabilities such as autism and communication disorders form part of recognized music therapy trainings, and qualified practitioners in the UK are regulated by the Health and Care Professions Council (www.hcpc-uk.org).

## Method

The two boys discussed in this study were referred for music therapy by their primary school because of delayed language development and associated difficulties in social interaction and behaviour. The boys, identified as A and S, were aged 5 years 1 month and 5 years 9 months, respectively, at the start of music therapy and were also receiving speech and language input through their school. Music therapy was provided by the charity Nordoff Robbins as part of an established relationship with the school. The work was not set up as part of a research project and consent was sought retrospectively to present aspects of the work publicly.

S had a diagnosis of autism but showed unusually keen awareness of verbal and non-verbal communications for an autistic child, including making good eye-contact. His expressive language was limited to a half-screamed "No!" if pressed to do something he did not want, and rare babbled attempts at spoken sentences which were sometimes understandable in context. A was described as having moderate learning difficulties and did not have a defined diagnosis. However, his expressive speech was limited to 1–2-word sentences and was often confused or unclear. Receptive speech was inconsistent for both A and S. Except for the diagnosis of autism for S, both children appeared to meet the DSM-IV criteria for Mixed Expressive-Receptive Language Disorder (American Psychiatric Association, 2000).

According to the school, S avoided older and more verbal children but would attempt to engage non-verbally with smaller or less verbal children (including A). This could include attempting to hug them against their will, or taking play objects from them. Not surprisingly this sometimes led to aggressive interactions. A could initiate playful interactions with adults and make his basic needs known but was unable to initiate and sustain play with his peers. He also did not defend himself against approaches by S, even when these appeared aggressive or unwanted.

## Approach and aims

In the music therapy work discussed here, improvised music-making was used to offer alternatives to normal verbal interaction. This included drum games (non-verbal interaction), kazoo-vocalization (quasi-verbal interaction) and musical/verbal narration of the children's play by the therapist. It was intended that these would help increase fluency in interactions, encourage vocalization, decrease aggressive/frustrated behaviours and raise self-esteem.

Seventeen half-hour music therapy sessions were conducted weekly between January and July 2013. The same greeting and goodbye songs were included at the beginning and end of

each session and the remainder of the music was improvised, drawing on initiatives from the children. Three chairs were set out around a drum, and a small range of percussion instruments were on a nearby shelf. A piano and guitar were also used (the guitar mainly by the therapist). Kazoos were introduced from session 4 and the therapist distributed these half-way through the session each week.

Social interaction and emotional regulation were constant issues, particularly in early sessions. Symbol cards from the school were used to remind children of basic rules (e.g. "No kicking"), and "time out" penalties were used to reinforce these.

## Video analysis

All sessions were video recorded, which is the usual practice in this setting. Videos were reviewed by the therapist and notes made of significant musical interactions. The process was based on the practice of "indexing" as described by Nordoff and Robbins and on the two evaluation scales they developed (Nordoff & Robbins, 2007). In this process, attention is paid to instrumental, vocal (including verbal) and gestural/bodily movements, and both "participation" (e.g. imitative, synchronous or cooperative actions) and "resistiveness" (e.g. evasive, non-synchronous or contrary actions) are considered. The precise features considered significant will vary according to the clients and their needs. Here, particular attention was paid to instances of cooperative play *between* the two children and instances of verbal or proto-verbal communication (participation), and instances of competitive, disruptive play or screaming (resistiveness). The video examples can be accessed on-line as supplementary material for this article.

### *Example 1: Improvised drum conversations (Session 2)*

> We are seated around a drum. I sing a simple "Hello" song, beating a steady pulse with both hands. A joins in with some large beats in time. S first tries to beat (slap) A's hands, and I sing "On the drum!" to redirect him (0:16). A beats faster, and I respond. S then makes small scratching/stroking moves on the drum, and I match these too, singing improvised phrases all the time (from 0:33). I use both ways of playing, beating and stroking, directing them to both children. A begins to match S's scratching/stroking gestures in response to me (0:40). S moves away as I return to the "Hello" song and steady beating.

"Conversational" drum improvisations developed out of the greeting song used each week. By using a variety of drum strokes and rhythms drawn from the children's playing I was able to engage the children non-verbally in short rhythmic interactions. Sharing and turn taking were hard for these children. A (in blue on the video) was able to sustain interaction longer than S (in white) which mirrored his generally higher level of social communication. Musical interaction clearly does not by-pass existing difficulties in social communication; rather, it offers another way in which such difficulties can be observed and through which they can be addressed.

### *Example 2: Kazoo vocalizations (Session 9)*

> I have handed out kazoos to us all. Screaming is audible at first which becomes transferred to whooping sounds on the kazoos (from 0:12). I join in this on my kazoo, then pick up a guitar and strum strong chords in slow rhythm (alternate E and F major) as a grounding accompaniment (from 0:16). S throws his kazoo on top of a cupboard before trying to climb onto a ledge. I intervene to lift him down, vocalising in a quasi-verbal way through the kazoo as if to say "Oh no you don't!" in a firm but humorous way (0:24–0:30). I give S his kazoo and begin to structure my playing and vocalising to

create spaces for each child to play (i.e. opportunities for quasi-verbal dialogue), and both children respond, playing/vocalising in response (0:40–0:52).

A often screamed excitedly in early sessions, while S was more silent and interacted more physically. Kazoos encouraged vocalizing without needing words and also encouraged a wider expressive variety of pitch and dynamics.

At first S would hide the kazoos, avoiding vocalizing as he also avoided speaking. However, later he joined in vocalizing using the kazoo and beginning to use his voice more communicatively and expressively. The therapist's musical structures and phrasing also provided models for speech phrasing and conversational turn-taking.

### *Example 3: Musical/verbal narration of play (Session 15)*

A gives S a small drum (bongos) and goes to sit astride a tall drum lying on its side on the floor (0:10). S communicates to me, using a mixture of gesture and vocal sounds, that A bumped his arm (although no contact is visible). I verbalise what I understand him to be saying: "A scratched your arm?" (0:18–0:25). Perhaps feeling understood, S then sits down on the drum behind A and a cooperative rocking game develops (0:41–end). I accompany this from the piano, singing an improvised adaptation of a nursery song.

Competitive play was common, and S often appeared to "steal" objects from A, limiting imaginative play. Elaborate rituals of moving chairs and instruments also developed, and the children were sensitive to being "bumped" by each other, intentionally or otherwise. In this example from a later session, A and S were able to share a cooperative rhythmic rocking game. This indicated a more positive relationship developing between the two children, supported verbally and musically by the music therapist.

### *Example 4: Emerging fluency and cooperation (Session 17)*

There is no music in this extract. Instead, I am verbalising the play between the two children as I understand it. A is lying on the floor, and S is trying to lie on top of him. I suggest to S that "it looks like you (S) want a hug, but you are squashing him (A)!" (0:20–0:24) S begins to gesture and vocalise to A, indicating that he wants A to stand up, and approximates the words "Get up!" (0:25) I verbalise this as "Please stand up!" (0:29) A eventually does stand up, and accepts the hug initiated by S.

Language skills were addressed only indirectly during the sessions, e.g. by encouraging single-words for greetings/goodbyes or choices, or verbalizing the implied meaning of actions e.g. "You want a hug!" In later sessions, an increase in occurrences of cooperative play occurred alongside an increase in spontaneous attempts at social speech. One did not clearly precede the other. This suggests that positive non-verbal social interactions such as those offered in music therapy may contribute to improvements in social speech, even if only indirectly.

## Outcomes

The extracts described above illustrate the kinds of intervention and approach used in all sessions and also show significant moments in the development of the group. Analysis of video recordings of all the sessions suggests that competitive/ aggressive play decreased during the course of music therapy, as did episodes of high-pitched screaming (indication of frustration). Cooperative play and spontaneous attempts at verbal communication increased over the sessions.

## Conclusion

These examples illustrate how music therapy can support children with a language impairment when used alongside language therapy and educational approaches. Improvised musical interactions can help sustain communicative interactions without words, and can encompass resistive or evasive behaviours that could otherwise interrupt or negate communication. This in turn can reduce the secondary deficits of language impairment and provide experiences of fluency, co-operation and self-expression that do not depend directly on language skills.

Oldfield, a music therapist working in a similar way, reported aiming "to help [the child] feel at ease with a non verbal means of communication, so that he would eventually become more spontaneous in his efforts to communicate" (Oldfield, 1991, p. 168). The work reported here confirms the value of such an approach and extends it to a small group setting where it can help promote playful and cooperative interactions between the children, rather than between therapist and child only. This is an advantage of group work generally but pre-supposes basic social skills and capacity for interaction.

Further research is needed to confirm the value of small-group improvisational music therapy in promoting social communication, positive changes in relationship patterns and increased spontaneous speech and cooperative play for children with a language impairment. This could include more detailed analysis of musical and social interactions within the sessions, and evaluation of the transfer of developments beyond the sessions into other areas of life.

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### Supplementary Material

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