

When I sound like You (consensus based product)

Group Music therapy for children on the autistic spectrum who present poor Theory of Mind (ToM) skills

Theo Dimitriadis (2009, June, first version) (2011 Second updated version)

Zorgprogramma (Target Group) Pupils within the mainstream and special education (UK: additional support units) with or without a diagnosis of an autistic spectrum disorder, including PDD-NOS, but with poor ToM skills.

Prototype werkvorm Orthopedagogisch (orthopedagogic)

Theoretical explanation (Rationale)

Theory of Mind (ToM) is defined as the ability to make inferences about the beliefs and desires of other people. In brief, having a theory of mind is to be able to reflect on the contents of one's own and other's minds. Difficulty in understanding other minds is a core cognitive feature of autism spectrum conditions. The ToM difficulties seem to be universal among such individuals (Baron-Cohen, 2001). People who lack ToM skills show, amongst others, difficulty in explaining the behaviour and predicting the emotional state of others. Children with an ASD fail to communicate to/with someone's emotional state, especially when this is expressed through metaphorical language, facial expressions, or emotional outbursts.

Music can be used as a bridge that connects the thoughts and the emotional world of the participants of the music therapy group in a non-verbal way. Through the use of the medium of music the participants experience and learn how to distinguish their emotional state from that of other people. They also learn (how) to empathise and support others without necessarily the need to think (i.e. use cognitive skills).

This can be theoretically underpinned through Damasio's theory of core consciousness. (Damasio, 2000). The core consciousness provides the organism with a sense of self about the moment (now) and about one place (here). Similarly to music, the scope of the core-consciousness is in the here and now; it is non-verbal and not related to cognition. Background emotions and background feelings (i.e. not conscious) determine in a great deal the mood and the energy level of the organism and greatly affect the processes of thinking, feeling and acting. Damasio's descriptions of *background feelings* are very close to Stern's (1985) *vitality affects*, and can be influenced by musical parameters like rhythm, tempo, number, intensity and shape (Stern, 1985). When something has an influence on the background feelings, then this might cause changes in the human psyche. This can only happen in the here-and-now, in what Stern called 'the present moment', the moment where the experience is without language (thus non-verbal) (Smeijsters, 2005).

Working in the here-and-now (the scope of the core consciousness) with musical activities is a good starting-point for autistic individuals in order to communicate their emotions and also to recognise their own feelings. This might be a key factor for interventions aiming at the improvement of ToM skills. Music can play an important role in the process of recognising and acknowledging (background) feelings as it happens in the 'here and now', involves no cognition and can be a 'learnt experience' without the use of language. Music, therefore, can be a way of expression that language cannot provide and a very useful tool for the reduction of anxiety, which ASD subjects experience when they don't understand other people's emotional expressions; this can help towards their emotional development and social functioning.

Indications (indicaties)

Children:

- with an ASD;
- without a diagnosis of an ASD but with poor ToM skills, such as understanding of and reacting to other people's emotions

- who are emotionally underdeveloped or show inappropriate social behaviour with regards to expressing their emotions

The chronological and developmental age of the participants should be homogenous. In general the chronological range should be between 6 and 10 years old.

Comorbidity (the presence of one or more disorders or diseases in addition to ASD) will be taken under consideration, bearing in mind that around 75% of children with ASD have also moderate to severe learning difficulties and more than 50% develop no appreciable language (Doherty, 2009).

Contra-indications

- Noise sensitivity that can make it impossible for the clients to tolerate a group music therapy session. A private session gives in this case more chances for 'adjusting' the volume and timbre of music.
- Extreme aggressiveness, withdrawal and socially inappropriate ways of dealing with situations that they find challenging. Individual music therapy is far more suitable for those children.

Goals (Doelen)¹

General goal

- Music therapy contributes towards their emotional development. Clients have a better idea of how other people perceive their way of expressing themselves and vice versa.

Specific goal

The clients/participants of the music therapy group:

- Learn how to deal with situations that they don't understand; in a flexible way they tolerate being in an unpredictable situation, with less structure but with the security of the therapeutic environment; rather than 'being in control' of a situation they learn how to put up with less predictable experiences, such as an improvisation through music.
- Function better in a social environment and make meaningful social contacts/ relationships
- Initiate social interaction without experiencing frustration, anxiety or uncertainty. Music instruments, as well as singing and vocalising, are used as 'communication tools'.
- Are more flexible and understand (through experiencing it in musical activities) the difference between 'me' and 'you'. Rather than using others like 'objects' they are encouraged to regard other people as 'different subjects', who can behave and communicate on a different and potentially unfamiliar way.

Interventions (Interventies)

The role of the therapist

The music therapist provides a safe non-threatening environment adjusted to the needs of the group. On most occasions there is also a co-therapist, who facilitates the immediate interaction. They are both empathic, they use a quiet tone of voice and are directive without being demanding. They emphasise on the non-verbal communication, therefore on the interaction IN the musical activities, rather than analysing the emotional and behavioural states. Language is minimised to absolutely necessary; apart from the musical interaction, facial expressions and body language are used in a clear and understandable way for all participants. Music with all its dynamic components, such as rhythm, pitch, melody, volume, timbre, is encouraged to be used as the language for communication and self expression.

Activities

As structure has indeed been proven to be helpful in ToM trainings for people with ASD (Ponnet et al, 2004), sessions are well structured but with some space for improvisation in the 'here-and-now'.

The series of sessions start with 'foundational support', thus with more predictable activities. As the sessions continue, the therapist initiates more improvisational activities. The therapist may also challenge the *musical self* of the child, for example through 'breaking' a rigid-repetitive rhythm on a percussion instrument and proposing a different rhythm.

¹ it is possible that, according to the needs of each client, the therapeutic intervention is focused on one specific goal, rather than all of the mentioned goals

The musical interaction is attuned to the needs each child. Some examples of the interaction in music therapy might be:

- Following what the child does (mirroring). *Sound imitation* involves the ability of a person to be attuned to the *other* and reproduce the sound he/she makes, whilst maintaining non-verbal contact. As the sessions progress the roles can change: the child might be asked to reflect and imitate what other people do (ToM skills)
- Challenging and initiating new musical ideas (e.g. in the tempo, timbre etc), incorporating the child's feeling state.
- Making a musical story as a group (e.g. the *Pif-Paf-Poltrrie* group musical story/activity, Nordoff-Robbins, 1971), which encourages the child's flexible and creative imagination and thinking

Opportunity for active music playing or receptive musical interactions- through listening to other people's improvisations.

Material

A good selection of instruments is a starting point for the session; these should not be too many, as they might influence the client's attention. Instruments should be accessible and of good quality. A selection of melodic and non-melodic percussion instruments is necessary, whereas the therapist should have access to an instrument that can provide both harmonic and melodic structure in the session and support a big range of musical dynamics (usually a piano or a guitar).

The music therapy room should be isolated and preferably not too intensely decorated. A sound-recorder is necessary for the audit of the sessions; it can be also used for activities that aim at the increase of the sense of self (see activities)

Conditions (Randvoorwaarden)

The space that is used for the music therapy sessions must remain the same as instability in the space can increase clients' anxiety. The clients should be able to respect (the limits of) the others, as well as the instruments. The presence of a co-therapist is highly desirable.

Frequency of the treatment and duration (Behandelduur en frequentie)

35 to 45-minute-sessions once a week for a period of 6 months; a follow-up series of sessions for another 6 months is possible, based on the evaluation and the reports of the initial block.

Eindtermen²

The client

- has learnt to recognise his/her emotions and expressed his/her own feelings in a social environment
- has learnt to recognise other people's emotional states and to refrain from identifying him/herself with those
- through the ToM skills training he/she is more able to empathise, listen and use music in order to create meaningful social relationships
- functions better in a social environment and can tolerate being in unpredictable situations, though recognising the difference between 'I' and 'you'

Measuring the effectiveness of the music therapy treatment is essential and can take place via:

- Observations (from other professionals, parents etc)
- Questionnaires (filled by other professionals, parents etc)
- Evaluation Scales based on video recording of the session
- Audit and (peer) supervision
- Psychological- Behaviour tests

² this section should be attuned to the clients' needs and therefore it is possible that more emphasis is put towards one specific result, than another, as in the 'goals' section

References (Literatuur)

- Baron- Cohen, S. (2001) Theory of Mind in Normal development and Autism. *Prisme*. 34: 174-183
- Damasio, A.R. (2000) *The Feeling of What Happens*. London: Harvest Books
- Smeijsters, H. (2005) *Sounding the self: Analogy in improvisational music therapy*. Gilsum: Barcelona Publishers.
- Nordoff, P. & Robbins, C. (1971, rev.2004) *Therapy in music for handicapped children*. Gilsum: Barcelona Publishers.
- Doherty, M. (2009) *Theory of Mind: how children understand others' thoughts and feelings*. Psychology Press: East Sussex
- Ponnet, K., Buysse, A., H. & De Clercq, A. (2008) Mind-reading in young adults with ASD: does structure matter? [*J Autism Dev Disord*](#). 38(5):905-18.

This consensus based product has been created as part of my Master of Arts Therapies training course, with the precious collaboration of: **Kathinka Poismans** (music therapist MA), **Emma Pethybridge** (N-R music therapist), **Valsamina Mavrommati** (N-R music therapist), **Mathieu Pater** (music therapist), **Nadia Tsaganá** (Clinical Psychologist, MA). I would like to deeply thank all contributors for their inspiration, enthusiasm and expertise.