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Identification of Challenges and Strengths of Children with Special Educational Needs in Their Musical Improvisations

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The study of therapeutic uses of musical improvisation can help to improve music therapy assessment which is the aim of this paper. This paper identifies 1. the individual challenges and strengths that may help to deal with problems reflected in musical improvisations of children with special needs and, 2. ways of their identification while listening to the children's musical expression. Data were collected from 180 verbal descriptions of musical improvisations of four children with special needs and then analysed using grounded theory as well as content analysis of documents. It was found that music reflects children's problems (with mainly bio-behavioural character) as well as their strengths that may be helpful in coping with those problems. Some theoretical guidelines for analysis of musical improvisation and the planning of music therapy intervention were suggested based on these findings.

Keywords: special needs, assessment, music therapy, musical improvisation, musical expression, analysis.

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Introduction

In many music therapy approaches there is a strong belief that music improvisations contain information about individual challenges (that can be explained through personal diagnoses and symptoms) as well as about personal strengths that can help to overcome these problems. However, this assumption is more experience-based than evidence-based since research in this area is limited.

One example of evidence can be found in Morphologic music therapy. S. Kunkel [15] developed a methodology for the analysis of musical improvisations of persons with schizophrenia. She posed one essential question to music therapy students who recorded their feelings and opinions of clients' music therapy improvisations: *"Which interactive signs and forms of relationship occur during initial meetings?"* She found that, even in the absence of client information, students' phenomenological descriptions contained accurate information about clients' diagnoses and the phases and development of the music therapy process. Similar comparative studies that included other groups of clients (borderline personality disorder, chronic pain and mental anorexia) have been done [15].

Another example from internationally published studies is the research of H. Smejsters [11]. He states that it is possible to identify analogies in musical-pathological and musical-therapeutic processes within musical content. Possible indicators of therapeutic change may be noticed in non-verbal speech and choice of instrument, and especially in the music itself, including emotional response [17]. Out of psychoanalytic approaches one theory that deserves to be mentioned here is the theory of transference and countertransference. In the context of musical interaction, it was elaborated on by K. Bruscia [3], M. Priestley [9] and other authors. Moreover, there are also music therapy approaches for children with special educational needs (SEN). Most of the evidence is based on descriptions of case studies, e. g. [1], [6] or [7].

Research methodology

The authors' observations of music therapy practice led them to believe that also the music of children with SEN reflected their current emotional state, representing inner mental processes connected to the symptoms and resources to overcome them. Moreover, it seemed that changes in musical content and music itself may be helpful to detect changes occurring in children before they are more noticeably manifested in their behaviour [7].

Therefore, the aim of this study is to explore what kind of information in terms of individual challenges and strengths can be found in musical improvisations of children with SEN and how this information may be detected. Findings may be applied in the improvement of music therapy assessment and planning.

Research questions:

- What individual challenges and strengths can be found in verbal descriptions of musical improvisations of children with SEN?

- How can these challenges and strengths be identified based on listening to musical improvisations of children with SEN?

The research experiment suggested by S. Kunkel [15] was used in this study with some modification:

- The study sample included children with SEN, the typical client group in author's practice.

- The theoretical framework of this study was not built on morphological theory, rather on the integrative background and interdisciplinary perspective used by authors.

- The research participants analysed sound-recordings of musical improvisations of 4 children with SEN in which their therapist, although being in the room, did not participate.

- Among research participants were also students of music therapy courses due to low numbers of professional therapists in the Czech Republic. The impact of this limitation was minimised by involving a large number of participants (n=180) and them studying a music therapy course that was directly aimed at gaining skills necessary for the research.

Research experiment design

In Phase 1 audio recordings of children with SEN (sample 1) were selected based on the following criteria:

- The musical structure of their improvisations was to be rich enough for the analysis purposes as to avoid schematic, monotonous or other negative impacts of some conditions, for example, a severe physical disability.

- The musical instrument chosen for the research was the piano, since it allows a wide variety of notes, expression of dynamics, etc.

- It was decided to obtain the recordings on or after the fifth session of individual therapy, which is usually about one month of therapeutic process. At that point, the technique of play had usually become consistent enough and improvisations had become

free from the uneasiness sometimes felt at the beginning of the process, e.g. because of using a new instrument.

- The therapy sessions that involved the collection of data typically comprised two phases: 1. Child's improvisation with the therapist, although present in the room, not being involved. 2. Improvisation of the child and the therapist together.

4 audio recordings had been obtained in total. The duration of the play was left to each child to decide. At the beginning of data collection informed consents had been acquired from the legal guardians of all children.

In Phase 2 the recorded material was presented to 180 students attending courses on musical analysis in music therapy (sample 2). These participants received no information about the children. They were given the following instructions: "Write down an unlimited number of responses to the question: 'What is the music you hear like?'" The participants were told the number of the recording that was to be played. They listened to it twice, and then were asked to write down their thoughts.

Research sample

For the purpose of this study two research samples were formed: children with SEN (sample 1) and music therapy students (sample 2).

Sample 1: Children with special educational needs involved in the research were assigned identification codes consisting of gender information (M-F), age and recording number (1-4). A short characteristic of each child had been assembled based on the content analysis of relevant data from pedagogical/psychological and music therapy records and from interviews with parents (see Table 1).

Table 1

Sample characteristics – children with SEN (sample 1)

Audio recording 1	
Identification code	M5/1
Gender	Boy
Diagnosis	Asperger's syndrome, Neurofibromatosis von Recklinghausen (type 1), ADHD
Characteristics	Hyperactivity, spatial imagination and construction skills on the level of a 3-year old, impulsive-aggressive reactions, bizarre thoughts with aggressive fantasies, strong verbal reactivity with a need to interact with adults, no attempts to initiate contact with peers, inability to adjust to social context and overall weak interconnection of social, emotional and communicational behavioural patterns.

Audio recording 2	
Identification code	F5/2
Gender	Girl
Diagnosis	Developmental disability associated with prenatal infection by CMV with dominance of severe intellectual disability, microcephaly
Characteristics	Evenly delayed psychomotor development, in communication dominance of pre-verbal expressions (approximately on the level of a 1-year-old), calm, positive mood with frequent expressions of joy, mostly short concentration, muscle hypotony and hypermobility of tendons and joints, delayed development of gross and fine motor functions – walking possible only for a short time and with support.
Audio recording 3	
Identification code	M5/3
Gender	Boy
Diagnosis	Atypical autism
Characteristics	Moderate intellectual disability with dominance of non-verbal and practical skills, uneven psychomotor development. Severe disorder of speech development with dominance of pre-verbal expressions and possible understanding by strong intonation and gestures. Strong inclination to hyperactivity and impulsive behaviour with short concentration. Social behaviour approximately on the level of 24-28-month-old, positive mood in social interaction, however, contact with others is not sought. Dysharmonic emotional mood ranging from expressions of anxiety and fear to positive initiative. Autodestructive attacks. Motor functions – dyscoordination and mild hypotony.
Audio recording 4	
Identification code	M5/4
Gender	Boy
Diagnosis:	Severe multiple disability associated with genetic abnormality and multiple visual disability
Characteristics:	Uneven psychomotor development. Multiple visual disability (myopy, strabism, cortical visual disorder), severe disorder of communication with speech on the pre-verbal level (the boy also rejects alternative communication systems), severe intellectual disability, endocrinological and cardiological defects, short concentration. Completely dependent on assistant, fed by PEG. Walking unstable, problems with balance, difficult orientation in space and low motor initiative. Low motivation for manipulation with objects (guidance of the hand needed).

Sample 2: 180 students of short music therapy courses led by this study's authors were all of Czech nationality living in the Czech Republic. There were 31 men (17%) and 149 women (83%). 107 participants (59.44%) were university graduates, 13 (7.22%) had completed specialised training and 60 participants (33.33%) had finished secondary education. The participants' age distribution and music therapy practice and experience is shown in Table 2. Each participant received a unique code.

Table 2

Characteristics of research participants – age and years of practice in music therapy (sample 2)

Age		Practice in music therapy	
Age group	Number of participants	Years of practice	Number of participants
25-29	37	Less than 1	42
30-34	53	1-4	57
35-39	49	5-9	65
40-44	26	10-14	13
45 and more	15	15-20	3

Methods of data analysis

The qualitative research analysis was carried out using grounded theory [8]. In the process of *open coding,* categories were formed for each child by contextual comparing and sorting the smallest meaningful units (codes) and by attempting to differentiate whether the units were independent or related to any other. The codes were grouped together according to content similarities, creating categories and subcategories. The codes, which belonged to semantically different categories, were coded repeatedly since the qualitative analysis allows assigning a unit of text to more than one category simultaneously [13]. Some subcategories were further specified to determine different qualities (e.g. high and low activity). Data regarding the children were analysed using content analysis [5]. Data in this process were divided into several essential categories (age, gender, child's diagnosis, symptoms, functional state, family background information and other information). Information from music therapy documents were extracted by the same procedure searching for the individual challenges, strengths and the course of the music therapy process. Combination of these methods enabled to synthesise horizontal perspective (represented by the research experiment) with vertical perspective (represented by case studies of children). However, because of space limitations information concerning case studies is not presented here. During the *axial coding* relevant contextual relationships were searched on different levels:

- Between categories and subcategories created from the verbal descriptions. The same or similar statements found in categories related to musical and non-musical

characteristics at once may indicate important theoretical guidelines for music improvisation analysis.

- Between categories connected to improvisation and to personal anamnesis of each child (e.g. the connection between perseverance in a child's behaviour and frequent use of one tone or rhythmical cluster). This relationship may indicate how the challenges and strengths of children are reflected in their music.

- Throughout the comparison of children's cases.

On the level of *selected coding* some theoretical principles for analysis of children's music were suggested and important relationships among these categories were visualised using a combination of graphical schemes and models. Finally, new theoretical suggestions and hypothesis for future research were formulated.

Results

This chapter presents the results divided according to individual cases of the children.

Case 1: M5/1. Categories connected to verbal descriptions of M5/1 are summarised in Table 3. M5/1 suffers from Asperger's syndrome, ADHD and Neurofibromatosis von Recklinghausen type 1. Aggression, tension and perseveration as his dominant symptoms were manifested in descriptions of musical improvisation (see Table 7). The moments, relating to personal strengths of the child, were categorised as:

- Abreaction that may create a channel for the release of aggression and inner tension in socially accepted ways.

- Playfulness, which is important for the development of the boy's creativity and overcoming the perseverance patterns.

- Concentration based on interventions that support participation in the creation of music (later in the music therapy process used to foster learning processes).

Table 3

Categories and subcategories created from verbal descriptions of M5/1

Categories	Subcategories	Presence	Examples from data
Technique of the play		17	Banging, thumping, staccato, no key omitted, precise play, short strokes…
Music dynamics	Intensity-related	37	Dynamic, intense, loud…
	Vigour-related	12	Vigour, accents…
Articulation	Energetically	18	Energetically, a lot of energy
	Joyfully	13	Joyfully
	Dramatically	10	Nervous, panic, indignantly, dramatic, screaming…

Articulation	Sharply	10	Sharp, sharply
	Dominantly	8	Authoritative, dominant, directive…
	Roughly	6	Explosive, wild, rough, striking, tough, intense
	Playfully	5	Playful, high-spirited…
Articulation/ emotional expression	Aggressively	54	Aggression, aggressive impression, letting the anger out, in an aggressive mode…
	Angrily	16	Anger, fury…
	Anxiously/hopeless	10	Hopelessness, anxiety, an inconceivable situation…
	Happiness	6	Happiness, happily, happiness from high tones…
Rhythm		14	Regular…
Tempo		12	Vivid, fast…
Instrumentation		6	Simple, structured, ascendant, graduating…
Form		13	Graduating, with clear closing…
Melody/pitch		8	Without melody, only high pitch, singing of birds…
Style		1	A soundtrack, Phill Glass music
Unpleasant listening		9	Unpleasant, sends shivers down the spine, annoying, from hell
Communication		22	Loquacity, a call, chattering, searching for contact, a challenge…
Personality	Relating to personality	18	Hyperactivity, temperament, obsession, destructive, hysterical, authoritative, stubborn, unstable
	Reflecting the inner void	6	Without fantasy, missing purpose, showing hopelessness…
Concentration		4	Concentrated, concentration, absorption…
Perseveration	Monotonous	63	Monotonous, repetitive, rigid, stereotyped, keeping the same rhythm…
	Only high tones-pitch	19	High tones, significant heights, only in the highest position…
Aggression and statements related to aggression	Aggression	56	Aggressive, aggression…
	Statements related to aggression	51	Rage, hit it, attack, I´ll beat him up…
Abreaction	High energy	43	Energetic, much energy, fire…
	Abreaction of energy	39	Channel, release of energy, release of aggression, freeing tension, catharsis…
Tension and anxiety	Urgency	19	Yelling for help, urgency, screaming
	Tension	20	Constraint, compulsion, tension…
	Unrest	9	Nervous, unrest…
	Anxiety	11	Anxious, hopeless…

Case 2: F5/2. Categories connected to verbal descriptions of F5/2 are summarised in Table 4. F5/2 suffers from developmental disability associated with prenatal infection. Distractedness, which is one of the most dominant symptoms and also a category in verbal descriptions, correlates with short attention span and low concentration (symptoms often mentioned in medical history, see Table 7). Despite this fact, there were moments with focused concentration and joy for musical activity found in the improvisation, and also other positive behavioural patterns in the history (e.g. calm and positive mood with frequent expressions of joy) match the subcategories of verbal descriptions (e.g. joy, cheerfulness and happiness). Furthermore, statements about the girl's musical talent were noted.

Table 4

Categories and subcategories created from verbal descriptions of F5/2

Categories	Subcategories	Presence	Examples from data
Technique of play		11	Ease, meticulousness, spontaneity, spontaneous, virtuous, all over the keyboard, plays several tones together …
Music dynamics		4	Dynamic
Precision		11	Confidant, precise, careful, experienced…
Articulation	Merrily	10	Merrily
	Playfully	10	Playful, we play together…
	Dramatically	9	Expressive, dramatic, adventurous, expression of strong emotions …
	Softly/gently	9	Softness, gently, sensibly, cute, smooth…
Articulation/ emotional expression	Joyously	35	Joy, joy from sounds, skipping "hopity hop", I play for joy…
	Happily	16	Satisfaction, enjoys playing, enjoys music, satisfaction from being nearly perfect, she has fun …
	Melancholic	3	Melancholic
Rhythm		1	Rhythmical
Tempo		10	Lively, vital, calm, slow…
Instrumentation		2	Rich, high-middle positions
Harmony		3	Attempt for harmony, dysharmonic, (tones) fit together
Talent		7	Virtuoso, almost a pro, artistic, musical…
Form		13	Graduating, focused on the form rather than content

Style		2	Jazz, modern
Theme-water		11	Water, rain, puddles, waves in the water…
Listening to music with pleasure		2	Pleasant
Communication		2	She communicates with the instrument, self-expression
Non-classified associations		10	The first path, orange-black, skating…
Participants without statement		17	---
Concentration	Exploratory	13	The world of discoveries, curiosity, exploring, discovery…
	Accuracy	11	Confident, accurate, careful…
Distractedness	Misconception	15	Disordered, confused, chaotic…
	Inner restlessness	2	Restless, insistent

Case 3: M5/3. Categories connected to verbal descriptions of M5/3 are summarised in Table 5. His history includes atypical autism and uneven psychomotor development. The psychological history describes him as a positive child sometimes experiencing deep and obvious sadness. Whereas in verbal descriptions the subcategory *sadness* was most saturated with statements (and also *depression*, *fear and anxiety*), the subcategory *joy* did not receive any statement. Among the subcategories related to autism only *low concentration* and *tension* were highly saturated with statements, whereas *perseverance* received few statements. A new subcategory *introvert* emerged in this case, filed under the subcategory *temperament* and obviously related to atypical autism (see Table 7).

In contrast to the pathological symptoms manifested in M5/3's improvisation, the *concentration* and *playfulness* subcategories also emerged. Both *low concentration* and *good concentration* were noted here, which indicates that musical improvisation may become an effective assessment as well as intervention tool, since it may foster the development of concentration, similarly as in case F5/2. This corresponds with data gained from the music therapy process.

Table 5

Categories and subcategories created from verbal descriptions of M5/3

Categories	Subcategories	Presence	Examples from data
Technique		3	Long, subtle play, as though he wasn't playing…
Music dynamics		5	Silent
Articulation	Softly/gently	15	Sensitivity, inwardness, softness, poetic, emotional…
	Dark/sombre	12	Dark mood, gloomy, death, pain in the soul, a cursed prince in a tower…
	Playfully	5	Playfully, spontaneous

Articulation/ emotional expression	Fearfully	20	Fear, tense, anxiety, he fears, distressed…
	Melancholic	14	Melancholy, dreaming, nostalgia…
	Depressive	21	Helplessness, depressive, agitated, desperate…
	Gloomy	36	Gloomy, sad song…
Tempo		13	Slow, tired, calm, suspicion, lazy…
Form		8	Closed form, dramatic introduction, a song, evidently coming to the end…
Melody/tones		11	Tones, sensitive tones selection, (melodic) zones are close together, long tones…
Harmony		4	Double tones, dysharmonic, effort to achieve harmony…
Style		7	Barocco, minimalism, classical music, impressionism…
Listening		1	Interesting
Communication		9	"May I?", call for help, alerting himself, dialogue with the piano, "Enough, please?"…
Concentration	Thoughtful	15	Reasonable, thoughtful, serious, contemplative, deep…
	Searching/exploring/discovering	16	Curiosity, experiment, searching, exploring tones, discovering, spontaneously created…
Decreased concentration	Distractedness	29	Distracted, short attention span, blurry…
	Misconception	22	Split, inconsistent, disorganised, chaotic, unbalanced …
	Unrest	42	Unrested, unrestrained…
Uncertainty and caution		27	Uncertainty, hesitation, caution …
Stagnation		5	Perseveration, short stagnation, a bit clingy, one tone…
Introversion		21	Loneliness, dreaming, introversion, dejection, only in his own world …

Case 4: M5/4. Categories connected to verbal descriptions of M5/4 are summarised in Table 6. There are very few statements related to symptoms of M5/4 found in the subcategory *perseverance* (see Table 7). Statements related to his resources fall mostly within the subcategory *concentration*, with some in *playfulness* and *musical talent*. Although low concentration is repeatedly mentioned in the history, he was able to focus on playing the piano as well as on individual notes, he showed vigour and a balanced overall volume of musical expression in relation to auditory feedback (extracted from verbal descriptions). The playfulness manifested in the musical improvisation indicated potential for developing the child's creativity.

Table 6

Categories and subcategories created from verbal descriptions of M5/4

Categories	Subcategories	Presence	Examples from data
Musical dynamic		6	Loud, vigorous…
Technique of the play	Technique	16	Waits for each tone to finish, hitting keys, focusing on single tones…
	Precision	28	Precise, meticulous, accurate…
Articulation	Sharply	6	Sharply
	Heavy	4	Heavy.
	Strikingly	5	Strikingly, curtly.
	Playfully	5	Playfully.
	Softly/sensitively	9	Gently, softly, sensitive…
Articulation/ emotional expression	Joyously	4	Joy, joyfully.
	Melancholic	8	Melancholic.
	Gloomy	19	Gloomy, sadness.
Rhythm		9	Rhythmical, structured, ordered…
Tempo		11	Calm, lazy, slow, a slow melodic walk…
Style		4	Classical music.
Instrumentation		8	Simple, structured.
Form		15	Ordered, organised, with an optimistic closure, structured, balanced…
Melody		46	Single tones, a scale, search for melody, diverse melodies, a pentatonic scale…
Harmony		3	Harmonic, harmony.
Musical talent		12	A composer, has got a talent, virtuosos…
Communication		10	Effort to communicate, he wants to express something, sad story, I want somebody to hear me, Narrowing a tale…
Pleasant music listening		12	Pleasant, contentment, positive, optimistic…
Concentration	Accurate	29	Certitude, precise play, precision, clear, step by step…
	Contemplative	15	Contemplative, sophisticated, philosophical, intellectual, he wants to learn, well thought out…
	Cautious	8	Cautious, controlled…
	Searching/ exploring/ discovering	29	Search for something, explorative, attempts, searching for melody, experiment, exploration of the piano…
Perseveration		16	Repeating one tone, one tune, one tone, stereotypical, monotonous, “up-down, up-down”…

Table 7

Summary of findings comparing categories from verbal descriptions and history

Code of the child	Categories and subcategories from verbal descriptions	
	Personal history	**Verbal descriptions**
M3/1	*Aggressive behaviour* (impulsive aggressive reactions, aggressive fantasies). This may be a symptom of all diagnoses of the child	Category Aggression and Statements related to aggression)
	Tension This may be a symptom of all diagnoses of the child with subcategories …	Category Tension (with subcategories Urgency ,Unrest, Tension, Anxiety)
	Perseveration Symptom of Asperger syndrome	Category Perseveration (with subcategories Monotonous and Only high tones-pitch)
F5/2	*Distractedness* Short attention span and low concentration (from medical history)	Category Distractedness (with subcategories Misconception and Inner restlessness)
M5/3	Sometimes experiencing deep and obvious *sadness* (from psychological history)	Subcategories Sadness, Depression, Fear and Anxiety
	Low concentration and tension (symptoms of atypical autism)	Subcategories Low concentration and Tension
M5/4	*Perseverance* (found in history related to multiple disability and visual disorder)	Subcategory Perseveration

Interpretation and discussion

This chapter will be dealing with two subjects related to the two research questions: one concerning the individual challenges and strengths in musical improvisations and the other the ways of their identification. At the end, the chapter contains a brief reflection of the study.

Individual challenges and strengths being reflected in musical improvisations. Statements about children's challenges (related to diagnoses and clinical symptoms), such as aggression, tension, perseverance, low concentration and statements about typical

emotions were noticeably present in the verbal descriptions of their musical improvisations. The patterns were most pronounced in categories related to *musical behaviour* and also in other psychological characteristics (e.g. emotions). The prevalence of the behavioural characteristics in the findings may be explained by the dominance of bio-behavioural characteristics typical for diagnoses of children with SEN (sample 1).

The statements of participants (sample 2) seem little related to cognitive functions which may be caused by the selection of music therapy methods. Music therapy usually employs structured improvisation techniques and methods of re-creation and composition for the development of cognitive functions [10], [14] or [16].

Individual strengths were also identified in the musical improvisations of children; these are mostly opposites of pathological symptoms, e.g. aggression/abreaction, perseverance/creativity and experimentation, low concentration/good concentration, etc. The child's musical talent seems to be an important factor for music therapy intervention.

Suggestion of a model for analysis of musical improvisation. The findings were discussed and interpreted from various interdisciplinary perspectives – psychological, educational, musical, etc. Based on these interpretations several important relationships seem to emerge from data. During axial coding categories and subcategories were divided into 2 central categories (musical and non-musical) and 4 main categories:

- compositional (metro-rhythmic, instrumentational, musical and genre-related),
- interpretational characteristics (technique, dynamics and articulation),
- related to emotions (with low and high activity, positive and negative valence),
- related to musical behaviour (desirable, undesirable, behaviour related to temperament and behaviour according to activity level).

The overlaps among these categories (codes may belong to more than one category at the same) may be interpreted as sharing mutual relationships:

- Emotions in musical content were perceptible in interpretational characteristics, mainly musical articulation. Despite the findings of M. Pavlicevic [8] who states that *"expressive musical articulation corresponds with dynamic forms of emotions"*, also well saturated relationships to technique and dynamics were found here.

- The compositional characteristics most related to expressions of emotions in the music are rhythm and tempo. Melody does not determine the character of emotions. This observation is supported by a general interpretational proficiency at playing the same melody in a wide variety of ways using different articulation, e.g. sadly or joyously.

- The characteristics in the category of musical behaviour also emerge in the music, mainly from the interpretational characteristics of music (an important role is played by *dynamics* and *technique* of play). From among the compositional characteristics the metro-

rhythmic as well as melodic are important for the category of behaviour. For example, perseverance may be recognised in melody by rigid monotonous lingering on notes.

- The possible musical talent of the child may be assessed by observing an even distribution of all *compositional characteristics.*

In the phase of selective coding a model for analysis of musical improvisation was created and visually described (Figure 1). In music therapy practice this model can be used to enhance understanding of musical expression and to plan music therapy intervention. Theoretically, this model belongs into the category of therapeutic assessments [4] with a significant clinical importance (it helps to identify the potential of music therapy intervention). The authors are aware that these suggestions are only hypotheses and future research will be needed for their verification.

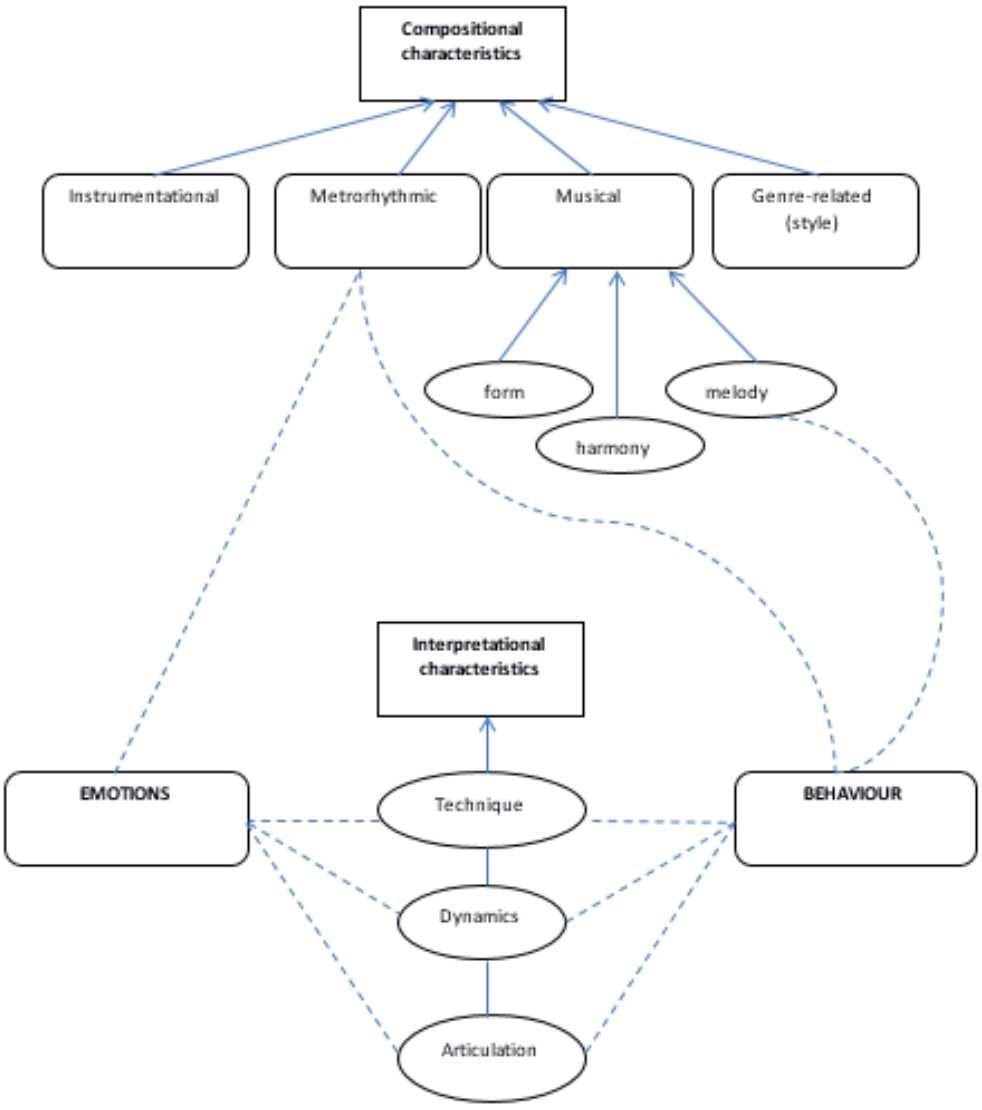

Fig. 1. A suggestion of a model for analysis of musical improvisation

Reflection of the research

Validity of the research was examined by different methods, e.g. triangulation of data sources or research supervision. Also other strengths of the research were present, e.g. great amount of data, interdisciplinary team cooperation and a deep and long-term knowledge of children's cases. However, there were some limitations:

- Low number of acquired audio recordings (4) and a limited sample that cannot take into account the full range of SEN, ages or potential client characteristics.

- Only a short part of the music therapy process (the 5th session) was captured in the data set, therefore they do not reflect the development of the therapy.

- It should be borne in mind that study was realised exclusively in a Czech population and there is no evidence that the theory presented here may be transferred outside the Czech cultural context.

Conclusion

This study suggests that musical expression is highly beneficial for understanding children with SEN because it may yield important information relating to their individual challenges as well as strengths. Although this conclusion is well documented in music therapy literature, the experiment of this study had not as yet been realised in the population of children with SEN. The categories related to diagnoses and symptoms are mostly of bio-behavioural character reflecting the nature of SEN. In the music therapy process, the findings can be used for formulating and testing hypotheses about further development of the intervention. Several theoretical guidelines for the analysis of musical improvisations were suggested however they must be subjected to future rigorous analysis.

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О зонах роста и сильных сторонах детей с особыми образовательными потребностями в процессе музыкальной импровизации

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Целью данной статьи стало исследование терапевтического эффекта музыкальной импровизации. В настоящей статье описываются индивидуальные проблемные и сильные стороны, которые могут помочь справиться с проблемами, выявленными при музыкальной импровизации детей с особыми образовательными потребностями, а также пути определения сильных и слабых сторон в ходе оценки детских музыкальных импровизаций. Были собраны данные 180 устных описаний музыкальных импровизаций четырех детей с особыми образовательными потребностями, затем полученные данные были проанализированы с помощью Grounded Theory (GT) и контент-анализа. Обнаружено, что музыка отражает проблемы детей (связанные преимущественно с биоповеденческими факторами), а также их сильные стороны. На основе этих результатов были предложены некоторые теоретические рекомендации для анализа музыкальной импровизации и планирования музыкальной терапии.

Ключевые слова: особые образовательные потребности, оценка, музыкальная терапия, музыкальная импровизация, музыкальное выражение, анализ.

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