Parent Singing in Relational Treatment of Children with Autism Spectrum Disorder

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Introduction

The purpose of this article is to draw attention to the goodness of fit for singing and vocalizations in Developmental, Social-Pragmatic (DSP) thinking and to illustrate introductory strategies for music therapists working in a developmental, relational model for treatment of young children with Autism Spectrum Disorder (ASD).

Among the broad hallmark symptoms of ASD are persistent deficits in social communication and interaction (including eye contact, facial expressions and gestures), and restrictive or repetitive behaviors linked to ideas, movements, sensations, speech, or objects. An array of individual, unique manifestations of symptoms shapes the complexity this disorder (American Psychiatric Association, 2013).

Developmental, Relational Models

The DSP Model encompasses a wide array of approaches, which espouse relational principles for intervention based in developmental theories, such as attachment, hierarchical progressions, Vygotsky's, and affect diathesis (Greenspan, 2001). These share numerous common outlooks and strategies, including the belief that a child's functional communication grows best in warm, affective relationships with caring adults in naturalistic settings. They are embedded in specific therapeutic interventions for young children who have, or are at risk for, neurodevelopmental disorders. Established practices, which show grounding in DSP include Theraplay (Booth & Jernberg, 2010), Developmental, Individual, Relational (DIR) (Greenspan & Wieder, 2006), The Play Project (Solomon, 2007), Hanen (Manolson, 1992), Relational Developmental Intervention (RDI) (Gutstein, 2002), and SCERTS (Prizant, Wetherby, Rubin, & Laurent, 2003), among others.

Parent Role

Interventions such as these often view the parent-child dyad as the broader client, relying on parents to play an active, primary role. When the therapist joins the child in play, she simultaneously functions as a model for the parent. In an ensuing shift, the parent interacts directly with the child while the therapist watches, reflects, and coaches the parent, or the play may also become triadic. Continual follow-up with reflective mentoring of the parent is optimal, with a focus on questions such as "What was addressed? What was missed? How did it feel?" Drawn from early infant mental health models (Fenichel, 1992), this practice increasingly includes work with children on the autism spectrum (Longtin & Gerber, 2008)

Affect and Singing

The centrality of affect is essential in developmental approaches, in which learning is thought to be driven by the child's affect and displayed by motivation. Indeed, affect is seen as a "primary probe" that enables double coding of experience (Greenspan, 2001). Singing, whether with words or wordless vocalizations, has been recognized as a powerful carrier of affect, which combines internal and external sensations (Powers & Trevarthen, 2009). Moreover, Porges' polyvagal hypothesis posits that there is an evolutionary basis for the connection between singing and affect.

Elements of Typical Development

Typical development informs how the earliest dyadic vocal parlay between mother and infant extracts the affective value of a musical voice within a liminal space of prosodic speaking, singing, chanting, and sound-making (Malloch & Trevarthen, 2009). Fernald documented cross-cultural expressions – smooth, downward glides for soothing, bursts of staccato for attention, coos of contentment, elongated rise and fall of praise – as the meaningful melodies of "motherese" (Fernald, 1992). Later, overlapping and turn-taking full of rhythmic and melodic patterns prevail (Malloch & Trevarthen, 2009). All this is rich material from which to draw when addressing the social and communicative difficulties of young children with ASD and their parents.

Harnessing Musicality

Not only should therapists have an understanding of vocal development stages of children, but they should also be able to supportively coax the parents' rudimentary singing. For the benefit of the parent, functional breathing, posture, chanting, recitative-like prosody, and sound exploration can be woven into play sessions. Kodaly-based John Feierabend (2003) asks, "Can your voice do this?" (e.g., whoosh, shush, wheee, hoot) in a collection of imaginative vocal explorations (which coincides with early developmental trajectory) that can easily be adapted for parent modeling, coaching and children's imitation.

In the following sequences, a DSP framework including vocal and relational parent coaching, and the music therapist's own experience and reflections inform the clinical treatments.

Containment and Communication

David was a cautious and sweet-natured 3.6 year old boy who initially found a way in his music therapy sessions to retreat from social engagement and overwhelming sounds, and to avoid the disorientation of movement; it was through his favorite spot. His favorite spot was a small rug on the floor where he sat still or played in

parallel with his parent, while the parent and the therapist sang around him.
David made sounds consisting mostly of grunts that were sometimes accompanied by broad gestures such as sweeping his hand, pulling, and tugging. The therapist interpreted these gestures as invitations to his parents to engage. In response to prosodic inflections and expressive face and hand/arm movements, the therapist modeled for David's parents ways to attune to their son's loosely communicative sound signals.

- Child shapes his environment, finds his comfort zone (The PLAY Project, 2005-2013) by choosing his place (the small rug)
  - Child chooses mode of interaction (mouth sounds, gestures).
  - Therapist maintains stability for the family through structured group singing
- Therapist follows child's sound lead; acknowledges his intentions and creates shared meaning (Greenspan & Wieder, 2006).
- Parents are led to a specific destination where they can join child – his vocal sounds.

Joining, Improvising, and Imitating

David was delighted when his parents imitated his mouth sounds and were able to improvise gurgling, popping and slippery "bubble" sounds. But David also had low-pitched monotonic sounds and his parents' quiet, un-modulated voices and tired faces matched it. To elevate the affect, the therapist began at the level of their sound play but improvised lively facial expressions and small gestures like shrugs, outstretched hands and anticipatory breath. Eventually parents' sillier sounds came to be articulated by their bodies. With long enough waiting to process and form a response, David was able to imitate.

- The mutual mouth sound playing is successful – affective pleasure and surprises; parents learn regulatory strategies through timing.
- Therapist joins parents' and child's lower tone sounds but simultaneously uses multi-modal systems (sound, face, gestures) for more energetic expressions, which the child imitated.

Extending Vocal Exploration

Simple consonant-vowel (c-v) sounds (e.g., ba, da, ma) appeal to children and are a comfortable way to help adults explore their singing voices. Diverse sounds learned through singing, listening, moving, or musical dialogue are tools that enable parents to explore their child's unique sound patterns, gestures, movements and moods.

The therapist extended the play with formulaic songs, such as a composed hello song with space for inserting names and "Old McDonald," a parents' favorite. The therapist also composed a song that encouraged an echo of unique silly sounds. The song "Make a mighty pretty motion" became "Make mighty pretty noises...doodly doo."

- Parents were able to use playful, game-like interactions instead of automatic, repetitious verbal instructions.
- Parents' confidence increased with pitch and improvisational sound play. Their broader dynamic range increased affect.

Full Body, Full Space

The therapist encouraged the parents to use their bodies and voices more dynamically (or more fully) by tossing, blowing, shaking and improvising sounds with the aid of a lightweight chiffon scarf or small bean bags. Combining visual and dynamic movement with sound quickly led to lively songs with bubbles, popcorn and flowing water sounds. Tweaking dynamic intensity and rhythmic emphasis maintained interest. The duration and frequency of interactions increased, as did David's joyful engagement and his exploration of the 25' by 25' room. Now he uses tiptoes and marching to move about while visually referencing his parents.

- Helping parents develop meaningful singing interactions was accomplished sequentially, with structure, creative simplicity, and improvisation, always with a mind toward warm affect.
- The child made rapid progress (in 10 weeks) in self-regulation, purposeful interactions, and longer chains of social reciprocity.

Relational Turns, Transactional Repair

A particular vulnerability in caring for children with immense, round-the-clock needs impacts parent psychological states and these negative affects may be carried by their voices. Robb's (2000) acoustic voice pattern analysis shows maternal depression reflected by stunted vocalizations – shorter phrases, lower pitch, and longer silences – which, in turn, the infant matches in an attempt to attune to mother. In gradually dwindling space the infant loses interest in reciprocal communication (Gratier, 2000). In such situation mutative influences, intervention using affective vocal play with the child by therapeutic or communal caregivers is crucial in order to break the cycle, as seen in the following vignette.

Dr. Harold Wylie, a seasoned psychoanalyst, observed a mother who sat apart from her baby in a circle of playfully singing mothers. While other mothers sang hello and bounced their children, she was silent and her dull gaze and slouch reflected growing depression since her husband's military departure. Her little girl, Linda, was silent as well, though she looked at the singers. Without verbal commentary, the other mothers began to sing Linda's name, angle their bodies toward her, smile and make eye contact. Linda brightened, moved her upper body rhythmically to the music and then referenced her own mother. The smile on the child's face pulled in her mother, who began to sing her daughter's name. Post-session, Dr. Wylie framed the episode as a clear example of mother-infant dyadic rupture through symptoms of maternal depression and uncharacteristic yet important repair by the baby, which initially took third party intervention (Weeks, 2002).

There is insight to be drawn from this vignette. While a music therapist may be more effective in vocally alerting and engaging a child, she should be ready to momentarily "turn over" the child's positive responses to the mother. This back-and -forth action may have to be negotiated many times. Mother's responses may well be scaffolded with a soft vocal drone using vowels or humming. The beauty of such vocal support is how subtly responsive it can be, waxing and waning in volume and tonal color, unifying in pitch with child or mother, or dissipating by infinitesimal degrees as the primary dyad assumes its relational agency.

Conclusion

In developmental, relational approaches that respond to individual differences, a preverbal child's spontaneous sounds and movements are valuable launching points for the parents' contingent affective responses. The child's un-verbalized communication may nonetheless be felt through his or her body. Though these expressions may be inchoate, the parents' use of singing may organize reflection and response through effective sound patterns. Music therapists working with young children with ASD can help their parents by drawing from relevant research combined with the unique conduit of affect that is the singing voice.

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