

**Title: A Sensory-Based Music Program for Children With Autism Spectrum Disorder: A Case Report**

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The lack of intention to communicate with others found in children with autism spectrum disorder (ASD) seems to be the main reason causing difficulties in socialization, which are furthered by the deficit in language learning (Chiang, Soong, Lin, & Rogers, 2008). Researchers have proposed that communicative intention may not emerge in children with ASD from the ages of 9 to 13 months, and this deficit may last through older childhood (Maljaars, Noens, Jansen, Scholte, & van Berckelaer-Onnes, 2011). It is possible that a child with ASD who continues to demonstrate severe verbal or nonverbal communication impairment may not develop linguistic communication eventually (Franco, Davis, & Davis, 2013).

A sensory-based approach is rooted on sensory integration theory, a theory developed by occupational therapist Ayres in the 1970s. The aim of sensory integration intervention is to change a person's internal neurophysiological processing of sensations and to encourage adaptive sensory responsiveness through providing tactile, vestibular, and proprioceptive experiences (Parham et al., 2007; Watling & Hauer, 2015). Through the process of neuroplasticity, the person can eventually become more independent with their functional skills (Schaaf et al., 2014).

The purpose of this study is to investigate the effects of a sensory-based music program in a child with ASD. The deficit in social communication is a well-known core feature of individuals with ASD. A systematic review suggested that sensory-based intervention involved in multisensory experience is more effective than single-sensory intervention in the treatment of children with ASD (Watling & Hauer, 2015). Berger (2002) suggested that the elements of music have potential capacities to organize and to integrate the sensory system. In other words, while listening to music, not only the auditory processing is activated but other sensory systems are also engaged. Koelsch (2009) also claimed that an individual's visual sensory input, auditory sensory input, attention, memory, and multisensory integration may be evoked by music stimulation.

Owing to the feature of multi-senses of music, music activity has the potential to enrich the sensory inputs during intervention, which can be applied in the daily life of children with ASD to amplify the effectiveness of the intervention in nonmusical fields. In this presentation, a case report will be discussed in the following ways, including the utilization of sensory-based music program and the effects of the intervention.

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