Background and Significance

**Music**
- Long acknowledged for universality, power and influence
- Plato referred to music as “medicine for the soul”
- Growing body of research is addressing the association of music with physical and mental well-being
- Music characteristics:
  - **Consonant music:** Typically pleasing to the ear; associated with sweetness, pleasantness or acceptability
  - **Dissonant music:** Typically displeasing to the ear; associated with harshness, unpleasantness, unacceptable

**Music and language**
Both rely on prosody (e.g., stress, rhythm, intonation and pitch) for expression
- Facilitate social closeness and bonding

**Play and language**
- Play develops simultaneously with language
- By age two, most children with typical development experience a burst in vocabulary growth along with an increase in multi-word utterances
- At the same time, they transition from simple play behaviors like exploration of toys to more complex pretend play schemes.
- Play provides opportunities for young children to practice and form symbolic relationships used in language

**Study aim**
- Add to empirical body of knowledge regarding potential use of music in therapeutic setting for SLPs
- Address association of music type with observed language and play skills

**Research Questions**
- Is there an association between type of music (upbeat, major and mostly consonant music versus subdominant minor and mostly dissonant music) for two-year-olds with typical language development on type of communicative behaviors observed during a 20-minute play sample?
- Is there an association between type of music (upbeat, major and mostly consonant music versus subdominant minor and mostly dissonant music) for two-year-olds with typical language development on type of play skills observed during a 20-minute play sample?

**Method**

**Participants**
- (n = 3); Ages 24 months to 28 months (M = 26.33, SD = 2.08)
- Identified typical development: (1) Standard score >85 on The Preschool Language Scale-5th edition (PLS-5). (2) Standard score > 15th percentile on the Language Development Survey (LDS)

**Procedures**
- Three 20-minute play-based conversational samples (60 minutes total) obtained from each child while interacting with his parent and researcher-supplied age-appropriate toys (e.g., farm set, toy groceries)
- Three different counter-balanced conditions:
  - No music, consonant music, and dissonant music
- Music conditions may have split the participants’ attention, leading to basic overall engagements in play behaviors under those conditions
- Findings may support Brandt et al. (2012) definition of music as “creative play with sound” (p. 3) in that the presence of background music may have affected the play levels as the participants were also “playing” by listening to music and participants could focus more on play with objects under no music condition
- When compared with findings from Kim et al. (2008), it illustrates a potential difference in interactive experiences with music versus music as a background feature

**Results and Discussion**

**Total number of words and different words**
- Consonant music was associated with the highest number of words and highest number of different words for all three participants
- This finding was consistent with Trainor and Heinmiller (1998) in that participants may have preferred consonant music over dissonant music and felt less inhibited with consonant music playing in the background, which resulted in more communicative interactions
- Sallat & Jentschke (2015) concluded that music perception skills may contribute to language learning. Findings support the possibility that pleasant music may be correlated to more language production

**Highest Level of Play**
- No music condition was associated with the highest level of play acts for all three participants

**Limitations and Future Directions**
- Larger sample size
- Modifications to type and volume of music and/or active participant interaction with music stimuli
- Both the consonant and dissonant music selections were fairly complex, a future comparison could contrast simple versus complex music
- Standardized time in-between sessions for all participants

**Selected References**

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