Therapeutic Function of Music
Client Background

• 21 year old male with Autism Spectrum Disorder
  – High Functioning
• IMPROVE RECIPROCAL COMMUNICATION
<table>
<thead>
<tr>
<th>Musical Element</th>
<th>Theoretical Framework</th>
<th>Purpose</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Form</td>
<td>• Those diagnosed with ASD perform equally with peers on explicit tasks, but significantly worse on implicit tasks</td>
<td>• Those diagnosed with ASD perform significantly better in well-structured environments</td>
<td>Form will be predictable, AAA or ABA</td>
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<tr>
<td>Lyrics</td>
<td>• Lyrics are a means of stimulating comprehension, speech and imagination • Lyrics and melody are processed separately in the brain • Combining a face singing the lyrics with the auditory improves word recognition in comparison to auditory alone</td>
<td>• Lyrics can provide prompts and instructions, model behavior, and convey ideas or stories • Lyrics are easier to understand when client can see them being sung</td>
<td>• Instructions will be embedded in lyrics when appropriate • SMT will face client • Client can use lyrics as a form of self-expression</td>
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<td>Melody</td>
<td>• Singing (more than speaking) engages a bilateral reciprocal network between frontal and temporal regions, which contain some components mirror neuron system (MNS). A dysfunctional MNS underlies some of the language deficits in autism. • Melody provides structure to organize, sequence, and remember verbal information • Melodies that follow a predictable pattern, such as moving in half or whole steps, prevent over-arousal • There is little difference in the way we perceive pitches in speaking and pitches in melody</td>
<td>• Melody that follows contour of spoken word aids in language development • Melody that follows a predictable pattern increases participation, reduces frustration, and aids in the processing of verbal information</td>
<td>• Melody will mimic contour of spoken word • Melody will follow a predictable pattern, moving in half or whole steps</td>
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Synthesis

• Form should aid creating **predictability**.
  – Verse, chorus, verse

• SMT should **face** client when singing lyrics. **Instructions** can be **embedded in lyrics** and client created lyrics can be used as a form of self-expression.

• Melody should follow **contour of spoken word** and **move in a predictable pattern**, using half or whole steps.
Improve reciprocal communication

MUSIC-BASED INTERVENTION PRESENTATION