Mazes and Paralinguistic Features in the Conversations of Adolescents with Williams Syndrome

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Williams Syndrome (WS)

• is a rare genetic condition that causes medical and developmental deficits.

• affects boys and girls equally and does not discriminate among ethnic groups.

• occurs in an estimated 1 in every 7,500 births (Stromme, Bjornstad, & Ramstad, 2002).
General Characteristics of WS

• Physical
  – Wide mouth
  – Prominent eyes
  – Large forehead
• Medical Problems:
  – hypertension,
  – hyperactivity,
  – microcephaly,
  – digestive/gastrointestinal difficulties,
  – chronic otitis media, and
  – congenital heart disease
• Social-Behavioral Attributes:
  – hyperactive
  – extroverted
  – excessively friendly/socially uninhibited personality,
  – inattentive
  – thoughtful
  – engaging
  – loquacious
Speech and Language Characteristics

- Socially engaging
- Effective/excessive use of prosody
- Unique vocabulary
- Expressive syntactic skills relatively strong
- Comprehension/cognitive difficulties
Purpose

• To compare the relative frequency of mazes and other paralinguistic features in the conversations of adolescents with WS and typically developing adolescents
Methods

- **Participants:**
  - 12 adolescents with WS
  - 12 typically developing peers (TDPs)
- **Groups:**
  - matched for gender and age
  - ages ranged from 10-18 years
  - 7 females, 5 males in each group
• Procedures:
  
  – Audiotaped conversational samples elicited by graduate students in CDIS.
  
  – Conversational samples transcribed into SALT (Miller & Chapman, 1996).
  
  – Transcripts and audiotapes for each adolescent were evaluated by graduate students in CDIS.
Dependent Variables:

- Mazes = false starts, repetitions, reformulations
- Paralinguistic features included:
  - Nonwords (e.g., mm, ah, “like”)
  - Sound Effects (e.g., vocalizations such as a truck or train noise)
  - Laughter (i.e., use of vocalizations to display amusement)
# Results—Reliability

<table>
<thead>
<tr>
<th>Measure</th>
<th>Interobs. %</th>
<th>Intraobs. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mazing (M)</td>
<td>95</td>
<td>98.5</td>
</tr>
<tr>
<td>Nonwords (NW)</td>
<td>98</td>
<td>96.5</td>
</tr>
<tr>
<td>Laughter (L)</td>
<td>94</td>
<td>100</td>
</tr>
<tr>
<td>Sound Effects (SE)</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Results (continued)
Discussion

- TD peers produced significantly more **Mazes** and **Nonwords** (fillers) than did adolescents with WS.
  - Moreover, the investigator perceived that the type of NW used by members of the groups was different.
  - This could contribute to the perception that speakers with WS are different from TD peers.
• There was not a significant difference between adolescents with WS and TDPs in the rate of laughter during conversation.

- However, the investigator’s impression was that the function of laughter was different for members of the two groups.
• Adolescents WS produced **sound effects** at a higher rate than TDPs.
• This could be one reason why speakers with WS are frequently perceived to be engaging speakers and/or to differ from peers.
Reference