

The Effects of Cultural Knowledge and Exposure on Speech and Language Assessments



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A Pilot Study On The Effects of Culture on Clinician-Child Play-Based Interactions

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WHAT IS CULTURE?

➤ Culture is "the socially constructed and learned ways of believing and behaving that identify groups of people...verbal and nonverbal communication behaviors identify cultural groups (Stockman, Boulton, & Robinson, 2004).

WHAT IS CULTURAL AND LINGUISTIC COMPETENCE?

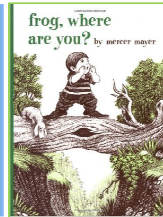
➤ Cultural and linguistic competence is defined as the "congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations" (ASHA, n.d.).

HOW DOES CULTURAL AND LINGUISTIC COMPETENCE EFFECT SPEECH LANGUAGE PATHOLOGY?

➤ The knowledge of appropriate intervention, strategies, materials, and education include clients' culture, race, ethnic background, customs, traditions, religion, beliefs, lifestyles, and language(s).

➤ The American Speech Language Hearing Association (ASHA) recommends that SLPs develop cultural competence prior to working with individuals with cultural and/or linguistically diverse backgrounds (ASHA, n.d.). However there is no generally accepted protocol for assessing CLD populations (Schmidt & Sullivan, 2003; Pena & Bedore, 2011).

American Speech Language Hearing Association (ASHA) demographics show that 7% of members identify as coming from a racial/ethnic minority background and less than 6% identify as bilingual or multilingual (ASHA, 2002). There is an underrepresentation of professionals in the field from racial, ethnic, and linguistic minority groups (Walters & Geller, 2002).



METHODOLOGY

➤ **Child participants:** Participants included two Hmong female children (ages 6;2 and 4;9) and two White female children (ages 6;5 and 4;5). Both Hmong children spoke both English and Hmong in the home, while the White children spoke English only. All four children had normal hearing and vision per parent report; none of the children had previously received speech-language services.

➤ **Clinicians:** Two college-aged female students (ages 21 and 20) participated as clinicians; one was Hmong and one was White.

➤ **Procedures:** Participants completed play-based sessions comprised of three activities: conversation about a favorite movie or story, reading wordless picture books, and playing with toys. Each child participant completed one session with a culturally-matched clinician and a culturally-mismatched clinician.

➤ Language samples were analyzed for quantity and complexity using SALT.

➤ Gestural and behavioral analyses are underway for use of non-verbal communication and behaviors using a modified non-verbal coding system (Collins et al., 2011). Specifically, eight non-verbal communication behaviors will be coded from each video interaction: body lean, body position, postural change, facial expression, eye contact, affirmative gestures, unresponsive movements, and hand gestures (Collins et al., 2011).

SIGNIFICANCE & KEY ISSUES

Speech language pathologists (SLPs) are trained to provide individualized evaluation and treatment for people affected by communication impairments. As the demographics of society change, with increasing numbers of individuals who are culturally and linguistically diverse, the lack of cultural exposure and knowledge within the profession has led to issues in serving diverse populations, particularly in the area of assessment. A clinician who is unfamiliar with cultural norms may interpret a child's behavior as a lack of comprehension of the task or a disorder in expressive language, rather than a culturally different response (Klingner, Blanchett, and Harry, 2009).

- Hispanic mothers are less likely to read to their children potentially making the use of books unfamiliar in intervention procedures.
- The eye contact expectation in Native American children differs, which may lead an SLP to diagnose a pragmatic disorder.
- African American mothers are not likely to ask "known-answer questions," making most standardized tests unfair if African American children lack that experience.
- Asian-American mothers are less verbally affectionate which may impact interpretation of social interactions.

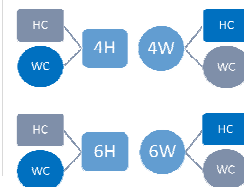
DATA USING SALT: MLU, TTR, & TOTAL UTTERANCES

Systematic Analysis of Language Transcripts (SALT) is software that manages the process of eliciting, transcribing, and analyzing language samples. Quantitative and qualitative comparisons of language, non-verbal communication, and overall interaction for both the children and the clinicians will be made between the cultural match and cultural mismatch conditions.

Table 1. 4-year old Hmong child	Hmong Clinician Match	White Clinician Mismatch
Mean Length of Utterance	2.91	4.25
Type Token Ratio	0.44	0.35
Total Utterances	71 total utterances	107 total utterances

Table 2. 6-year-old Hmong Child	Hmong Clinician Match	White Clinician Mismatch
Mean Length of Utterance	6.26	6.07
Type Token Ratio	0.31	0.23
Total Utterances	98 total utterances	173 total utterances

Table 3. 6-year-old White Child	Hmong Clinician Mismatch	White Clinician Match
Mean Length of Utterance	4.06	4.74
Type Token Ratio	0.38	0.36
Total Utterances	129 total utterances	113 total utterances



The incidence of speech and hearing disorders are higher among ethnic and racial minority groups (Walters & Geller, 2002).



LITERATURE REVIEW: TERRELL, DANILOFF, GARDEN, FLINT-SHAW, FLOWERS, 2001.

➤ "...purpose of the study was to determine whether Black children who are tested for language status will perform differently on conversational sample analysis as a function of the race of the examiner and level of children's bias" (Terrell et al., 2001)

- Walters and Geller (2002) suggested that educators who were from the same ethnic and linguistic backgrounds as their clients positively affected special education placement rates.
- However, Terrell, Terrell, and Golin (1977) showed that language productivity during a conversational sample between a child and clinician of differing cultures was higher than when the child and clinician were from the same culture.
- To date, it is unclear what role the cultural backgrounds of the clinician and client play in the interaction, particularly in informal assessments.

PRELIMINARY RESULTS DURING PLAY ACTIVITY WITH TOYS

*The data of the 4-year-old white child was omitted due to insufficient verbal output.

Table 1. This data shows that the MLU Clinician-Client match was lower than the Clinician-Client mismatch. The MLU for a typical 4 year old is 4.5+.

Data shows that while playing, the child had 71 utterances with the Hmong clinician and 107 utterances with the White clinician.

Table 2. This data shows that the MLU Clinician-Client match was higher than the Clinician-Client mismatch. The MLU is typical of a 6-year-old. However the mismatch condition elicited more child utterances at 173 utterances compared to the 98 utterances with the match condition.

Table 3. This data shows the MLU for the Client-Clinician match condition was higher than the mismatch condition. There were more utterances elicited with the mismatch condition.

DISCUSSION

- Results are inconclusive, as some match conditions resulted in greater language quantity and complexity, while for other participants, the mismatch had more language output.
- Increased production in mismatch conditions could be due to a lack of cultural understanding, as suggested by Terrell, Terrell, and Golin (1977).
 - Less language is required when the child and the clinician have common experiences and do not need to provide as much context.
- Increased production in match conditions were noted in the older children, but differences between the match and mismatch conditions were negligible.
- Coding in SALT eliminated any utterances in Hmong; further study is needed to determine how to incorporate these bilingual productions into language sampling and analysis.
 - The interactions between the Hmong Clinician and Hmong child involved code switching between Hmong and English. The lower MLU for the 4-year old may be a result of being unable to transcribe the Hmong words within the program, resulting in the omission of the utterances containing Hmong. This is another form of a systematic bias that can occur when using language samples and standardized coding to find MLU and TTR.
- Future analyses are needed to determine the effects of cultural match and mismatch on non-verbal communication.