

Relationships Between Expressive and Receptive Language Ability and Play Initiation in 2-Year-Olds

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INTRODUCTION

- Language milestones: Met through interactive process that requires active child participation (e.g., initiation of social interactions)
- For young children, social initiations occur during natural play and social competences (including acquisition of initiation skills) develop through play (Strangeland, 2017)
- Child-led or child-initiated interactions during play illustrate self-assertion and control of interactions lead to further gains in language (Paul et al., 2018)
- Unfortunately, not all young children learn language in a typical way, and some are identified with late language emergence (LLE). These “late talkers” gain new words slowly, produce few word combinations in the absence of a known causal deficit.
- Without intervention, children with LLE may have lasting language difficulties that impact them well into their school-age years (Tysbina & Eriks-Brophy, 2007)
- Just as a child’s language develops over time, play skills develop gradually with an increase in complexity. Play skills (i.e., pretend play, use of different play themes) have occur less frequently and show less variety in young children with LLE (Rescorla & Goossens, 1992).
- Hedrickson and colleagues (2019) found children with expressive language delay did not initiate play schemes as often as their peers with typical language development.

Present study purpose: Further determine the relationship between language proficiency and play initiation for toddlers.

The following questions were addressed:

- Is there a relationship between play initiation and expressive language ability in 2-year-olds?
- Is there a relationship between play initiation and receptive language ability in 2-year-olds?

METHOD

The study involved a secondary analysis of an archival data set with 35 participants (DeVeney et al., 2019).

Participants. n=35 (22 males; 13 females) between 24- and 31-months of age ($M=26$ months, $SD=2.15$); monolingual English speakers, no reported sensory deficits; screened for characteristics of autism and developmental deficits (M-CHAT-R/F, ASQ3); wide variety of language skills (1st – 99th %ile on the PLS-5 auditory comprehension subtest; $\leq 15^{\text{th}}$ – 80th %ile on the LDS expressive vocabulary; 9 late talkers)

For the 2-year-old children participating in the present study:

-A statistically and clinically significant relationship between play initiation and one measure of expressive language ability studied, average phrase length, was found.

Moderate positive correlation between child initiations during play with a parent and average phrase length, $r_s = .371$, $p = 0.034$

-A significant relationship between play initiation and other measures of expressive language studied (vocabulary, expressive communication overall) was not found.

-A significant relationship between play initiation and the measure of receptive language ability studied, auditory comprehension overall, was not found.



Take a picture to view the play initiation coding scheme used

General Study Procedures. All data were collected and video-recorded in participants’ homes including a 20-minute parent-child play sample (later analyzed using the *Play in Early Childhood Evaluation System* [PIECES] developmental coding scheme, available from: plaisuno.com) and administration of LDS (Rescorla, 1989) PLS-5 (Zimmerman et al., 2011), and other developmental assessments.

Play Initiation Coding. Behaviors were coded using a coding scheme developed by the researchers. After training reliability was established to 90% agreement, the 1st author coded 100% of the data; the 2nd author re-coded a 10% sample. Reliability between the two authors remained at or above 80% for both parent (91% agreement) and child (80% agreement) initiations. Ambiguous behaviors were resolved to 100% agreement through joint viewing and discussion.

Data Analysis. Spearman rank correlation, a non-parametric statistical test, was used to measure the degree of association (i.e., strength/direction) between the targeted variables. This test was used because it does not carry any assumptions about normal distribution of the data and is appropriate for use when variables are measured on a continuous or ordinal scale.

RESULTS & DISCUSSION

Table 1
Spearman’s correlation coefficients of participants’ test scores and percent initiating social play.

Participant test scores investigated	Correlation coefficient	Significance level*
PLS Auditory Percentile Rank	$r_s = 0.251$	$p = 0.145$
PLS Expressive Percentile Rank	$r_s = 0.159$	$p = 0.362$
LDS Average Length of Phrase	$r_s = 0.371$	$p = 0.034^*$
LDS Vocabulary Percentile	$r_s = 0.202$	$p = 0.243$

*Denotes significant findings ($p \leq 0.05$)

Table 2
Spearman’s correlation coefficients of types of play initiation and percent initiating social play.

Type of play initiation	Correlation coefficient	Significance level*
Non-Verbal Initiation	$r_s = 0.432^*$	$p = 0.010$
Verbal Linguistic Initiation	$r_s = -0.061$	$p = 0.727$
Combination: Non-Verbal and Verbal-Linguistic	$r_s = 0.489^*$	$p = 0.003$
Combination: Non-Verbal and Verbal-Prelinguistic	$r_s = -0.007$	$p = 0.968$

*Denotes significant findings ($p \leq 0.01$)

- Significant link between expressive language ability and child play initiation
- Why phrase length?
- Clinical implications.** Play = important dx and tx tool.

LIMITATIONS AND FUTURE DIRECTIONS

- Small participant cohort with relatively few late talking participants; initiation coding scheme new and, consequently, not validated or shown to be reliable through repeated use

SELECTED REFERENCES

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