

Narrative Ability, Self-Regulation, and Working Memory in Children Aged 5–7: A Study in Kosovo

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ABSTRACT

Narrative ability is one of the unique skills humans possess and use continuously. Explaining where you were, where you are, and where you will be is a common activity that becomes particularly noticeable when others lack well-developed narrative skills. Considering human complexity, narrative ability often relies on other skills such as self-regulation, working memory, expressive and receptive language, and parents' perceptions of children's communicative competence.

This study assessed narrative ability, self-regulation, and working memory (through number recall tasks), parents' perceptions of expressive and receptive communication, and the relationship and influence of self-regulation and working memory on narrative ability.

Data from 205 children aged 5–7 years (mean age = 6.03) from the municipalities of Prishtina and Kaçanik were collected. Results showed that ~50% of children had average narrative ability, ~35% low, and ~15% high-level skills. Narrative ability was significantly related to self-regulation, working memory, expressive-receptive language, and parental perceptions.

KEYWORDS: *children, narrative ability, self-regulation, working memory, expressive-receptive language.*

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1. INTRODUCTION

1.1. Background

Narration integrates linguistic, cognitive, and social skills and is used as a clinical tool to investigate language-social cognition relationships (Botting, 2002). Narrative development has been studied in typically developing children (Berman & Slobin, 1994), and three main parameters are analyzed: global structure, local sentence structure, and evaluative language.

1.2. Theoretical Framework

- **Narrative Ability:** Communicating sequential information, crucial for social skill development and later literacy (Gleason, 2002; Griffin et al., 2004).
- **Working Memory & Executive Functions:** Vital for holding information during reasoning, comprehension, and learning (Atkinson & Shiffrin, 1968).
- **Self-Regulation:** Managing thoughts, emotions, and behaviors to achieve goals (Boekaerts & Corno, 2005; Zimmerman, 2000).

- **Parent-Administered Assessments:** Valuable supplements for language assessment (Dale, 1991; Alpert & Kaiser, 1992).

1.3. Literature Review

Narrative ability is a key indicator of language competence (Gernsbacher & Givón, 1995). Working memory and self-regulation are closely linked to narrative and language development (Miyake et al., 2000; Diamond, 2013). Children with higher working memory perform better in communicative interactions (MacKey et al., 2002). In Kosovo, socially accepted children display better narrative skills (Hymel et al., 2011; Shaqiri, 2017).

1.4. Research Aim and Questions

Aim: Measure narrative ability, self-regulation, working memory, parental perceptions, and their relationships.

Question: What are the levels of these abilities, and how do self-regulation and working memory influence narrative ability?

Hypotheses:

- H0: No significant relationship between narrative ability and self-regulation/working memory.

- H1: Significant positive relationship exists.
- H2: Most children (>2/3) will demonstrate average or low narrative ability.

2. Methodology

2.1. Participants

205 children (aged 5–7) from Prishtina and Kaçanik, preschool and first-grade. One parent completed a communication questionnaire.

2.2. Instruments

- **Narrative Ability:** Frog Story test (Pence et al., 2008), $\alpha = .954$

- **Parental Perceptions:** Vineland Adaptive Behavior Scales, $\alpha = .820$
- **Language:** Receptive & Expressive One-Word Picture Vocabulary Tests, $\alpha = .516$
- **Working Memory:** K-ABC Number Recall subtest
- **Self-Regulation:** Pencil Tap (8-point scale)

2.3. Procedure

Data collected April–May 2022 in “Qamil Batalli” and “Emin Duraku” Schools. Ethical approval and parental consent obtained. Analyses performed using SPSS 21.

3. Results

Table 1. Descriptive Statistics of Participants

Variable	Min	Max	Mean	SD
Age (years)	5	8	6.03	0.68
Daily screen time (minutes)	2	300	129.28	67.13
Working memory	10	70	39.70	14.61
Self-regulation	4	20	12.45	4.29
Expressive language	30	120	71.39	-
Receptive language	50	140	86.15	-
Parental perception (Vineland)	70	100	98.37	-
Narrative ability	0	54	26.66	14.11

Table 1 presents descriptive statistics for the study participants. The mean age was 6.03 years (SD = 0.68). Children spent an average of 129.28 minutes per day on digital devices, with substantial variability (SD = 67.13). Mean scores for working memory and self-regulation were 39.70 and 12.45, respectively. Expressive and receptive language scores averaged 71.39 and 86.15, while parental ratings of communication skills were very high, particularly for receptive language (M = 98.37%). Narrative ability had a mean of 26.66, suggesting an overall average level among participants.

3.1. Narrative Ability Categories

Table 2. Narrative Ability Levels

Category	Score Range	N	%
Low	0–22	74	36.0
Average	23–40	99	48.3
High	41–54	32	15.8

Table 2 shows the distribution of children across narrative ability levels. Results indicate that 36% of children had low-level narrative ability, 48.3% were at an average level, and only 15.8% demonstrated high-level narrative skills. This suggests that more than half of the children have average abilities, while a substantial proportion may require additional support in developing narrative skills.

3.2. Gender Differences

Table 3. Gender Differences in Narrative Ability

Gender	N	Mean	p-value
Boys	105	28.69	0.039
Girls	100	24.60	

Table 3 illustrates gender differences in narrative ability. Boys scored higher (M = 28.69) than girls (M = 24.60), and this difference was statistically significant ($p = .039$). For other measures, including expressive and receptive language, parental perceptions, working memory, and self-regulation, no significant gender differences were observed.

3.3. Preschool Attendance Effects

Children attending preschool scored higher on narrative ability ($p < .001$), working memory ($p < .001$), self-regulation ($p = .025$), and parental ratings of communication and language ($p = .001$).

3.4. Correlation Analysis

Table 4. Correlations with Narrative Ability

Variable	r	p-value
Self-regulation	0.468	<0.001
Working memory	0.400	<0.001
Expressive language ability	0.310	<0.001
Receptive language ability	0.216	<0.001
Parental perception – overall	0.623	<0.001
Parental perception – expressive	0.614	<0.001
Parental perception – receptive	0.623	<0.001

Table 4 presents correlation results. Narrative ability was positively correlated with self-regulation ($r = .468$) and working memory ($r = .400$). Strong correlations were observed between narrative ability and parental perceptions of overall communication ($r = .623$) as well as expressive and receptive language ($r = .614$ – $.623$). These findings suggest that parental perceptions are important indicators of children's narrative skills.

Table 5. Regression Predicting Narrative and Language Abilities

Dependent Variable	Predictor	β	R^2	p-value
Narrative ability	Self-regulation	0.384	0.54	<0.001
	Working memory	0.295		
Expressive language	Self-regulation	0.219	0.37	<0.001
	Working memory	0.267		
Receptive language	Self-regulation	0.125	0.35	0.001
	Working memory	0.308		

Table 5 shows the results of multiple regression analyses. Self-regulation and working memory explained 54% of the variance in narrative ability, 37% in expressive language, and 35% in receptive language. This indicates that executive function skills are key factors influencing children's narrative and language development at ages 5–7.

4. Discussion

Narrative ability correlated strongly with self-regulation and moderately with working memory. Only 15% of children were high-level narrators; 85% were medium/low. Findings align with previous research linking executive functions and language (Acheson & MacDonald, 2009; Alloway et al., 2009; MacKey et al., 2002).

- Develop standardized tools for Albanian-speaking populations.
- Referencat:

6. Conclusions and Recommendations

5. Conclusions and Recommendations

5.1. Conclusions

- ~50% medium-level narrative ability; ~35% low-level; 15% high-level.
- Self-regulation and working memory significantly influenced narrative ability ($R^2 = 0.54$) and receptive language ($R^2 = 0.35$).
- Executive functions are critical for language development.

5.2. Recommendations

- Implement programs targeting narrative ability and executive functions.
- Encourage active, interactive learning in early education.
- Train parents on their impact on language development.
- Raise awareness for early identification of difficulties.

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