

processing speed, cognitive control). Covariates included age, sex, and education.

Results: LPA identified two profiles characterized by (1) reduced primacy relative to recency (RP; $n = 150$); and (2) reduced recency relative to primacy (RR; $n = 261$). Pairwise comparisons within the RP class showed that recency was better than primacy ($p < .001$, $d = .66$) and middle recall ($p < .001$, $d = .52$), with no difference between primacy and middle recall ($p = .68$, $d = .04$). All pairwise comparisons differed within the RR class (primacy > middle recall: $p < .001$, $d = 1.85$; primacy > recency recall: $p < .001$, $d = 1.32$; middle > recency recall: $p < .05$, $d = .132$). The RP class had worse performance on measures of total immediate ($\beta = .47$, $p < .001$) and delayed verbal recall ($\beta = .32$, $p < .001$); processing speed ($\beta = .20$, $p < .001$); and cognitive control ($\beta = .22$, $p < .001$). The RR class made more repetition errors ($\beta = .25$, $p < .001$).

Conclusions: These findings support substantial heterogeneity in memory functioning in homeless and precariously housed individuals. The RP profile was characterized by poorer cognitive functioning across several domains, which suggests multiple contributions to memory impairment, including dysfunction of long-term memory circuitry. The RR profile with their higher number of repetition errors, may experience difficulties with self-monitoring in verbal learning. Subsequent studies will explore the neurobiological underpinnings of these subgroups to further characterize profiles and identify targets for cognitive intervention.

Categories: Memory Functions/Amnesia

Keyword 1: learning

Keyword 2: memory disorders

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11 The Psychometric Characteristics of a Novel Metamemory Questionnaire for Children

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Objective: Metamemory is a component of metacognition that includes both the knowledge of factors that affect memory (i.e., declarative metamemory) and knowledge and application of factors in one's own learning and recall performance (i.e., procedural metamemory; Kreutzer et al., 1975). Previous researchers have examined children's metamemory through interviews and found that metamemory abilities are positively associated with age and performance on memory measures (see Godfrey et al., 2022 for review). However, there is not yet a standardized measure to evaluate children's metamemory. The current study aimed to examine the psychometric characteristics of a declarative metamemory questionnaire, the Measure of Metamemory (MoM-10), for children ages 6-12 years old. Based on previous research, we hypothesized that performance on the MoM-10 would not be associated with sex but would be positively associated with age and learning and memory performance.

Participants and Methods: A total of 75 English-speaking typically developing children between the ages of 6 to 12 years old were recruited for the current study (M age=9.1+1.92; females 49%). Participants completed the MoM-10 which assessed declarative metamemory via 10 multiple choice questions (accuracy score of 0 or 1 points per question) and required participants to provide an explanation for their multiple-choice answer (explanation score of 0, 1, or 2 points per question). The metamemory questionnaire provided two outcome variables: an Accuracy score of 10 possible points, and an Explanation score of 20 possible points. Additionally, participants completed a 3-trial pictorial learning/memory task which provided an Immediate Recall score and Delayed Recall score.

Results: As hypothesized, there were no sex differences on the MoM-10 Accuracy scores ($t(73)=0.71$, $p=0.48$) or Explanation scores ($t(73)=-.73$, $p=0.47$). Consistent with our hypothesis, age was significantly associated with Accuracy ($r=0.31$, $p<0.01$) and Explanation scores ($r=0.79$, $p<0.001$). Internal consistency of the MoM-10 was moderate for the Explanation score (Cronbach's alpha=0.68) and low for the Accuracy score (KR-20=0.54). Lastly, after controlling for age, participants' MoM-10

Accuracy score was significantly associated with Immediate Recall ($r=0.32$, $p<0.01$) on the learning/memory task and the Explanation scores were significantly associated with the Immediate Recall ($r=0.36$, $p<0.01$) and Delayed Recall scores ($r=0.32$, $p<0.01$) on the learning/memory task.

Conclusions: The current study presents an initial review of psychometric properties of a metamemory questionnaire for children ages 6 to 12 years old. Additionally, as hypothesized, these results suggest the MOM-10 performance is significantly positively associated with participants' age and immediate and delayed recall performance on a pictorial learning/memory task. These associations provide lines of evidence for convergent validity given the expected maturation of metamemory with both age and with improvements in actual memory performance. However, based on the low internal consistency of the accuracy scores, further refinement will be explored including possibly rephrasing questions from the current item set or perhaps excluding current items in future use of the scale.

Categories: Memory Functions/Amnesia

Keyword 1: metamemory

Keyword 2: psychometrics

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12 The Development of a Pediatric Metamemory Questionnaire and Scoring Procedure

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Objective: To create a standardized scoring procedure to evaluate open-ended responses as part of a novel questionnaire (Measure of Metamemory; MoM) designed to assess declarative metamemory in youth. Metamemory is an aspect of metacognition that is one's knowledge of the factors related to storage and retrieval of information (Flavell 1971; Kreutzer et al., 1975), and includes both declarative metamemory (i.e., one's knowledge about

factors influencing memory) and procedural metamemory (i.e., one's understanding of their own memory performance).

Participants and Methods: Fourteen short vignettes related to memory were administered to 100 participants (age 6-12) with questions such as, "Two children hear a story they must remember. The first person is 5 years old. The second person is 12 years old. Who is most likely to remember it best?" After answering, they were then prompted to explain their answer (i.e., "Why?") and their responses were recorded verbatim. To develop standardized and objective criteria for each of the 14 open-ended responses, responses from a subsample of 20 youth were collectively examined by the study team and a scoring structure similar to open-ended items on common intelligence tests (e.g., WISC-V/WAIS-IV) was created. Two points (full credit) were awarded for complete and thorough understanding of memory processes related to the question; 1 point was given for partially accurate or incomplete understanding of the related memory process; and 0 points for an inability to correctly express an understanding of relevant memory concepts. This scoring guide was then applied independently by each of the six raters to an additional 25 participants (ages 6-12 mean age (SD)). To assess the interrater reliability of this 3-point ordinal scoring system, we examined both Fleiss' kappa and 2-way random-effects, single-rater, absolute agreement Intra-Class Correlations (ICC).

Results: Across the six independent raters, reliability coefficients for each of the 14 items ranged from (Fleiss') $k = .277$ to $.792$ (ICC ranged from $.481$ to $.880$). Of these 14 items, the kappa value was classified (using interpretation rules for Cohen's kappa) as "substantial" for 10 items, "moderate" for 3 items, and "fair" for 1 item. Based on these lower inter-rater reliabilities, two items were subsequently removed from the measure to create the 12-item open-ended measure of metamemory, the MoM-12, with reliable scoring for youth as young as 6 years old.

Conclusions: A consensus process established a quantifiable scoring procedure to assess open-ended responses related to youth's knowledge of memory (e.g., metamemory). Reliability metrics identified acceptable interrater reliabilities in 12 of the 14 original items. Further examination of psychometric properties, including internal consistency and lines of evidence for validity is needed. The successful crafting of a scoring procedure is a first step