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AN EXPLORATORY STUDY OF PRESCHOOL TEACHERS' PERCEIVED KNOWLEDGE, BEHAVIORS AND ATTITUDES/BELIEFS REGARDING THE NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS (NCTM) PROCESS STANDARDS (249 pp.)

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The purpose of this study was to find out what preschool teachers know about the NCTM Process Standards. A 56 item survey instrument was designed to assess, a) teachers' perceived content and pedagogical content knowledge, b) teachers' reported behaviors, and c) teachers' attitudes and beliefs, all regarding the value and importance of the mathematics processes in preschool settings. The recommendation in the literature is that quality mathematics instruction is important in preschool and should include a focus on these processes. There were 217 preschool teachers in the state of Ohio that completed the online survey.

Data analysis revealed areas where teachers would benefit from more professional development opportunities. Teachers have some knowledge of the mathematics processes but not a strong knowledge base. They had the most knowledge of mathematical connections and least knowledge of problem solving. A look at reported behaviors revealed that teachers promote representation of mathematical ideas the least, and for attitudes/beliefs teachers are least confident with reasoning & proof and representation. There was a meaningfully significant correlation between teachers'

reported behaviors and attitudes/beliefs. Further analyses indicated that teachers with a state teaching license had more knowledge of the processes, particularly for reasoning & proof and representation. Also, work setting did have an affect on teacher behaviors with significant differences found between teachers who work in Head Start programs and teachers in public school settings, with Head Start teachers reporting more frequent behaviors that promote the mathematics processes.