The role of adult input on numeracy development

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Abstract: This research investigated the role of adult mathematically-related talk and gesture on children's numeracy development. Though mathematically-rich input provided by parents and teachers has been found to relate to children's emergent numeracy skills (LeFevre, Clarke, & Stringer, 2002; Klibanoff et al., 2006), little is known about the role of gesture during math talk on children's early mathematics development. Twelve boys and 12 girls between 26 and 32 months old and their parents participated in a 30-minute free play session at home. Instances of the five types of math talk and ten types of gesture during math talk were coded. The children's mathematics abilities were also assessed using TEMA-3 (Ginsburg & Baroody, 2003) a year later. Results from the multiple regression revealed that adult math talk but not gestural use along with child math talk and gesture significantly predicted children's mathematics abilities [$F(6,12) = 5.02$, $p = 0.009$, $R2 = 0.72$].