

# TEMPERAMENT AND FRACTURE RISK AMONG PRESCHOOL CHILDREN: A TARGET KIDS! CROSS-SECTIONAL SURVEY

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**Background** Previous studies have reported an association between temperament and fracture risk among school-age children; however, few studies have examined this association among preschool children.

**Aims/Objective/Purpose** The purpose of this study was to examine the association between temperament and fracture risk among preschool children (3–5 years).

**Methods** A cross-sectional study with a case-control analytic approach was used to examine the association between temperament and fracture risk among preschool children in Toronto, Canada. Participants were selected from TARGet Kids!—a community-based pediatric primary care research network. Cases were children who had experienced a fracture. Controls were children with no history of fracture. A 1 : 12 ratio of cases: controls was used, with all cases selected and random sampling of controls. Primary exposure variables included three temperament subscales from the Children's Behavior Questionnaire—Surgency, Effortful Control and Negative Affect. Logistic regression was conducted to estimate the ORs and 95% CIs

of fractures predicted by temperament, adjusted for sex and daycare status. Models were run for each temperament subscale.

**Results/Outcomes** A total of 48 cases and 600 controls were selected. No significant association between temperament and fracture risk was found. Sex (females vs males, unadjusted OR 2.46, 95% CI 1.29 to 4.68) and daycare attendance (attends vs does not attend, unadjusted OR 0.44, 95% CI 0.24 to 0.80) were the only significant predictors of fracture risk among preschool children.

**Significance/Contribution to the Field** These findings contrast with results among school-age children. The lack of association between temperament and injury may relate to increased supervision of preschool children and developmental stage.

**Conference theme** Safety, Design and Sustainability

**Conference topic** Child safety