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The Motivation for Active Travel to School Survey (MATSS): Instrument development and initial validity evidence

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Abstract

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The Motivation for Active Travel to School Survey (MATSS): Instrument development and initial validity evidence

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Introduction: Journeys to and from school represent opportunities for many adolescents to accumulate physical activity (i.e., active travel). Motivation is an important determinant of physical activity behaviour; however, no measure of motivation towards active travel exists. Thus, our aim in this study was to develop and evaluate a brief measure of adolescents' motivation to participate in physical activity on their way to or from school. We employed a self-determination theory (SDT) framework and sought to create a questionnaire with three subscales, designed to measure: (1) autonomous motivation, (2) controlled motivation and (3) amotivation (i.e., lack of motivation) towards active travel.

Methods: In Phase 1, 25 SDT experts rated the content validity of 28 preliminary items for the Motivation for Active Travel to School Scale (MATSS). In Phase 2, 239 adolescent boys completed the scale (mean age = 13.24 years, SD = .70) and we conducted confirmatory factor analysis to examine the factorial validity of MATSS scores.

Results: Validity coefficients associated with experts' ratings of 24 of the original 28 items exceeded the threshold value ($V > .65$, $p < .01$) and effect sizes indicated that these 24 items were deemed relevant only to the intended construct ($d > .80$). We removed the four low rated items and, after considering expert reviewers' written comments, another eight items were not included in further analysis. In Phase 2, a preliminary three-factor (16-item) model suggested poor fit to the data (SRMR = .10, RMSEA = .10, CFI = .83). We removed five cross-loading or low loading items and this revised 11-item model showed excellent fit (SRMR = .07, RMSEA = .06, CFI = .96).

Discussion: This study provided preliminary supportive evidence regarding the validity of the MATSS scores in adolescent boys. Further research is needed to examine reliability and other aspects of validity in adolescent boys and girls.