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Development and Validation of a New Gadget Addiction Scale (Screen Dependency Scale) among Pre-School Children in Malaysia
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Abstract
Background: Excessive screen time in young children is associated with many harmful consequences including screen dependency. Research has shown a worrying prevalence of media-related dependency among adolescents and pre-school children. There are a few available questionnaires among adolescents but none for pre-school children. This study aimed to design and validate a questionnaire to assess screen dependency among pre-school children aged 4 to 6 years old. Methodology: Across-sectional two-phase study was carried out to develop the scale. In phase 1, a preliminary parent-report measure questionnaire was developed in Bahasa Malaysia. Later, it was sent to four experts for content validity followed by face validity. In Phase 2, a total of 386 parents of pre-school children aged 4 to 6 years old, split into two samples, were involved in the field study for exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Result: Sample 1 was used to perform EFA to determine the factorial structure of the SDS. All items with a factor loading of >0.4 were included. Sample 2 was used to perform the CFA. RMSEA and CFI analysis showed that the SDS has a good fit and confirms the dimensional structure found via EFA. The final questionnaire consists of 15 items with a 4 factors' structure and has excellent internal consistency reliability. Conclusions: The Screen Dependency Scale (SDS) is a reliable and valid questionnaire to detect screen dependency among pre-school children aged 4 to 6 years old in Malaysia. © 2022 by the authors.

Author Keywords
Malaysia; pre-school children; questionnaire; screen dependency; validation

Index Keywords
adolescence, child care, factor analysis, health status, model validation, public health, questionnaire survey; addiction, algorithm, area under the curve, Article, child, confidence interval, confirmatory factor analysis, construct validity, content validity, Cronbach alpha coefficient, cross-sectional study, daily life activity, diagnostic accuracy, excitatory postsynaptic potential, exploratory factor analysis, face validity, factor analysis, family medicine, female, human, internal consistency, interrater reliability, Likert scale, major clinical study, male, mobile phone addiction, preschool child, prevalence, questionnaire, receiver operating characteristic, reliability, sample size, sensitivity and specificity, sociodemographics, test retest reliability, validation process, validation study, Youden index, adolescent, epidemiology, Malaysia, procedures, psychometry, reproducibility; Malaysia; Adolescent, Child, Child, Preschool, Cross-Sectional Studies, Factor Analysis, Statistical, Humans, Malaysia, Psychometrics, Reproducibility of Results, Surveys and Questionnaires

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