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**Convergent validity of the PROMIS®-PA with wearable devices and comparisons between different recall timeframes in Adolescents****Reem A. Algheryafi***Mohammed Al-Mana College for Medical Sciences, Saudi Arabia*

**Statement of the Problem:** The Patient Reported Outcome Measurement Information System (PROMIS)®, supported by the National Institutes of Health (NIH), developed many psychometrically robust self-reported outcome measures. The convergent validity of the Pediatric Physical Activity instrument (PROMIS®-PA [8-item short form]) with an objective PA monitoring using wearable sensors needs to be investigated. Our study was conducted mainly to examine convergent validity of PROMIS-PA with step counts from wearable devices and another validated self-reported outcome measure. The PROMIS-PA instrument uses a 7-day recall period, which requires recall over an extended period and may contain recall bias. As a secondary aim, we explored the effect of different recall timeframes (7-day, end of day [EoD], and ecological momentary assessment [EMA] during day) in terms of feasibility and associations with each other and with step counts.

**Methodology:** This is a prospective cohort study examining the associations between measures of PA in school age children and adolescents ( $n = 84$ , aged 10-20). Participants wore Fitbit devices for 7 consecutive days and then completed the 7-day recall PROMIS-PA short form and Youth Activity Profile (YAP). Additional analyses were completed in a subsample ( $n = 25$ , aged 11-18 years) using PROMIS-PA for EMA at 5 intervals during the day (shorter form) and EoD. Findings: In the total sample, PROMIS-PA showed positive moderate correlations with the YAP and average daily steps ( $r = 0.533$ ,  $P < 0.001$  and  $r = 0.346$ ,  $P = 0.002$ ; respectively). In the sub-sample, 7-day PROMIS-PA was highly correlated with the averaged EMA or EoD ratings for the week, and moderately correlated with daily step counts.

**Conclusion & Significance:** These findings support the validity of the PROMIS-PA as a measure of self-reported physical activity. Adolescents demonstrate higher compliance rates and preference for the 7-day recall and EoD compared to more frequent EMA reporting.

**Biography**

Reem Algheryafi is an assistant professor in the Physical Therapy Department at Mohammed Al-Mana College for Medical Sciences, Saudi Arabia, and a licensed senior pediatric physical therapy specialist. Dr. Algheryafi received her Ph.D. in Neuromotor Science from Temple University, USA. Her previous clinical practice, which involved establishing a pediatric physical therapy service in a medical center, derived her specific interest in outcome measures and physical activity. Dr. Algheryafi's research focuses on validation studies of self-reported outcome measures of physical activity and related behaviors in children and adolescents using mixed methodologies as well as examination of the relationships between these behaviors to guide the practice of utilizing better intervention strategies. Her long-term research goals involve improvements in the rehabilitation services delivered to children with physical disabilities based on sound assessment of their conditions. A member in the American Physical Therapy Association (APTA) and Patient-Reported Outcomes Measurement Information System Health Organization (PHO).