Introduction

Patient recorded outcomes [e.g., health-related quality of life (HRQOL), functional status, etc.] have assumed increasing importance in research and clinical care in the fields of pediatrics and pediatric psychology (Palermo et al., 2007; Varni, Limbers, & Burwinkle, 2007) for several cogent reasons: (a) these measures are sensitive to the issues associated with health status that are most important and salient to children and their families in evaluating outcomes of medical treatment; (b) patient-reported outcomes complement and extend the evaluation of medical treatments beyond the traditional measures of psychological status, biomarkers, and symptoms; (c) data that are generated from patient-reported outcomes can facilitate communications among children, families, and providers, inform shared decision making concerning medical treatment and improve children’s well-being (DeWit et al., 2008). However, widespread clinical application of patient-reported outcomes and generalizability of findings across settings and chronic conditions in the field of pediatric psychology are needed. In their article, Forrest and colleagues describe the application of the Patient-Reported Measurement Information System (PROMIS®) for children and youth and implications for the field of pediatric psychology. This introduction highlights several of the salient issues raised by Forrest et al. (2012) for the field of pediatric psychology.

Enhancing Generalizability of Measurement of Patient-Reported Outcomes

With the exception of Varni and colleagues’ programmatic research on generic and condition-specific measurement (Limbers, Newman, & Varni, 2008; Varni et al., 2007), much of the research on patient-reported outcomes has focused on specific chronic conditions. The approach that has been used by PROMIS is a domain-specific measurement approach in which domains are defined as clinically coherent and unidimensional health attributes that are applicable across multiple chronic conditions. This approach is operationalized by a comprehensive item bank that encompasses a wide range of relevant item domains: symptoms, feelings, experiences, functional status, subjective well-being, and general health. Item generalization, validation, and refinement have included a range of state of the art methods such as cognitive interviewing, item response theory (IRT), construct and criterion validity, and computerized adaptive testing (CAT). Forrest et al. (2012) describe a relevant application of the PROMIS methods to studies of medically unexplained symptoms, such as abdominal pain, syncope, fatigue, and etc. in children and adolescents. Readers might also be interested in Lai et al.’s relevant application of an item bank using item response theory and CAT for parent reported perceived cognitive function for children with a wide range of neurological problems.

The PROMIS approach enhances the generalizability of items across ages and hence their sensitivity to developmental changes. Moreover, the systematic use of IRT facilitates investigators’ abilities to link child and adult item banks that measure the same construct so that measures of a specific domain can be put on the same scale. Taken together, these factors enhance investigators' capacities to conduct research across a broad age range. Finally, the generalizability of the PROMIS approach is enhanced by the application of developmental and clinically relevant
domains with noncategorical data sets that include healthy children and adolescents as well as those with a range of chronic conditions.

Reducing Respondent Burden

An increasing number of studies in the field of pediatric psychology involve comprehensive, multimethod, multi-informant approaches that increase both the burden on research participants and the cost of research. Approaches such as PROMIS that employ IRT the context of item banks and also use CAT have extraordinary potential to reduce redundant items and develop shorter forms of measures that reduce respondent burden while preserving if not enhancing measurement validity and precision.

Facilitating Flexible Selection and Targeting of Items

The item bank approach developed by PROMIS has also gives investigators considerable flexibility to select specific items that represent various unidimensional domains that are aligned with the specific purpose, age group, etc. of their study. Investigators can choose to utilize fixed length self-administered forms or choose items based on CAT. The ease of using PROMIS-based measures is facilitated by the use of a web-based platform that allows customization of the format of items and instruments.

Future Directions

An important by product of the PROMIS approach is the potential to develop a collaborative science of measurement. For the most part, the typical approach to measurement development in the field of pediatric psychology has involved measures being developed and authored by individuals, investigators, and their colleagues in a validation process then published by copyright and then spread by individual research groups. In contrast, PROMIS facilitates opportunities for researchers to participate in the development of measures that they need for specific projects, to access available item banks and tailor the measurement to the needs of their study. Specific PROMIS measures can be readily downloaded, customized, and applied from the assessment center. These methods have the potential of enhancing collaborative science in pediatric psychology and facilitate advances in multidimensional measurement of child health. My hope is that Forrest and colleagues’ 2012 description of PROMIS will encourage its use and application by pediatric psychologists in research and eventually in clinical care.

Conflict of Interest: None declared.

References


