ABSTRACT

Development of the Patient Propensity Indicator: Measuring and Predicting Antecedents of Insights into the Individual Management of Healthcare

By

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Despite significant advancements in treatment, medication adherence has been a long-standing concern in healthcare leading to poor clinical outcomes and economic impact on the healthcare system. This research describes the development of the Patient Propensity Indicator (PPI), a reliable and valid measure, which is grounded in the rigorous conceptualization and operationalization of psychometric (ability, attitude, belief), health literacy, and learning preferences constructs and their effect on medication adherence.

An expert assessment of 130 items was conducted by a distinguished judging panel who provided validation of the constructs and item reduction (87). Refined constructs and items were then piloted with a group of consumers to enhance the clarity of descriptions and language prior to the broader administration of the survey. A refined PPI was administered online in a survey to consumers (N = 201), overweighted in the 40-65-year-old demographic, to match the proportion of the strata on the population of interest, to assess the measure’s performance and reliability, and to determine item reduction. The final PPI was then administered to consumers (N = 212) at two timepoints (week 1 and weeks 2-3) to assess the measure’s performance and reliability over time. Lastly, using the full test sample (timepoint 1, N = 314), a predictability analysis using structural equation modeling and confirmatory factor analysis was conducted to determine the most predictive constructs (ability, attitude, belief, health literacy, and learning preferences) and associated relationships and resulting paths leading to the outcome variable, likelihood of medication adherence.

The analysis showed that the PPI, which is composed of psychological constructs (ability to learn, affective attitude, and belief), health literacy, and learning preferences, has reliable psychometric properties with demonstrated effects of health literacy and learning preferences on those psychometric properties and their collective ability to predict medication adherence. Having a valid and reliable measure to assess a patient’s propensity to medication adherence can provide deeper insight for healthcare providers and industry stakeholders to tailor their patient education approach to best meet patients’ needs, including what and how they communicate relative to content and formats, as well as the broader impact on public policy and the importance of health engagement and literacy, ensuring optimal delivery of complex healthcare information. The PPI shows meaningful relevance to solving the broader healthcare problem of medication adherence and the high cost and poor outcomes associated with it.