Evaluating Professional Engagement: Development and Pilot Testing of the Student Pharmacist Inventory of Professional Engagement (S-PIPE)

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Objective. To describe the development and initial psychometric testing of a novel instrument to assess professional engagement.

Methods. A 21-item instrument was developed from prior qualitative work that gathered students’ perceptions of professional engagement. A paper survey was offered to all third year pharmacy students at one college of pharmacy. Exploratory factor analysis was performed, using a Principal Component Analysis (PCA) extraction. One item with low item-item correlation (<0.3) was removed after the initial extraction. After subsequent extraction with Oblimin rotation, one item with weak loadings (<0.3) on all factors was removed. Another PCA extraction with Oblimin rotation was performed. Three items with strong loadings (>0.4) on multiple factors were evaluated and placed in the best fitting conceptual factor. The internal consistency of the items within each factor was evaluated using Cronbach’s alpha.

Results. A five factors solution emerged based upon eigenvalues of greater than 1, describing 70.34% of the variance in the data. The Kaiser-Meyer-Olkin (KMO) value was 0.849, demonstrating “meritorious” sampling adequacy. Bartlett’s Test of Sphericity was significant (p<0.001), indicating the data were factorable. Factors were named based upon the content of the items that composed the factors. The five factors and their internal reliabilities are: Belonging (α=0.878, 6 items), Professional Impact (α=0.750, 3 items), Prepared for Profession (α=0.917, 2 items), Educational Impact (α=0.788, 4 items), Growth (α=0.745, 4 items).

Implications: Professional engagement is an attribute vital to the professional membership of pharmacy. This research describes the development of a novel instrument to assess professional engagement in student pharmacists. The S-PIPE is composed of five factors with high internal reliability. Future research will involve expanding the question bank to cover all factors of professional engagement, and assessing validity and reliability of the complete instrument.

This abstract represents the initial attempt to measure professional engagement in student pharmacists.