

IMPROVING A RATING SCALE: APPLYING RASCH ANALYSIS TO STUDENT PHARMACISTS’ PERCEPTIONS OF THEIR PROFESSIONAL IDENTITY

Choi BM¹, Obeng-Kusi M¹, Axon DR¹, Cooley J¹, Warholak T¹

1: College of Pharmacy, University of Arizona (Tucson, AZ)



Background

- Professional identity (PI) shapes how individuals perceive, evaluate, learn, and assert their professional responsibilities.¹
- Several methods have been used to evaluate professional identity among student pharmacists.^{2,3}
- There is limited data on the psychometric properties of instruments that evaluate the professional identity of pharmacy students.

Objective

- To evaluate the psychometric properties of an instrument to assess student pharmacists’ perception of their PI.

Methods

- Data from a previously conducted cross-sectional survey were used to assess validity and reliability of student pharmacists’ perceived PI.
- Student pharmacists indicated their agreement to identifying with various PIs.
- Validity and reliability of the instrument were assessed using the student and item separation index (SI) and reliability coefficients (RC).
- Linear regression assessed the association of students’ characteristics with their perceived PIs.

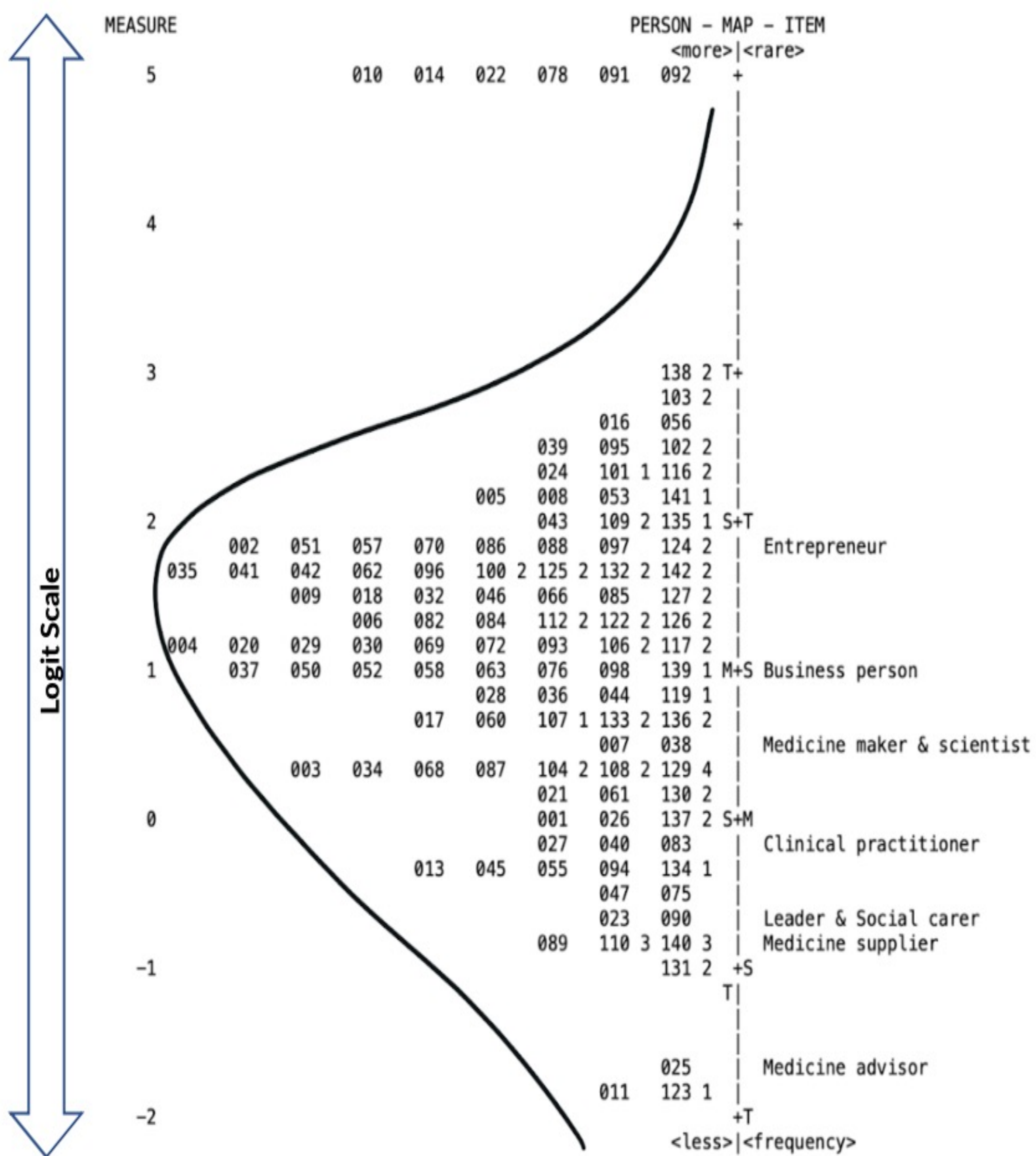
Citations

1. Elvey R et al. Who do you think you are? Pharmacists' perceptions of their professional identity. Int J Pharm Pract. 2013;21(5):322-332. doi:10.1111/ijpp.12019

2. Van Huyssteen M et al. The meaning of being a pharmacist: Considering the professional identity development of first-year pharmacy students. African Journal of Health Professions Education. 2015;7(2):208. doi:10.7196/ajhpe.423

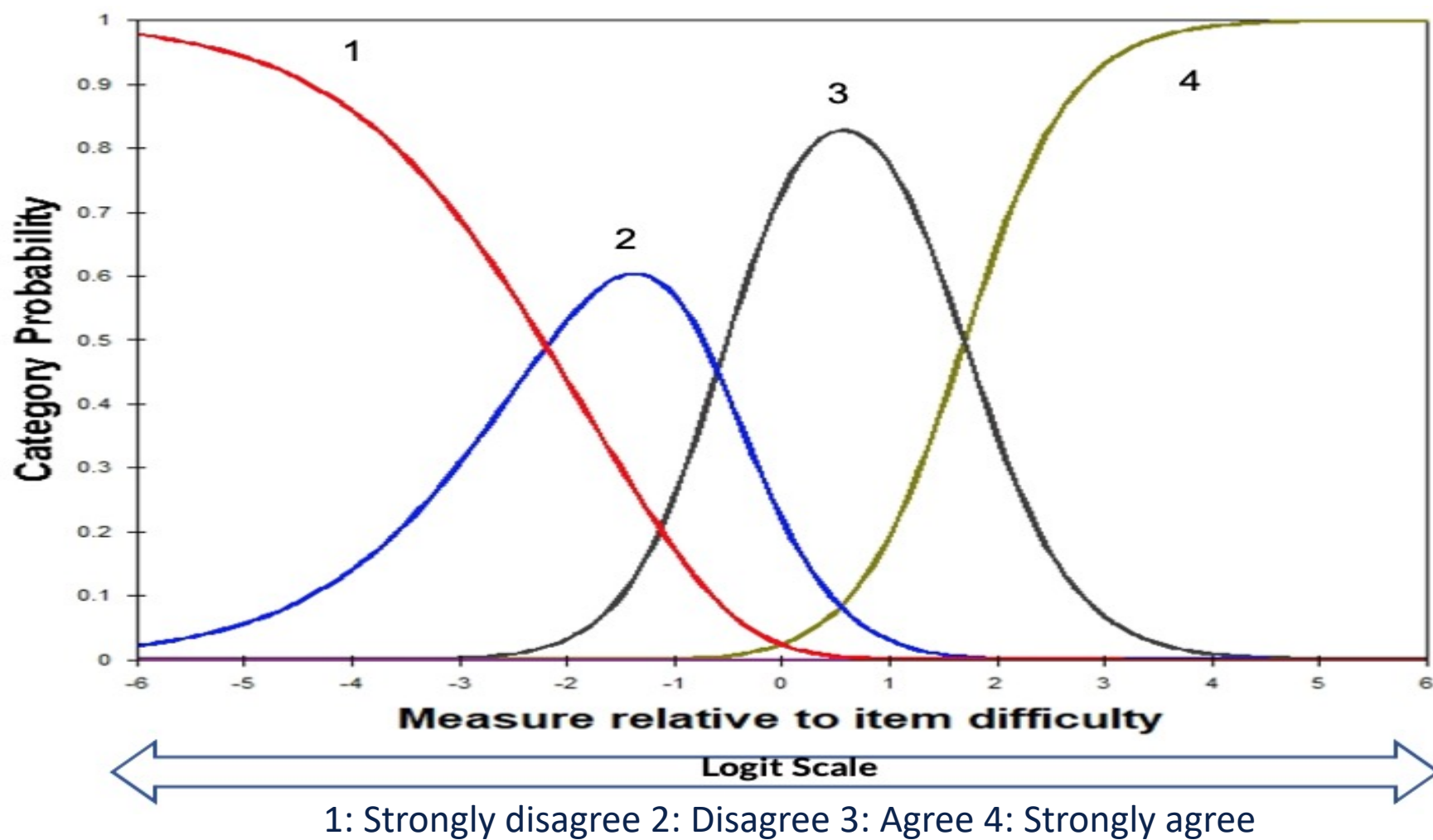
3. Noble C et al. Making the transition from pharmacy student to pharmacist: Australian interns' perceptions of professional identity formation. Int J Pharm Pract. 2015;23(4):292-304. doi:10.1111/ijpp.12155

Figure 1: Item map of students’ ability & item difficulty



Student agreement on left side, with more agreeing students at the top and least agreeing students at the bottom. Scale in logits, calculated from log odds of students’ correct response to random item and log odds of an item being answered correctly by a random individual. “M” = mean, “S” = 1 standard deviation from mean, and “T” = 2 standard deviations from mean. Curve represents distribution of data.

Figure 2: Category probability curve for students’ PI perception



Results

- Primary analysis suggested inadequate scale functionality thus some item responses were merged and the most misfitting item removed.
- All items fit the model except for “unremarkable character”.
- Students’ RC was 0.98 and SI 1.73, item RC was 0.94.
- Students who reported receiving formal PI training were 0.30 (p=0.0001) times more likely to have high perception of PI than those who did not.

Conclusion

- The instrument exhibited fair validity and reliability for assessing the perception of PI among student pharmacists.
- Additional items to fill identified item gaps are needed to improve the PI instrument, with further assessment of this revised instrument.