Developing a survey to probe factors that contribute to the career choices of graduate students

Matthew J. Styles, Leah V. Schaffer, Morgan E. Howe, Sam Pazicni

Developing the Survey

Motivation for the Study
Why do underrepresented groups in STEM disproportionately choose not to pursue faculty positions?1,2

Survey Development
SCCT Framework3
Interviews with Faculty and Students

Existing Surveys1,4
Final Survey 122 Respondents

Personal Inputs:
Values and belonging statements, Gender, ethnicity, undergrad institution, year in grad school, etc.

Learning Experiences:
Mentors, workshops, conferences, grant writing, etc.

The Social Cognitive Career Theory Model (SCCT)

Personal Inputs
(Demographics)
Self Efficacy
Learning Experiences
Outcome Expectations
Career Choice Intentions

Preliminary Validity and Reliability Checks
Pearson Correlations:
- PUI Self-Efficacy vs. Intention: 0.374**
- PUI Outcome Expectation vs. Intention: 0.488**
- R1 Self-Efficacy vs Intention: 0.628**
- R1 Outcome Expectation vs. Intention: 0.703**

Cronbach’s Alpha:
- PUI Self-Efficacy: 0.729
- PUI Outcome Expectations: 0.836
- R1 Self-Efficacy: 0.831
- R1 Outcome Expectations: 0.891

Preliminary checks allow for a rough confirmation of certain aspects of the model with simple calculations but are not statistically rigorous.

Support for this research was provided by the Office of the Vice Chancellor for Research and Graduate Education at UW-Madison with funding from the Wisconsin Alumni Research Foundation and the Wisconsin Local Section of the ACS

Analyzing the Model


EFA: Self-Efficacy

EFA: Outcome Expectations