Psychometric Testing of a New Instrument to Measure Writing Self-Efficacy: A Proposed Mixed-Methods Delphi Study

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Purpose
The purpose of this proposed study is to develop and test an instrument to measure writing self-efficacy based on a model of constructivist writing. It seeks to address the question: What measurement tools will form the most reliable and valid measure of writing self-efficacy?

Background
Writing is a pedagogical strategy that facilitates critical thinking, identity development, and ways of knowing. The educational and occupational demands of writing are highly dependent on the instructor's strategic abilities, increasing barriers for students in writing development. Quadratic research has established that writing assignments are anxiety-provoking, fraught with frustrations, and conditioned by contextual challenges such as instructor expectations and grading. Some of the emotional upheaval associated with writing stems from the reality that writing is more than a means to an end or a grade, it is also a process of meaning making and self-reflection. Writing skills can be effectively improved through writer training and writing. Writing self-efficacy, defined as the belief that a student's ability to write will be effective in writing, is a key aspect of writing self-efficacy. It is crucial to consider the context in which writing takes place, as well as the ability to reflect upon and improve one's writing skills.

Writing Self-Efficacy and Nursing
A review of the literature exploring writing self-efficacy and its impact on nursing education has shown that nurses have demonstrated higher self-efficacy in writing compared to other professions. This finding raises the question of how writing self-efficacy translates to writing in the nursing discipline. However, the literature on writing self-efficacy in nursing is largely quantitative, and it is crucial to develop a qualitative approach to understanding writing self-efficacy in the nursing discipline.

Significance
A writing self-efficacy instrument based on constructivist principles is needed to align with nursing's values of holistic and relational care. A new writing self-efficacy instrument will benefit researchers in contributing to the growing need for writing research in the nursing discipline. A multidisciplinary scale will assist educators in identifying areas for targeted instructional interventions across nursing curricula. Writing self-efficacy needs to reflect a broader understanding of writing as more than a graded outcome. It is a challenging and emotional experience that propels a writer's self-efficacy. Understanding writing self-efficacy will assist with understanding factors that contribute to student attention and delayed graduation from nursing programs.

Study Phases
1. Item Development
   - 37 items have been developed corresponding to the theoretical framework.
   - Positive wording was used to avoid cognitive interpolation.
   - Scale presentation will be an electronic sliding scale on a 0-100 range to increase response variability.

2. Delphi Panel
   - 10 International nurse educators and writing experts will form the expert panel.
   - They will be provided with theoretical and practical descriptions of the framework and questionnaire.
   - Experts will rate each item's applicability to the proposed scale.
   - Respondents will also be asked to comment qualitatively on each item's terms of efficacy, the item's interpretability, and to provide rationale if they believe an item should be removed.
   - Opportunity will be given to the experts to suggest additional items.
   - Items will be removed, added, or edited based on feedback and represented to the panel until consensus is obtained.

3. Think-Aloud Interviews
   - The revised questionnaire will be presented to 8-12 undergraduate nursing students from local nursing programs.
   - Think-aloud interviews will be used and will be tape-recorded and transcribed.
   - Enrolled participants will be asked to read each item, score themselves, and then explain verbally why they decided upon the score they gave as well as any writing factors that came to mind that influenced the score decision.
   - These interviews will be used to establish that the items are being interpreted in the intended manner and edited or removed as necessary.

4. Psychometric Testing
   - 10-20 nursing students for each finalized item on the instrument will be selected.
   - The scale will be presented concurrently with the instrument.
   - The scale will be presented concurrently to the established writing self-efficacy instrument.
   - Demographic information will also be collected from students.
   - Cronbach's alpha will be calculated for reliability.
   - Exploratory and confirmatory factor analysis will be the primary method of construct validity.