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Development of a Marginality Tool for Nursing Education

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Purpose: The nursing profession remains largely homogenous with regard to a number of variables including race/ethnicity, sexual orientation, gender, and age. The homogeneity of the nursing profession is largely a direct result of the significantly higher attrition rates that minority nursing students experience when compared to non-minority students. Qualitative data suggest that feelings related to marginality are associated with higher attrition rates of minority students from nursing school, yet no research tool exists that accurately measures marginality in the student population. The purpose of this study was to develop a valid and reliable marginality index that speaks specifically to marginalization within the field of nursing and nursing education.

Methods: A two-stage process for estimating content validity was undertaken. The first stage, the *development stage necessitated* A review of the extant literature on marginalization of minority students in nursing education was undertaken. For the purpose of this study, the term “minority nursing student” was defined as an undergraduate nursing student who met any of the following criteria: 1) is a racial/ethnic minority; 2) is male; 3) is a sexual minority; 4) is 25 years of age or older. Hall and colleagues (1994) introduced a conceptual framework for the study of marginality within the field of nursing. Hall and colleagues (1994) ascribed seven key properties or subconcepts to marginality: 1) intermediacy; 2) differentiation; 3) power; 4) secrecy; 5) voice; 6) reflectiveness; and 7) liminality. This conceptual framework was used to develop the marginality index. This concept analysis provided the framework for the marginality index. Items for the marginality index were developed in under the guidance of the author of the concept analysis used as the foundation for the tool development. A 4-point Likert scale (0= strongly disagree to 4= strongly agree) was created. Evidence of content validity was established based on the feedback from five experts.

Results: Results of the content analysis indicated that 7 of the 35 items had a CVI of .63, which is below the threshold level of .80. After reviewing each item, all 7 seven were eliminated from the instrument. Qualitative remarks from one of the content experts suggested minor revisions on two items; both were revised accordingly. The CVI for the total instrument after revisions was .94. The marginality index consisted of 50 items, which was used for the pilot testing phase.

A study was then conducted to evaluate the psychometric properties of the marginality index. A demographic survey and the marginality index was given to all undergraduate students enrolled in a nursing program in the Midwest. A convenience sample of 323 participants was used. Prior to factor analysis, the PI examined the inter-item correlations among variables. According to Kim & Mueller (1978), any variable that yields an inter-item correlation of less than .4 may be excluded from further analysis. After analysis of inter-item correlations, the marginality tool was reduced from 28 to 19 items. Cronbach's alpha for the revised index was $\alpha = .925$.

Exploratory factor analysis of the marginality index was conducted using SPSS version 24. The first step of the process was to determine the appropriateness of factor analysis. The Kaiser-Meyer-Olkin measure for the index was .960 and the Bartlett Test of Sphericity was statistically significant, $\chi^2 (171, n = 323) = 5759.8, p < .001$. The marginality index with a varimax rotation procedure yielded the extraction of two factors, which accounted for 70% of the variance. Analysis of these factors revealed that all seven of the expected dimensions of marginality were present. Results of the larger study suggest that minority nursing students experience significantly higher marginalization when compared to non-minority students.

Conclusion: Results of the study suggest that marginalization remains a significant issue within the realm of nursing education. Further studies need to be conducted using the marginality index. Correlational studies that evaluate the relationship between marginalization and a number of variables including self-efficacy and social integration can also be undertaken.

Title:

Development of a Marginality Tool for Nursing Education

Keywords:

Marginalization, Minority Nursing Student and Tool Development

References:

- DeVillis, R. F. (2012). *Scale development. Theory and application* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Ferketich, S. (1991). Focus on psychometrics aspects of item analysis. *Research in Nursing & Health*, 14(2), pp. 165-168.
- Hall, J., Stevens, P., & Meleis, A. (1994). Marginalization: A guiding concept for valuing diversity in nursing knowledge development. *Advances in Nursing Science*, 16(1), 23-41. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/8092811>
- Hamilton, J. B., Crandell, J. L., Carter, J. K., & Lynn, M. R. (2010). Reliability and validity of the perspectives of supports from God scale. *Nursing Research*, 59(2), pp. 102-109.
- Kim, J., & Mueller, C. W. (1978). *Introduction to factor analysis: What is is and how to do it*. Beverly Hills, CA: Sage Publications.
- Lynn (1986). Determination and quantification of content validity. *Nursing Research*, 35(6), pp. 382-386.
- Mertler, C. A., & Vanatta, R. A. (2013). *Advanced and multivariate statistical methods: Practical application and interpretation* (5th ed.). Glendale, CA: Pyrczak Publishing.
- Polit, D. F., & Beck, C. T. (2017). *Generating and assessing evidence for nursing practice* (10th ed.). Philadelphia, PA: Wolters Kluwer

Abstract Summary:

Results of qualitative studies suggest that marginalization of minority students remains a significant issue in nursing education. Unfortunately, no scale exists that measures

marginality in the student population. The purpose of this study was to develop a marginality scale that speaks specifically to marginalization within the field of nursing education.

Content Outline:

I. Background

1. The nursing profession remains largely homogenous with regard to a number of variables including race/ethnicity, sexual orientation, gender, and age.
2. The homogeneity of the nursing profession is largely a direct result of the significantly higher attrition rates that minority nursing students experience when compared to non-minority students.
3. Qualitative data suggest that feelings related to marginality are associated with higher attrition rates of minority students from nursing school.
4. No index exists that accurately measures marginality in the student population.

II. Purpose

1. The purpose of this study was to develop a valid and reliable marginality index that speaks specifically to marginalization within the field of nursing and nursing education.

III. Methodology

1. A two-stage process for estimating content validity was undertaken.
2. *Development stage*: A review of the extant literature on marginalization of minority students in nursing education was undertaken. For the purpose of this study, the term "minority nursing student" was defined as an undergraduate nursing student who met any of the following criteria: 1) is a racial/ethnic minority; 2) is male; 3) is a sexual minority; 4) is 25 years of age or older.
3. Hall and colleagues (1994) introduced a conceptual framework for the study of marginality within the field of nursing. Hall and colleagues (1994) ascribed seven key properties or subconcepts to marginality: 1) intermediacy; 2) differentiation; 3) power; 4) secrecy; 5) voice; 6) reflectiveness; and 7) liminality. This conceptual framework was used to develop the marginality index.
4. Items for the marginality index were developed in under the guidance of Dr. Hall (the author of the concept analysis used as the foundation for the tool development). A 4-point Likert scale (0= strongly disagree to 4= strongly agree) was created.
5. *Judgment-quantification stage*: Evidence of content validity was established based on the feedback from five experts. The Content Validation Index (CVI) recommended by Lynn (1986) was used to calculate a content validity ratio.

Results

1. Results of the content analysis indicated that 7 of the 35 items had a CVI of .63, which is below the threshold level of .80 as put forth by Lynn (1986). After reviewing each item, all 7 seven were eliminated from the instrument. Qualitative remarks from one of the content experts suggested minor revisions on two items; both were revised accordingly. The CVI for the total instrument after revisions was .94. The marginality index consisted of 28 items, which was used for the pilot testing phase.
2. A pilot study, consisting of a convenience sample of 36 undergraduate students enrolled in a nursing program in the Midwest was undertaken. The pilot study was completed so as to provide feedback regarding the readability and clarity of items included in the

instrument, as well as to identify any potential procedural issues that may arise when conducting the larger study.

Larger Study

1. A study was conducted to evaluate the psychometric properties of the marginality index. A demographic survey and the marginality index was given to all undergraduate students enrolled in a nursing program in the Midwest. A convenience sample of 323 participants was used.
2. Prior to factor analysis, the PI examined the inter-item correlations among variables. According to Kim & Mueller (1978), any variable that yields an inter-item correlation of less than .4 may be excluded from further analysis. After analysis of inter-item correlations, the marginality tool was reduced from 28 to 19 items.
3. Cronbach's alpha for the revised index was $\alpha = .925$.
4. Item-total correlations for the marginality index were above the .30 threshold.
5. Exploratory factor analysis of the marginality index was conducted using SPSS version 24. The first step of the process was to determine the appropriateness of factor analysis. The Kaiser-Meyer-Olkin measure for the index was .96- and the Bartlett Test of Sphericity was statistically significant, $\chi^2 (171, n = 323) = 5759.8, p < .001$.
6. The marginality index with an oblique rotation procedure yielded the extraction of two factors, which accounted for 70% of the variance.
7. The two-factor model had high primary loadings for all 19 items; hence the retention of all 19 items in the index is supported.
8. Of the 19 items, 15 loaded strongly with the first factor and 4 items with the second factor.
9. Do to time constraints (20 minutes to present), I am not presenting the results of the study (although I can touch briefly upon this).

Conclusion and Discussion

1. Results of the study suggest that marginalization remains a significant issue within the realm of nursing education.
2. Further studies need to be conducted using the marginality index. Correlational studies that evaluate the relationship between marginalization and a number of variables including self-efficacy and social integration can also be undertaken.

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