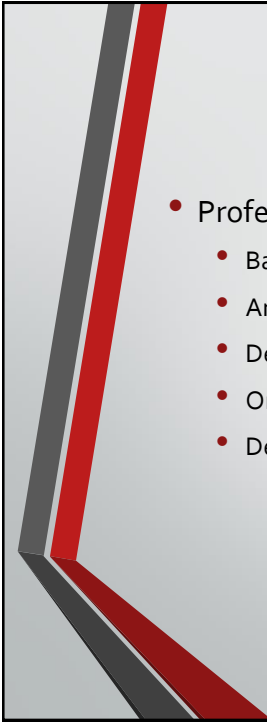


Development and Testing of an Instrument to Measure Professionalism in Nursing

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Introduction

- Professionalism in nursing
 - Background
 - American Nurses Association (ANA)
 - Defined by American Association of Colleges of Nursing (AACN) definition
 - Originally defined in the *BSN Essentials*
 - Definition recently revised

(AACN, 2008, 2021; ANA 2015)

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Purpose Statement

- The purpose of this study was to develop and test the Professionalism in Nursing Scale (PNS), which will allow objective evaluation of the constructs of professionalism in nursing, and to determine the reliability and validity of the PNS.

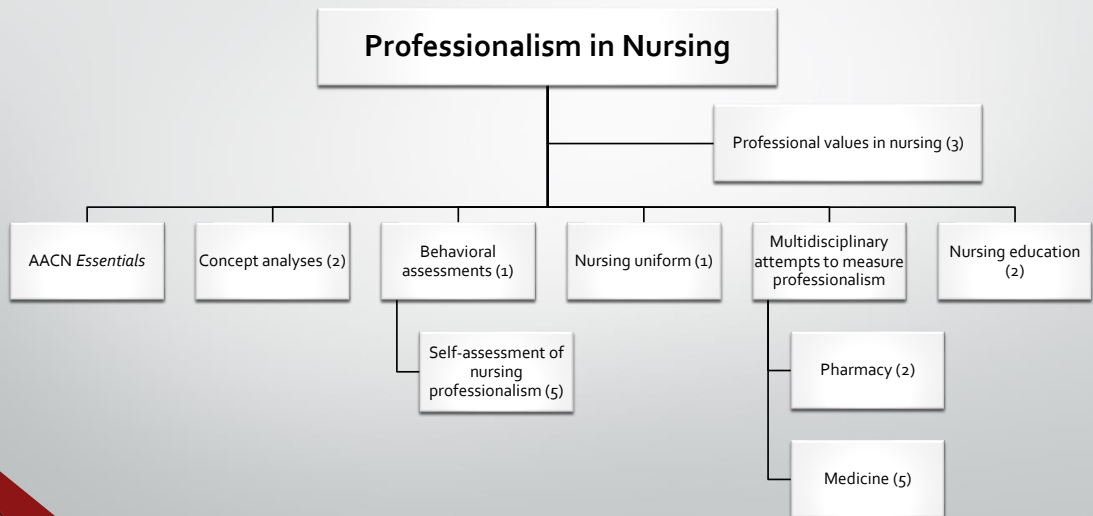
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Research Questions

- Are the psychometric properties of the PNS sufficient to support the use of the scale in data collection?
 - Does the content validity index (CVI) support content validity for the PNS at the minimal level of agreement (0.83) among at least six experts and no more than 10 for each item and the entire PNS?
 - Does internal consistency reach at least 0.70?
 - Does factor analysis support the construct validity of the overall PNS and its subscales?
- What are the relationships among the subscales and between each subscale and the total PNS?
 - Are there significant differences among the subscale and total scores of the PNS for various demographic data?

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Review of the Literature



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Significance and Gaps

- Total of 21 studies reviewed
 - Methodological flaws
 - Different definitions for each discipline
 - Self-report questionnaires
 - Sample limitations
 - Lack of investigation of causal or relational variables

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Development Process

- Phase I: Item Development
- Phase II: Scale Development
- Phase III: Scale Evaluation

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Phase I Item Development

- Item generation and identification of domains
 - 63 total items
 - 6 proposed domains
- PNS scaling
- Content validity index
 - Sample, sampling, setting
 - Members of the AACN Task Force that created the new *Essentials* competencies

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Demographic Results for CVI

Demographics (<i>n</i> = 10)	<i>n</i>	%
Highest degree earned		
Master of Science in Nursing	1	10.0
Doctor of Nursing Practice	1	10.0
Doctor of Nursing Science	1	10.0
Doctor of Philosophy	7	70.0
Number of years' experience		
26-30 years	3	30.0
31+ years	7	70.0
Primary practice setting		
Academia/higher education	9	90.0
Clinical environment/practice setting	1	10.0
Gender		
Male	0	0.0
Female	10	100.0
Race		
Black/African American	1	10.0
White	8	80.0
American Indian/Alaskan Native	1	10.0
Ethnicity		
Hispanic or Latino	0	0.0
Not Hispanic or Latino	10	100.0
Age		
50-59 years	2	20.0
60+ years	8	80.0

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Content Validity Index Results

- Overall CVI for PNS = .93
- Items that fell below benchmark of .83

Domain	Item	CVI
Ethics and Values	Altruism	.80
	Humility	.50
Excellence	Innovative	.80
Collaboration	Peer evaluation	.80
Social Justice	CLAS	.60
Professional Engagement	Scholarship	.80
	Discovery	.70
Communication	Steward the discipline	.80
	Assertiveness	.70

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Phase II Scale Development

- Pilot Testing
 - 54 items
 - Sample, sampling, setting
 - Senior-level nursing students
 - Registered nurses from across the United States working in academia
 - Registered nurses from across the United States working in clinical settings
 - Desired sample size 25-150 participants

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Pilot Testing Results

- Total of 262 responses ($n = 247$ registered nurses, $n = 15$ students)
 - Demographics for students
 - Primarily white females age 20-29
 - Demographics for registered nurses
 - Bachelor of Science degree (46.6%)
 - Range of years' experience 31+ years (25.1%)
 - Clinical environment (74.1%)
 - Staff nurse (46.2%)
 - Female (93.1%)
 - White (80.1%)

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Pilot Testing Results

- Inter-item correlations (.30 - .80)
- Collaboration
 - Three items (.63 - .76)
- Professional Engagement
 - Two items (.63)
- Social Justice
 - Four items
 - One removed (Item 45)
 - Final correlation (.70 - .78)
- Communication
 - Seven items
 - Two removed (Items 52 and 53)
 - Final correlation (.63 - .78)
- Excellence
 - 18 items
 - Three removed (Items 27, 28, and 25)
 - Final correlation (.49 - .79)
- Ethics and Values
 - 20 items
 - Five removed (Items 16, 20, 14, 9, and 2)
 - Final correlation (.46 - .81)

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Pilot Testing Results

- Item-scale correlations
 - Recommended .50 or higher
 - 43 items remaining
 - Ranged from .63 - .87

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Phase II Scale Development (continued)

- Field Testing
 - Conducted in similar manner as pilot testing with larger sample size
 - Desired sample size 300 participants

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Phase III Scale Evaluation

- Descriptive statistics
- Statistical analysis
 - Validity
 - Exploratory factor analysis
 - Reliability
 - Internal consistency
 - Exploration of associations between demographics and responses

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Field Testing Results

- Total of 545 responses ($n = 504$ registered nurses, $n = 41$ students)
 - Demographics for students
 - Age 20-29 (82.9%)
 - Female (85.4%)
 - White (82.9%)
 - Demographics for registered nurses
 - Equal number of BSN and PhD (22.4%)
 - Range of years' experience 31+ years (36.9%)
 - Academic setting (66.7%)
 - Nurse educator (60.9%)
 - Female (92.9%)
 - White (91.5%)

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Exploratory Factor Analysis

- Eigenvalues

	Eigenvalue	Difference	Proportion	Cumulative
1	22.2096760	19.9132228	0.5165	0.5165
2	2.2964531	0.8473055	0.0534	0.5699
3	1.4491476	0.2379182	0.0337	0.6036
4	1.2112294	0.1179089	0.0282	0.6318
5	1.0933205	0.0999542	0.0254	0.6572

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Exploratory Factor Analysis

- Factor loadings reviewed (> 0.5)
- Items not loading on any factor
 - Variables 4, 11, 12, 21, 23, 26, and 43
- Items loaded on more than one
 - Variables 17, 33, and 42
- Resulted in 33 items

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Exploratory Factor Analysis

- Eigenvalues

	Eigenvalue	Difference	Proportion	Cumulative
1	16.8701444	14.8823808	0.5112	0.5112
2	1.9877636	0.6609354	0.0602	0.5715
3	1.3268283	0.2512283	0.0402	0.6117
4	1.0756000	0.0652844	0.0326	0.6445
5	1.0103156	0.167947	0.0306	0.6749

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Exploratory Factor Analysis

- Factor loadings reviewed (> 0.5)

Factor 1	•VAR1 •VAR5 •VAR9	VAR2 VAR7 VAR20	VAR3 VAR8 VAR21
Factor 2	•VAR16 •VAR22 •VAR35	VAR18 VAR25 VAR36	VAR19 VAR34
Factor 3	•VAR24 •VAR37	VAR30 VAR38	VAR32 VAR39
Factor 4	• VAR6 • VAR14	VAR10 VAR15	VAR13
Factor 5	• VAR27 • VAR40	VAR28 VAR41	VAR29

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Reliability

- Cronbach's coefficient alpha for each subscale and the overall PNS

Factor	Cronbach's Coefficient Alpha
Factor 1 (Ethics and Interprofessional Collaboration)	0.93
Factor 2 (Excellence)	0.91
Factor 3 (Professional Engagement)	0.88
Factor 4 (Caring)	0.88
Factor 5 (Self-awareness)	0.89
Overall PNS	0.97

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Discussion

- PNS is valid and reliable
- Five-factor structure with 33 items
- Factor 1
 - Ethics and Interprofessional Collaboration
 - ANA *Code of Ethics* (2015)
- Factor 2
 - Excellence
 - Evidence-based, patient-centered care
 - Inclusion and diversity (AACN, 2021)

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Discussion

- Factor 3
 - Professional Engagement
 - Continuous learning, self-improvement
- Factor 4
 - Caring
 - Core concept for nursing
- Factor 5
 - Self-awareness
 - Emerged from new competencies from AACN (2021)
 - Maturity, emotional intelligence, intentional presence

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Exploration of Associations Between Demographics and Responses

- Age, race, ethnicity, gender
 - Grouped into dichotomous categories
 - Mann-Whitney U
 - Positively skewed data
- Years of experience, highest degree earned, practice setting, and primary role
 - Grouped for comparison
 - Kruskal Wallis test
 - Pairwise multiple comparison analysis

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Discussion

- Demographic Associations
 - Increased age and greater years' experience
 - Higher scores = better understanding of importance of ethics in professional nursing practice
 - Lifelong learning and need for dedication and professional engagement
 - Primary setting and role
 - Higher scores for ethics in academia versus clinical setting
 - Theory versus practice

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Limitations

- Convenience sample
- Self-report nature of PNS
- Dissemination of survey to Magnet™ hospitals
 - Organization of healthcare systems
 - Identification of nursing leadership
 - No contact information
- Unable to determine test-retest reliability

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Implications and Conclusions

- Valid and reliable tool to measure domain nine (Professionalism)
- Outline expectations of professionalism in the clinical environment
- Exploration of stability of the PNS over time, Confirmatory factor analysis
- Academic settings
 - Measure and trend levels of professionalism
- Clinical environment
 - Exploration of causal and relational variables
- Exploration of interprofessional expectations of professionalism
- Core competencies released by the AACN (2021)
- Promote positive patient outcomes
- Promote professional image for future of nursing profession

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