The Relationships Among Education, Leadership Experience, Emotional Intelligence, and Transformational Leadership of Nurse Managers

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Introduction

- Leadership in healthcare is an important concept in influencing patient, organizational, and employee outcomes.

- Many nurses assume formal leadership roles and are accountable for transforming healthcare environments.

- An individual’s behavior, not title, reflects leadership qualities.
Background/Literature

- Transformational leadership has been identified as a desirable leadership style for nurse managers.
- The ANA, IOM, and AONE recommend nurse managers possess higher levels of formal education.
- Emotional Intelligence (EI) is documented as an important skill for nurse managers.
- Education, leadership experience, and EI have each been linked to effective leadership.
Purposes

To examine the relationships among education, leadership experience, EI, and transformational leadership and to investigate whether education, leadership experience, and EI predict transformational leadership of nurse managers.
Research Questions

1. What is the relationship between education and transformational leadership in nurse managers?

2. What is the relationship between leadership experience and transformational leadership in nurse managers?

3. What is the relationship between EI and transformational leadership in nurse managers?

4. What are the relationships among education, leadership experience, EI, and transformational leadership of nurse managers?
Hypothesis

The linear combination of the predictor variables education, leadership experience, and EI predict the outcome variable transformational leadership of nurse managers better than any one predictor variable alone.
Theoretical Underpinning

Conceptual Systems:
- Social
- Interpersonal
- Personal

Leadership experience
- Level of education
- Emotional intelligence

Theory of Goal Attainment

Perception: shaped by education and past experiences (work & personal)
Communication: human behavior that relates person to person and person to environment; and the information component of interactions
Interaction: process of perception and communication; influenced by knowledge, needs, goals, experiences, and emotional intelligence
Transaction: observable behaviors

Transformational leadership

TL Components:
- Idealized Influence (attributed)
- Idealized Influence (behavior)
- Inspirational Motivation
- Intellectual Stimulation
- Individualized Consideration
Methodology

- Predictive correlational design
- Convenience sampling
- Sample: Nurse managers ($N = 148$)
  - Members of the American Organization of Nurse Executives (AONE)
  - Actively working FT in a nurse manager role
  - At least one year experience
- Paper and electronic data collection
Research Instruments

- **Concise Genos Emotional Intelligence Inventory**
  - 31- items
  - Reliability for total EI ($\alpha = .90$)

- **Multifactor Leadership Questionnaire (5X-Short)**
  - 45- items
  - Reliability for total TL ($\alpha = .86$)

- **Demographic Questionnaire**
  - 13- items
Data Analysis

- Primary research questions & hypothesis:
  - Descriptive statistics
  - Eta
  - Pearson correlations
  - Step-wise multiple regression

- Additional analyses:
  - Independent $t$-tests
  - One-way analysis of variance (ANOVA)
  - Two-way ANOVA
  - Pearson correlations
Descriptive Statistics of Categorical Demographic Data ($N = 148$)

- **Gender ($n = 147$):**
  - 88.4% Female ($n = 130$)
  - 11.6% Male ($n = 17$)

- **Ethnicity/race:**
  - 91.9% White ($n = 136$)

- **Highest level of education:**
  - 1.4% Diploma in Nursing ($n = 2$)
  - 2.7% Associate ($n = 4$)
  - 20.3% Bachelor ($n = 30$)
  - 70.9% Master ($n = 105$)
  - 4.7% Doctorate ($n = 7$)
Descriptive Statistics of Categorical Demographic Data ($N = 148$)

- 77.7% held professional certifications ($n = 115$)
- 90.5% participated in leadership training in last 2 years ($n = 134$)
- Unit specialty managed ($n = 147$):
  - 33.3% Medical Surgical or Telemetry ($n = 49$)
  - 31.3% Other ($n = 46$)
  - 16.3% Critical Care ($n = 24$)
  - 8.2% Maternal Health ($n = 12$)
  - 7.5% Perioperative ($n = 11$)
  - 3.4% Behavioral Health ($n = 5$)
## Descriptive Statistics of Continuous Demographic Data ($N = 148$)

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>48.86</td>
</tr>
<tr>
<td>Years of RN Experience</td>
<td>23.65</td>
</tr>
<tr>
<td>Years in Current Nurse Manager Role</td>
<td>7.53</td>
</tr>
<tr>
<td>Years Worked in Current Organization</td>
<td>14.93</td>
</tr>
<tr>
<td>Years of Leadership/Management Experience</td>
<td>13.39</td>
</tr>
<tr>
<td>Number of Units Managed</td>
<td>2.01</td>
</tr>
<tr>
<td>Number of Employees Managed</td>
<td>75.59</td>
</tr>
</tbody>
</table>
Descriptive Statistics of Emotional Intelligence (EI) and Transformational Leadership (TL) Mean Scores ($N = 148$)

- **Emotional Intelligence:**
  - Mean: 4.22
  - 1-5 range
  - SD: .36

- **Transformational Leadership:**
  - Mean: 3.42
  - 0-4 range
  - SD: .36
### Research Question 1

**Descriptive Statistics of Education on Transformational Leadership Scores (N = 148)**

<table>
<thead>
<tr>
<th>Education Group</th>
<th>n</th>
<th>M</th>
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<tbody>
<tr>
<td>Diploma in Nursing</td>
<td>2</td>
<td>68.50</td>
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<tr>
<td>Associate</td>
<td>4</td>
<td>70.00</td>
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<tr>
<td>Bachelor</td>
<td>30</td>
<td>68.30</td>
</tr>
<tr>
<td>Master</td>
<td>105</td>
<td>68.16</td>
</tr>
<tr>
<td>Doctorate</td>
<td>7</td>
<td>72.00</td>
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<tr>
<td>Total</td>
<td>148</td>
<td>68.43</td>
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</table>

- Eta Correlation between Education and Transformational Leadership **non-significant** ($p = .738$)
Research Questions 2 & 3

Correlations between Research Predictor Variables and Transformational Leadership ($N = 148$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>$r$</th>
<th>$p$</th>
<th>$r^2$</th>
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</thead>
<tbody>
<tr>
<td>Leadership Experience</td>
<td>147</td>
<td>.01</td>
<td>.918</td>
<td>$ns$</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>148</td>
<td>.59</td>
<td>&lt;.001</td>
<td>.34</td>
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</table>

*Note. p value significant at .05*
Research Question 4

Stepwise Multiple Regression Model Summary of Emotional Intelligence on Transformational Leadership (N = 148)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>$R^2$</th>
<th>$R^2\Delta$</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>.59</td>
<td>.342</td>
<td>.342</td>
<td>75.51</td>
<td>1,145</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. $p$ value significant at .05
Additional Analyses

Significant Findings:

- Women exhibited higher transformational leadership scores ($M = 69.10$) than men ($M = 63.88$), ($p = .005$)

- Years of leadership experience ($r = .19, p = .023$) and RN experience ($r = .19, p = .024$) were related to EI

- Age was related to EI ($r = .20, p = .017$)
Limitations

- Limited generalizability
  - Highly homogenous group
  - Practice regions and settings undetermined

- Self-rater instruments
  - Potential response self-inflation
Implications

- Nursing Science & Research:
  - Extension and application of nursing theory
  - Expansion of transformational leadership concept - adds to body of knowledge
  - Support of instruments’ validity and reliability

- Nursing Education:
  - Curricula revisions to include formal EI education
  - Workplace EI continuing education
Implications

- Nursing Administration
  - Inform recruitment efforts when making decisions about qualified candidates
  - Guide formation of job description: education and skill requirements
  - Integration of EI screening tools or behavioral assessments during interview process
  - Integration of EI continuing education or development training programs into the practice setting
Recommendations

- Replicate the study using a random sampling method.
- Measure transformational leadership using 360-rater instruments.
- Examine transformational leadership in nurse managers by practice regions and work settings.
Thank You

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