Nursing Knowledge: Does it make a difference in client outcomes?

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Objectives

- Describe the purpose of the research project
- Review the process
- Explain the research findings
Describe the Purpose of the Research

Identify the relationship of:
• The concepts of knowing and patient outcome improvement scores
• The years of nursing experience and patient outcome improvement scores
• The nurses educational level and patient outcome improvement scores

Outcome Improvement Measures

• M1860- Improvement in ambulation
• M1850- Improvement in bed transfer
• M1242- Improvement in pain interfering with activity
• M1830- Improvement in bathing

• M2020- Improvement in management of oral medications
• M1400- Improvement in dyspnea
• M1342 Improvement in status of surgical wounds
• M1610- Urinary Incontinence

OASIS-C Client-Centered Outcome Improvement Measures
The nature of the study

I asked simple questions:
1. What is the relationship between: nurses knowledge,
2. nurses knowledge of the system and institution of home health nursing,
3. the knowledge of their own skills,
4. their experience, and
5. their level of education and the total client-centered outcome improvement measures on the discharge OASIS-C?

Literature Review

• Benner’s Novice to Expert Theory
• Expert Practice in Home Health is influenced by education, experience, and embodied knowledge
Novice To Expert Theory

- **Expert**
  - Experienced-based in-depth knowledge acquired through the fulfillment of tasks which require a high level of work experience and the acquisition of theoretical knowledge

- **Skilled learner**
  - Detailed and functional knowledge acquired through exposure to complex problems without ready-made solutions

- **Competent learner**
  - Coherent and context-specific knowledge through work experience and the observation and consideration of many facts and rules in the situated context of work

- **Advanced learner**
  - Reference knowledge acquired by work experience and the application of complex rules in rather ambiguous situations

- **Novice (beginner)**

*Source: Rauner (2002)*

Knowledge Gap

**The Expertise Gap**

- What Your Target Market Knows
- What You Know $$$$$
Minick’s Manifestations of Early Recognition Instrument

Early Recognition of patient problems include the thought processes of:
1) Knowing the patient
2) Knowing home health, and
3) Knowing oneself

Review the Research Process

• Quantitative Method
• Descriptive correlational design using primary data from surveys and existing data from the discharge OASIS-C
Population & Sample

Home health registered nurses with one year of home health experience who perform the OASIS-C in Ohio.

- Required sample size was 98
  - Potential of 214 participants
  - 138 participants: response rate of 64%
  - 31 participants were excluded
  - 107 participants: operational response rate of 50%
Sampling Plan

Ohio Council for Home Health & Hospice Resource Guide listed 1,000 agencies located within the 300-mile radius.

Home Health Compare was reviewed to determine if the OASIS-C outcome improvement measures data existed.

Sampling Criteria & Ethical Considerations

Inclusions & Exclusions

Home health nurses working more than one year in home health were included.

Excluded where nurses who had worked less than one year in home health

Ethical Considerations

The home health directors & staff were informed of the intent of the study. Informed consents were obtained prior to collecting any data.

Confidentiality was maintained throughout the study.
Data Collection!

- Collected at two levels
  Self-administered survey
  Archival OASIS-C
- Instrumentation
  Manifestation of Early Recognition
  Outcome Assessment Information Set
  version C (OASIS-C)

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Early Recognition of Patient Problems (MER)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am able to act on my own judgments without input from another nurse or physician most of the time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>I am comfortable trusting assessments when technology suggests the contrary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>I do something other than what standard practice is if I feel a patient needs it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>I feel that knowing the personal aspects of a patient is important.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
## Population demographics

- **Gender**
  - Male: 4 (3.7%)
  - Female: 103 (96.3%)

### Age

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-30 years</td>
<td>9</td>
<td>8.4</td>
</tr>
<tr>
<td>31-36 years</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>37-42 years</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>43-48 years</td>
<td>17</td>
<td>15.0</td>
</tr>
<tr>
<td>49-54 years</td>
<td>23</td>
<td>15.9</td>
</tr>
<tr>
<td>55-60 years</td>
<td>13</td>
<td>21.5</td>
</tr>
<tr>
<td>61-66 years</td>
<td>10</td>
<td>9.3</td>
</tr>
</tbody>
</table>

### Educational Level

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate</td>
<td>65</td>
<td>60.7</td>
</tr>
<tr>
<td>Bachelors</td>
<td>39</td>
<td>36.7</td>
</tr>
<tr>
<td>Graduate (Masters &amp; Doctorate)</td>
<td>2</td>
<td>1.9</td>
</tr>
</tbody>
</table>

## Demographic data (continued)

### Position

<table>
<thead>
<tr>
<th>Position</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Nurse</td>
<td>4</td>
<td>3.7</td>
</tr>
<tr>
<td>Field Nurse</td>
<td>58</td>
<td>54.2</td>
</tr>
<tr>
<td>Both</td>
<td>45</td>
<td>42.1</td>
</tr>
</tbody>
</table>

### Experience

<table>
<thead>
<tr>
<th>Experience</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Health Registered Nurse</td>
<td>7.6</td>
<td>6.8</td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>15.6</td>
<td>11.4</td>
</tr>
</tbody>
</table>
## Nurses’ Knowledge Descriptives (N=107)

<table>
<thead>
<tr>
<th>Nurses’ Knowledge Descriptives (N=107)</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client and client’s families</td>
<td>2.9</td>
<td>5.0</td>
<td>4.3</td>
<td>0.5</td>
</tr>
<tr>
<td>System and institution of HH nursing</td>
<td>3.0</td>
<td>5.0</td>
<td>4.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Their own and their colleagues’ skills</td>
<td>1.8</td>
<td>5.0</td>
<td>3.0</td>
<td>0.8</td>
</tr>
</tbody>
</table>

## Client-centered Outcome Improvement Measures Descriptions

<table>
<thead>
<tr>
<th>Outcome</th>
<th>n</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status of surgical wound</td>
<td>84</td>
<td>0.775</td>
<td>0.361</td>
</tr>
<tr>
<td>Bathing</td>
<td>106</td>
<td>0.700</td>
<td>0.226</td>
</tr>
<tr>
<td>Pain interfering with activity</td>
<td>103</td>
<td>0.681</td>
<td>0.223</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>102</td>
<td>0.663</td>
<td>0.238</td>
</tr>
<tr>
<td>Ambulation</td>
<td>105</td>
<td>0.641</td>
<td>0.270</td>
</tr>
<tr>
<td>Bed transfer</td>
<td>103</td>
<td>0.581</td>
<td>0.297</td>
</tr>
<tr>
<td>Management of oral medications</td>
<td>100</td>
<td>0.556</td>
<td>0.286</td>
</tr>
<tr>
<td>Urinary incontinence</td>
<td>92</td>
<td>0.510</td>
<td>0.308</td>
</tr>
<tr>
<td>Mean</td>
<td>107</td>
<td>0.635</td>
<td>0.169</td>
</tr>
</tbody>
</table>

*Scores range from 0% to 100% and are in order from highest to lowest
### State and National Outcome Improvement Scores: January-March 2013

<table>
<thead>
<tr>
<th>Outcome Measures for January-March 2013</th>
<th>Sample Outcome Improvement Measures (%)</th>
<th>Ohio Outcome Improvement Measures (%)</th>
<th>National Outcome Improvement Measures (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathing</td>
<td>70.00</td>
<td>68.32</td>
<td>68.48</td>
</tr>
<tr>
<td>Bed transfer</td>
<td>58.00</td>
<td>57.96</td>
<td>58.06</td>
</tr>
<tr>
<td>Ambulation</td>
<td>64.00</td>
<td>61.08</td>
<td>61.96</td>
</tr>
<tr>
<td>Management of Oral Medications</td>
<td>56.00</td>
<td>51.05</td>
<td>54.54</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>68.00</td>
<td>64.01</td>
<td>67.32</td>
</tr>
<tr>
<td>Pain interfering with Activity</td>
<td>68.00</td>
<td>64.01</td>
<td>67.57</td>
</tr>
<tr>
<td>Status of Surgical Wound</td>
<td>75.00</td>
<td>87.68</td>
<td>89.38</td>
</tr>
<tr>
<td>Urinary Incontinence</td>
<td>51.00</td>
<td>45.70</td>
<td>48.41</td>
</tr>
<tr>
<td>Total</td>
<td>63.50</td>
<td>60.70</td>
<td>62.69</td>
</tr>
</tbody>
</table>

### Research Findings

**Summary:**

There was not a statistically significant relationship between the embodied nursing knowledge concepts of “knowing the client and family, knowing the system and institution, and knowing oneself and one’s colleagues”

Unexpectedly, the findings did not support a relationship between and embodied nursing knowledge and client outcomes in home health

This is surprising, as theoretical literature suggested these concepts were foundational requirements for improving client health outcomes
Research Findings

**Embodied Nursing Knowledge:**

Embodied nursing knowledge using the MER instrument was validated on hospital nursing samples.

Embodied nursing knowledge may not be the same construct in home health nursing.

Why is this???

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Research Findings

Home health nurses may have specific perspectives of embodied nursing knowledge:

- Developed through distinct activities of home health nursing practice.

- Supported by Neal (2000) who identified three stages through which nurses progress as they adapt to the home health environment and become autonomous.
Research Findings

Neal (2000) reported:

Identified three stages home health nurse progression

1 – dependence
2 – moderate dependence
3 – autonomy

Time working in home health enables nurses to gain experience and confidence

Validation of Benner’s novice to expert theory and Minick and Harvey’s definition of embodied knowledge

Research Findings

Outcome Improvement Scores:

Client-centered outcome improvement scores were at or higher than the state and national average scores at time investigated

This resulted in a statistically restricted range of outcome improvement scores
Research Findings

Other results included:

Significantly negative related to nurses age and outcome improvement scores

Should be an expert through refinement of theory and experience and should have higher client-centered outcome improvement score

Possible explanation could be mentoring of new staff, therefore spending less time with client

Research Findings

Other results included:

No relationship between level of nursing education and years of experience

Not expecting level of nursing education

Possible explanation could be majority of nurses held an associates degree, with technical competence, rule orientation, and task focus therefore may have attenuated any possible association between knowledge and improvement
Research Findings

Limitations and recommendations:

Convenience sample lessened reliability of findings
  future study – more random sample

Outcome improvement scores were similar with low variability
  future study – use at least one year of data

MER instrument used perception vs actual knowledge
  future study – measure actual ability with direct observation

Additional future study questions;

  What factors do influence the client-centered outcome improvement measures in home health?

  Why is there a relationship with nurse education levels in hospital environments, but maybe not in home health?
So what, you are thinking...

Home health is complex, with four components, including reimbursement, quality practices, home environment, and care planning.

This study focused on nursing expertise that supports client-centered quality outcomes.

So what, you are thinking...

Home health quality requires the right nurse providing the right intervention at the right time therefore it is necessary to understand the relationship between the nurse and client outcomes.

Home Health nurses must be creative, think critically and solve problems.

Home Health nurses must adapt to each new environment or home situation, changing regulations, and changing needs of the home health client.
So what, you are thinking...

Hire the right nurse:

Home Health agencies may be able to improve client-centered outcomes by recruiting experienced, educated staff

So what, you are thinking...

Hire the right nurse:

Describe the home environment
Describe safety requirements
Share job description
Offer a "ride-a-long" if possible
So what, you are thinking...

Hire the right nurse:

What is the nurse’s background?
What is their experience?
What is their level of assessment skills?
Evidence of critical thinking skills?
Where have they worked?
Are they ethical?
Are they flexible?

So what, you are thinking...

Hire the right nurse:

Peer interview process:
Include other nurses, therapists, clerical staff
Ask behavior based interview questions
  ex. Tell me what good customer service
      looks like to you
      Describe quality care
Rate the candidates individually
Tally for a total score
So what, you are thinking...

Orientation process:

Basic pre-hire process – drug screen, background check, license active
Give them their “stuff” – key, nurses bag, computer, phone, car supplies
Make them welcome!

So what, you are thinking...

Orientation process:

Adapt to the nurse based on their experience
Flex process as needed
Consistent preceptor
Balance experience and theory orientation
Include field and office time
Regulatory information
OASIS education
Clinical information
So what, you are thinking...

Orientation process:
- Ongoing assessment of progress
- Weekly touch base with manager

So what, you are thinking...

Competency process:
- Staff will be at various levels of competence
- Help move through stages – novice to expert, dependence to autonomy
- Share individual outcome scores
- Review case studies
So what you are thinking...

Competency process:

Frequency – monthly, quarterly, yearly?
Just in time education – new equipment
Annual competencies – needs assessment
Standardized
Consistent

Conclusion

This study examined possible relationships between home health nurses’ embodied knowledge, demographic variables, and client-centered outcomes.

The results were non-significant

More research is needed to further understand whether and how embodied nursing knowledge influences client outcomes in home health
Questions

References


References (continued)

