Undergraduate Nursing Student Perceptions of Facilitators and Inhibitors of Clinical Learning with Q Methodology

Dr. Angela Opsahl
The presenter has no real or perceived vested interests or conflicts of interest in relation to this presentation.

Presenter:
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Session Objectives

Objectives

- Understand student perceptions of their clinical learning environment.
- Identify the needs of students in the clinical setting
- Discuss areas of concern around the optimal clinical learning environment
In addressing the nursing shortage, nursing education faces several major constraints that limit the number of programs, or program growth, to meet the demand for a well-prepared nursing workforce – including securing adequate clinical site placements, enlisting appropriate faculty preceptors, and dealing with budgetary constraints (Andreson & Levin, 2014).

Prelicensure nursing students assume the clinical environment provided to them will be individualized, innovative, and supportive to meet their educational needs (Lienert-Brown, Taylor, Withington, & Lefebvre, 2018).
The purpose of this study is to determine the facilitators and inhibitors to undergraduate nursing students’ clinical learning in acute-care practice sites.
Clinical nurse education is a critical aspect of all undergraduate programs to prepare future nurses for professional practice.


A recent study found through implementing changes based on student feedback provided support for the overall partnership between academic and hospitals, student learning needs, and improves the student experiences.


Meaningful learning occurs within an environment that facilitates mutual respect and shared expectations.

Methodology

- Students were recruited via course email to participate in a Q methodology study on what facilitates and inhibits their clinical learning.
- Data collection sessions over two days were offered on each of the participating campus sites for student participants.
- Using a Q methodology mixed-methods design, quantitative measures of student’s perceptions will be used to describe qualitative viewpoints.
- These participant profiles are correlated to each other to discover groups with common viewpoints (McKeown & Thomas, 2013). 35 opinion statements were distilled from 147.
- Students performed a rank order of their levels of agreement and disagreement on a -4 to +4 forced-distribution sorting sheet (35 boxes) comprised of common statements about their clinical experiences that were gathered in open-ended class discussion.
- To protect confidentiality, no identifying information appeared on the data collection tool.
- Data were analyzed using centroid factor extraction and varimax rotation with PQMethod for Windows Version 2.35(GNU Public License).
- Data collection was facilitated by the principle investigator with site faculty sponsor.
Q-Methdology

• Q methodology is a philosophical framework and set of techniques for conducting research focused on individuals’ preferences (Hensel, 2016; McKeown & Thomas, 2013).

• Exposing students to Q methodology provides an opportunity to explore subjective attitudes and opinions (Akhtar-Danesh, 2017) for emerging themes from the data rather than resulting from the researcher’s perspectives (Killam, Timmermans, & Raymond, 2013).

• Process involves rank ordering levels of agreement/disagreement with a set of statements about a given topic.

• Utilizing Q Methodology provided a more objective assessment of students’ needs to optimize clinical learning.
1. I feel the clinical environment offered experts to support us on the unit
2. I feel the clinical site staff helped me with new skills
3. The (clinical) site helped to train me on new treatments for patients
4. It helps me when I feel I can trust the staff at the clinical site
5. The clinical site staff did not set a good example for our class
6. The clinical site did not help me to learn to prioritize my workload
7. It was frustrating that I did not learn anything new
8. Staff at the clinical site provided guidance for questions
9. The clinical site staff were always negative in feedback
10. I feel the clinical staff were anxious about me being there
11. The clinical site staff were not welcoming to students
12. Staff at the clinical site were helpful of me
13. The clinical site experiences helped to prepare me for my future practice
14. The clinical site staff were helpful to drill us on our new skills
15. I was not impressed by the clinical site staff as role models
16. The clinical site staff only wanted to talk about all their personal problems
17. The clinical site staff made me feel uncomfortable asking questions
18. The clinical site staff were very knowledgeable about our patients
19. Other health workers on the floor avoided clinical site staff
20. The clinical staff were excellent teachers
21. I felt accepted when staff at the clinical site supported me with patient care
22. The clinical site staff really helped to guide us through patient care skills
23. The clinical site assisted me with new knowledge
24. The clinical site staff gave me feedback on how I was doing
25. The clinical site staff were too busy to help us explain new skills
26. I was given specific directions for patient care from the clinical site
27. The clinical site staff made me feel as though I was an inconvenience
28. Staff from the clinical site helped me talk through or practice steps for my patient care task
29. I liked that the clinical site staff were very experienced
30. The clinical site staff were quick to point out all my faults
31. The clinical staff were excellent teachers
32. The clinical site staff tried to make me feel comfortable from the start
33. I was always worried what clinical site staff would convey to my instructor
34. I did not learn anything new with the clinical site
35. The clinical site made me feel as though I was a hardship to their workload
### Sample Q Methodology Data Sorting Sheet

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>-3</td>
<td>-2</td>
</tr>
<tr>
<td>-1</td>
<td>0</td>
<td>+1</td>
</tr>
<tr>
<td>+2</td>
<td>+3</td>
<td>+4</td>
</tr>
</tbody>
</table>

**DISAGREE**

COUNT: ___

**NEUTRAL OR NOT RELEVANT**

COUNT: ___

**AGREE**

COUNT: ___
Take the deck of cards [see Table B] and the score sheet and go sit at a table. Lay down the score sheet [see Table C] in front of you. All 35 cards in the deck contain a statement about a student viewpoint on facilitators or inhibitors to the clinical environment. We will ask you to rank-order these statements from your own point of view. Our question to you is: “To what extent do you agree with the following statements”. The numbers on the cards (from 1 to 35) have been assigned to the statement cards randomly and are only relevant for the administration of your response.

This study is about student viewpoints related to the clinical site. We are interested in your attitudes toward facilitators and inhibitors in the clinical learning environment.

Read the 35 statements carefully and split them up into three piles: a pile for statements you tend to disagree with, a pile for cards you tend to agree with, and a pile for cards you neither agree or disagree with, or that are not relevant or applicable to you. Please use the three boxes “AGREE”, “NEUTRAL OR NOT RELEVANT” and “DISAGREE” at the top from left to right of the score sheet. Please check whether the numbers entered in 3 boxes add up to 35.

Take the cards from the “AGREE” pile and read them again. Select the two statements you most agree with for facilitators and inhibitors in the clinical learning environment and place them in the two last boxes on the top right of the score sheet, below the “+4” Strongly Agree(it does no matter which one goes on top or below). Next, from the remaining cards in the deck, select the three statements you most agree with and place them in the three boxes below the “+3”. Follow this procedure for all cards from the “AGREE” pile.

Now take the cards from the “DISAGREE” pile and read them again. Just like before, select the two statements you most disagree with for facilitators and inhibitors in the clinical learning environment and place them in the two last boxes on the left of the score sheet, below the “- 4” Strongly Disagree. Follow this procedure for all cards from the “DISAGREE” pile.

Finally, take the remaining cards and read them again. Arrange the cards in the remaining open boxes of the score sheet until all boxes have a statement card on them. Place the sentence number of the statement in the box that corresponds on your score sheet to your preferred placement. Please turn in your completed score sheet to the coordinator.
### Actual Project Q Methodology

**Data Sorting Sheet**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>-3</td>
<td>+4</td>
</tr>
<tr>
<td>-3</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>+1</td>
<td>+2</td>
<td></td>
</tr>
<tr>
<td>+2</td>
<td>+3</td>
<td></td>
</tr>
<tr>
<td>+3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**I feel the clinical environment offered experts to support us on the unit**
-4: The clinical site staff were always negative in feedback
-3: The clinical site staff were not welcoming to students
-2: I feel the clinical site staff were anxious about me being there
-1: The clinical site staff were not helpful to drill us on our new skills

**The clinical site made me feel uncomfortable asking questions**
0: Staff at the clinical site provided guidance for questions
1: The clinical site staff made me feel uncomfortable asking questions
2: The clinical site staff only wanted to talk about all their personal problems
3: Staff at the clinical site were helpful of me
4: Other health workers on the floor avoided clinical site staff

**The clinical staff were excellent teachers**
0: The clinical site staff were excellent teachers
1: The clinical site staff gave me feedback on how I was doing
2: Staff from the clinical site helped me practice steps for my task
3: The clinical site staff made me feel as though I was an inconvenience
4: I felt accepted when staff at the clinical site supported me with patient care

**Other health workers on the floor avoided clinical site staff**
0: Other health workers on the floor avoided clinical site staff
1: The clinical site staff were quick to point out all my faults
2: The clinical site staff tried to make me feel comfortable from the start
3: I liked that the clinical site staff were very experienced
4: The clinical site staff were very knowledgeable about our patients

**I feel the clinical site staff helped me with new skills**
0: I was not impressed by the clinical site staff as role models
1: The clinical site staff really helped to guide us through patient care skills
2: The clinical site experiences helped to prepare me for the future
3: Staff at the clinical site were helpful of me
4: It helps me when I feel I can trust the staff at the clinical site

**I feel the clinical site staff helped me with new skills**
0: The clinical site did not help me to learn to prioritize my workload
1: Other health workers on the floor avoided clinical site staff
2: The clinical site staff did not set a good example for our class
3: Staff at the clinical site were quick to point out all my faults
4: I felt accepted when staff at the clinical site supported me with patient care

**The clinical staff were excellent teachers**
0: The clinical site staff were excellent teachers
1: The clinical site staff gave me feedback on how I was doing
2: Staff from the clinical site helped me practice steps for my task
3: The clinical site staff made me feel as though I was an inconvenience
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**I felt accepted when staff at the clinical site supported me with patient care**
0: I was not impressed by the clinical site staff as role models
1: The clinical site staff really helped to guide us through patient care skills
2: The clinical site experiences helped to prepare me for the future
3: Staff at the clinical site were helpful of me
4: It helps me when I feel I can trust the staff at the clinical site

**I was given specific directions for patient care from the clinical site**
0: I was not impressed by the clinical site staff as role models
1: The clinical site staff really helped to guide us through patient care skills
2: The clinical site experiences helped to prepare me for the future
3: Staff at the clinical site were helpful of me
4: It helps me when I feel I can trust the staff at the clinical site

**I was given specific directions for patient care from the clinical site**
0: The clinical site staff were very knowledgeable about our patients
1: I was always worried what clinical site staff would convey to my instructor
2: The clinical site staff tried to make me feel comfortable from the start
3: I liked that the clinical site staff were very experienced
4: The clinical site staff were very knowledgeable about our patients

**I was always worried what clinical site staff would convey to my instructor**
0: Other health workers on the floor avoided clinical site staff
1: I was always worried what clinical site staff would convey to my instructor
2: The clinical site staff tried to make me feel comfortable from the start
3: I liked that the clinical site staff were very experienced
4: The clinical site staff were very knowledgeable about our patients

**The clinical site helped me with new skills**
0: Other health workers on the floor avoided clinical site staff
1: The clinical site staff were very knowledgeable about our patients
2: I did not learn anything new with the clinical site
3: I did not learn anything new with the clinical site
4: The clinical site made me feel as though I was a hardship to their workload

**I did not learn anything new with the clinical site**
0: Other health workers on the floor avoided clinical site staff
1: The clinical site staff were very knowledgeable about our patients
2: The clinical site staff were very knowledgeable about our patients
3: The clinical site staff were very knowledgeable about our patients
4: The clinical site staff were very knowledgeable about our patients

**The clinical site made me feel as though I was a hardship to their workload**
0: Other health workers on the floor avoided clinical site staff
1: The clinical site staff were very knowledgeable about our patients
2: The clinical site staff were very knowledgeable about our patients
3: The clinical site staff were very knowledgeable about our patients
4: The clinical site staff were very knowledgeable about our patients
## Factor Scores Related to Statements

<table>
<thead>
<tr>
<th>Statement #</th>
<th>Statement</th>
<th>factor 1</th>
<th>factor 1</th>
<th>factor 2</th>
<th>factor 2</th>
<th>factor 3</th>
<th>factor 3</th>
<th>factor 4</th>
<th>factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Z-score</td>
<td>Rank</td>
<td>Z-score</td>
<td>Rank</td>
<td>Z-score</td>
<td>Rank</td>
<td>Z-score</td>
<td>Rank</td>
</tr>
<tr>
<td>1</td>
<td>I feel the clinical environment offered experts to support us on the unit</td>
<td>-1.25</td>
<td>28</td>
<td>1.17</td>
<td>5</td>
<td>0.41</td>
<td>12</td>
<td>-0.09</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>I feel the clinical site staff helped me with new skills</td>
<td>-0.65</td>
<td>32</td>
<td>-1.08</td>
<td>31</td>
<td>1.6</td>
<td>4</td>
<td>-1.7</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>The (clinical) site helped to train me on new treatments for patients</td>
<td>-0.47</td>
<td>24</td>
<td>-2.64</td>
<td>35</td>
<td>-1.4</td>
<td>33</td>
<td>-0.87</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>It helps me when I feel I can trust the staff at the clinical site</td>
<td>-1.24</td>
<td>34</td>
<td>0.9</td>
<td>10</td>
<td>-0.59</td>
<td>23</td>
<td>-0.01</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>The clinical site staff did not set a good example for our class</td>
<td>-0.21</td>
<td>18</td>
<td>1.38</td>
<td>6</td>
<td>0.54</td>
<td>11</td>
<td>0.17</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>The clinical site did not help me to learn to prioritize my workload</td>
<td>-0.6</td>
<td>25</td>
<td>0.03</td>
<td>18</td>
<td>0.34</td>
<td>14</td>
<td>0.72</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>It was frustrating that I did not learn anything new</td>
<td>-1.02</td>
<td>29</td>
<td>0.31</td>
<td>14</td>
<td>-0.13</td>
<td>20</td>
<td>-0.94</td>
<td>29</td>
</tr>
<tr>
<td>8</td>
<td>Staff at the clinical site provided guidance for questions</td>
<td>-1.27</td>
<td>33</td>
<td>-0.66</td>
<td>28</td>
<td>-0.75</td>
<td>27</td>
<td>-0.77</td>
<td>26</td>
</tr>
<tr>
<td>9</td>
<td>The clinical site staff were always negative in feedback</td>
<td>-1.08</td>
<td>30</td>
<td>-0.7</td>
<td>29</td>
<td>-0.97</td>
<td>28</td>
<td>0.01</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>I feel the clinical site staff were anxious about me being there</td>
<td>-0.46</td>
<td>22</td>
<td>-0.16</td>
<td>22</td>
<td>0.05</td>
<td>17</td>
<td>0.01</td>
<td>16</td>
</tr>
<tr>
<td>11</td>
<td>The clinical site staff were not welcoming to students</td>
<td>-1.13</td>
<td>31</td>
<td>-1.62</td>
<td>33</td>
<td>-0.57</td>
<td>24</td>
<td>-1.71</td>
<td>34</td>
</tr>
<tr>
<td>12</td>
<td>Staff at the clinical site were helpful of me</td>
<td>-1.42</td>
<td>35</td>
<td>1.44</td>
<td>2</td>
<td>-0.62</td>
<td>25</td>
<td>0.02</td>
<td>14</td>
</tr>
</tbody>
</table>
From the forty-seven participants, thirty-nine participants loaded on the final four-factor solution which explained 52% of the variance surrounding the caregiver viewpoints. Four Q sorts by participants were found to be confounding and four participant Q sorts did not load (missing data). The final four-factor outcomes assisted in understanding the focus of the student opinions for their clinical site experience.
Four Focus Areas

• Role Model (n=12)
  ○ “The clinical site staff did not set a good example for our class.”
    (intentional role modeling)

• Knowledge (n=7)
  ○ “The clinical site experiences helped to prepare me for my future practice.”
    (value of staff within the learning environment)

• Trusting Relationship (n=5)
  ○ “I feel the clinical staff were anxious about me being there”
    (assurance of safe/supportive environment for the student)

• Coaching (n=4)
  ○ “Staff from the clinical site helped me talk through or practice steps for my patient care task”
    (teaching/coaching in the practice environment)
Demographic Data-Gender

Gender

- Male: 6%
  - Male (3)

- Female: 94%
  - Female (44)
Demographic Data-Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>70%</td>
</tr>
<tr>
<td>21-23</td>
<td>11%</td>
</tr>
<tr>
<td>24-26</td>
<td>6%</td>
</tr>
<tr>
<td>27-29</td>
<td>4%</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>9%</td>
</tr>
</tbody>
</table>
Demographic Data - Ethnicity

- Caucasian: 35 (75%)
- Hispanic/Latino: 3 (6%)
- Native American: 0 (4%)
- Asian: 2 (11%)
- African American: 5 (4%)
- Native Hawaiian: 0 (6%)
- Multiracial: 2 (4%)
This pilot study is vital to improving students’ clinical learning and connecting clinical partners with the program outcomes. The evidence generated by this study informed participating nursing programs on what their students need to optimize clinical learning in the acute care setting with identified themes of coaching, trusting relationship, role model, and knowledge; and b) provided a foundation for study expansion to optimize clinical learning nationally in a time of workforce shortage which is consistent with the priorities for the National League for Nursing.
Limitations

● Acquiring Participants

● Limitations of the environment

● Time constraints

● Issues with student comprehension
Questions


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