The Just Culture Assessment Tool for Nursing Education: Reliability and Validity Study

Danielle Walker PhD, RN, CNE, Gerry Altmiller, EdD, APRN, ACNS-BC, FAAN, Nina Barkell, MSN, RN, ACNS-BC, Lora Hromadik PhD, RN Rebecca Toothaker, PhD, RN
Identified Practice-Education Gap

Just Culture: balances system accountability with individual accountability

• Practice setting – an expectation that errors and near-misses are identified so that individual and system remedies can be implemented to prevent error reoccurrence.

• Nursing education - student experiences with error are frequently punitive and focus on individual performance.
Bridging the Gap: A Call For Just Culture in Nursing Education

- While 55% of nursing programs indicated having an error reporting system, the adoption of just culture within nursing education lags behind the momentum seen in healthcare.

- Barnsteiner and Disch call for adaptation of the Just Culture Assessment Tool (JCAT) developed by Petschonek et al. for use as an assessment method in academia.
Just Culture Assessment Tool - JCAT

• 27 item, 7-point Likert scale survey
Measures perceptions of just culture in a hospital setting based on
  • balance
  • trust
  • openness of communication
  • quality of the event reporting process
  • feedback and communication
  • Overall goal of continuous improvement

• Internal consistency of the JCAT is greater than alpha = .70 for all dimensions except “quality of the event reporting process” (alpha = .63).

Purpose of Study

• Adapt the Just Culture Assessment Tool (JCAT) to be used in academic settings to evaluate students’ perceptions of just culture in their nursing program.

• Establish content validation

• Conduct pilot study
Methods

Three step Process

Instrument Development
- The 27 items of the JCAT adapted to create the JCAT-NE
- Careful review and discussion among 5 co-PIs

Content Validation of JCAT-NE
- 6 content experts recruited to review using Content Validity Index (CVI)

Pilot Study of JCAT-NE to establish reliability
- Implemented with small convenience sample
## Instrument Development

<table>
<thead>
<tr>
<th>JCAT</th>
<th>JCAT-NE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The <strong>management</strong> does a good job of sharing information about events.</td>
<td>The <strong>nursing faculty/instructor and school administration</strong> do a good job of sharing information about safety related events.</td>
</tr>
<tr>
<td>The <strong>management</strong> does a good job of sharing information about events.</td>
<td><strong>Nursing faculty/instructors</strong> respect suggestions from students.</td>
</tr>
<tr>
<td><strong>Coworkers</strong> discourage each other from reporting events.</td>
<td><strong>Peers</strong> discourage each other from reporting safety related events.</td>
</tr>
<tr>
<td>The <strong>hospital</strong> uses a fair and balanced system when evaluating staff involvements in events.</td>
<td>The <strong>nursing program</strong> uses a fair and balanced system when evaluating nursing student involvements in safety related events.</td>
</tr>
<tr>
<td>I am uncomfortable with others entering reports about events in which I was involved.</td>
<td>I am uncomfortable with others reporting about safety related events in which I was involved.</td>
</tr>
</tbody>
</table>
Content Validation Process

• Expert Reviewers Recruited
  • 6 nurse leaders with extensive knowledge of just culture
    • 5 doctorally prepared and experts in QSEN competencies
    • 1 clinical nurse specialist and CNO in a large health care system
  • 4 of the reviewers had published on just culture
    • 2 focused on implementation in the practice setting
    • 2 focused on implementation in nursing academia
• 5 of 6 experts returned completed review
• Served to determine if items adequately addressed the domain of just culture in the academic setting

• 4 of the 5 remaining experts completed the review
• Served to clarify item refinement and assess the content validity of the items and scale as a whole
Results of Content Validation Process

Item CVI – 1st round - all items were rated as relevant.

No items discarded

Refinement of item wording

2nd round – all 27-items of JCAT-NE relevant with item CVI = 1.0

Scale CVI = 1.0

Universal Agreement (U/A) method

• proportion of items rated 3 or 4 = 1.0

Average (Ave) method

• Average of all item scores = 1.0
Piloting the JCAT-NE

IRB Approval Obtained

Setting: BSN in central U.S.

Convenience Sampling

SPSS-version 23

Demographics

Psychometric Analysis

Difference Between Two Groups
<table>
<thead>
<tr>
<th>JCAT-NE Demographics</th>
<th>N=133 (96% response rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>87% Female</td>
</tr>
<tr>
<td>Age</td>
<td>77% between 20 - 23 years of age</td>
</tr>
<tr>
<td>Involved in safety related incident</td>
<td>29%</td>
</tr>
<tr>
<td>Participated in reporting a safety related event</td>
<td>10%</td>
</tr>
<tr>
<td>Progression in their program</td>
<td>46% Last semester of program</td>
</tr>
<tr>
<td></td>
<td>54% Middle of program</td>
</tr>
</tbody>
</table>
Results - Psychometric Analysis

• Scale CVI = 1

• Cronbach’s alpha = 0.75

• JCAT-NE total score  \( M (SD) \) 140 (20.97)
  • Possible range 27 – 189
<table>
<thead>
<tr>
<th>JCAT-NE Differences between groups</th>
<th>Items</th>
<th>Middle Students</th>
<th>End Students</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Score - Mean (SD)</td>
<td>143.1 (20.1)</td>
<td>136.8 (21.6)</td>
<td>0.087</td>
</tr>
<tr>
<td></td>
<td>I often hear about safety related event conclusions and outcomes.</td>
<td>4.4 (1.6)</td>
<td>3.48 (1.6)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Nursing faculty/ instructors respect suggestions from students.</td>
<td>5.93 (.91)</td>
<td>5.46 (1.31)</td>
<td>.020</td>
</tr>
<tr>
<td></td>
<td>Students can easily approach nursing faculty/instructors with ideas and concerns.</td>
<td>6.10 (.97)</td>
<td>5.57 (1.38)</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>I trust nursing faculty/ instructors to do the right thing.</td>
<td>6.4 (.79)</td>
<td>5.87 (1.27)</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>The nursing program devotes time, energy, and/ or resources toward making safer learning experiences and improved patient safety</td>
<td>6.18 (.91)</td>
<td>5.74 (.95)</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td>The nursing program adheres to its own rules and policies</td>
<td>6.0 (.99)</td>
<td>5.51 (1.6)</td>
<td>.027</td>
</tr>
</tbody>
</table>
Implications for Nursing Education

• The JCAT-NE provides a valid and reliable instrument for assessment of just culture in academia.

• Assessment is the first step to developing robust just culture in nursing academia.

• Assessment can help identify areas where sustainable change can be implemented to support just culture in nursing academia.
Future Research

• Further validation of the JCAT-NE
• Large-scale assessment using JCAT-NE
• Strategies to better align academia with practice
• Faculty development strategies for just culture implementation
• Learning tools for students
Impatative for Just Culture in Academia

• “The single greatest impediment to error prevention is that we punish people for making mistakes.” - Lucian Leape

• First step in moving toward just culture in academia is measuring the current culture

• The JCAT-NE is a valid and reliable instrument to assess just culture in academic settings.