Perianesthesia Nurses’ Knowledge, Attitude, and Intention to Promote Safe Use, Storage, and Disposal of Opioids

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Background
- Every day over 130 Americans die from an opioid overdose.¹
- Prescription opioids are the foundation of post-surgery pain management.
- In a national survey of 1032 adults who had recently had opioid prescriptions, only 48.7% received education about safe storage; 45.3% reported education regarding disposal of unused medication; of those with unused opioids, 61.3% kept them and over 20% shared with family or friends.²
- More than 70% of people who misuse opioids get them from family and friends; 79% of those family and friends had a prescription from a provider.³
- Nurses and other providers do not routinely discuss safe use, safe storage, or safe disposal of medications including opioids.⁴
- Perianesthesia nurses are more likely to discuss side effects of opioids than information regarding disposal, storage, or safe use of opioids.⁵

Theory of Planned Behavior
- Intention to perform a behavior is influenced by an individual’s attitude toward the behavior, social pressure regarding behavior, and perceived behavioral control.

Research Design, Measures, and Data Analysis
- A one group pre-test, post-test interventional study (a web-based voiceover module with patient education scenarios) was conducted using multiple surveys of perianesthesia nurse professionals.
- An evidence-based survey was developed with experts in the field of perianesthesia nursing, pain management, and anesthesia using components the Theory of Planned Behavior.
- ASPAN members who responded to an email request to participate in an intervention study: 678 completed the pre-test survey, 247 the immediate post-test, and 171 the 4-week post-test. The analysis presented is limited to the 247 who completed at least the immediate follow-up since they completed the intervention to get to the first post-test.
- Responses to the pre-survey, post-survey 1 (immediately after module) and post-survey 2 (4 weeks after completion of module) were collected and archived using the Qualtrics system on a secure server.
- Survey included a link to voluntarily include their name and address to be used for a prize drawing; names of 15 participants drawn to receive a $50 gift card.
- Data analysis included descriptive summary, including means and standard deviations or frequency distributions; and evaluation of changes in knowledge and domains of Theory of Planned Behavior using repeated measures mixed modeling.

Findings/Discussion
- The majority had a BSN degree as highest education (62%); the most typical practice setting reported was hospital based PACU (73%).
- For each of the outcomes (knowledge and the Theory of Planned Behavior constructs: perceived behavioral control, subjective norms, attitude and intention), the overall repeated measures mixed model was significant.
- For all outcomes, there was an immediate increase in the measure following the intervention; this pairwise difference (between pretest and the immediate post-test) was significant in each model.
- In all cases, both the immediate and 4-week post-test scores exceeded the corresponding pre-test score, though for perceived behavioral control, attitude, and intention, the difference between baseline and week 4 was not significant.
- For the outcomes of knowledge, attitude, and intention, the average scores at each timepoint were close to the maximum possible score, all exceeded 90%; this suggests there was little possibility for the intervention to spur growth in these variables.
- Research to develop safe post-discharge prescription practices and encourage safe opioid practices after surgery is needed. These findings suggest a more intensive intervention with possibly the inclusion of booster sessions, particularly for the outcomes of perceived behavioral control and subjective norms is where additional support may be needed.

Table 1

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Time 1 Mean (Percent of max)</th>
<th>Time 2 Mean (Percent of max)</th>
<th>Time 3 Mean (Percent of max)</th>
<th>Significant Differences (P &lt; 0.05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Potential range:</td>
<td>0-7</td>
<td>6.18 (&lt;88.3%)</td>
<td>6.69 (95.6%)</td>
<td>6.55 (93.6%)</td>
</tr>
<tr>
<td>Perceived Behavioral Control Potential range:</td>
<td>3-15</td>
<td>10.09 (67.3%)</td>
<td>10.93 (72.9%)</td>
<td>10.55 (70.3%)</td>
</tr>
<tr>
<td>Subjective Norms Potential range:</td>
<td>3-15</td>
<td>11.23 (74.9%)</td>
<td>11.72 (78.1%)</td>
<td>11.98 (79.9%)</td>
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<tr>
<td>Attitude Potential range:</td>
<td>12-60</td>
<td>57.72 (96.2%)</td>
<td>59.18 (98.6%)</td>
<td>58.29 (97.2%)</td>
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<tr>
<td>Intention Potential range:</td>
<td>5-25</td>
<td>23.68 (94.7%)</td>
<td>24.46 (97.8%)</td>
<td>24.25 (96.2%)</td>
</tr>
</tbody>
</table>

References

Funding

American Society of PeriAnesthesia Nurses