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Certified Registered Nurse Anesthetists (CRNA’s) Knowledge and Attitudes Regarding Acupressure as an Adjunct to Postoperative Nausea and Vomiting Prevention

Jacqueline Kuhn
jacqueline.a.kuhn@gmail.com

Kim Homa
khoma@outlook.com

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Abstract

Background: Postoperative nausea and vomiting (PONV) continues to be a problem for patients despite multimodal pharmacologic treatments available. Although acupuncture has demonstrated clinical usefulness, it has not been adopted in mainstream anesthesia practice. Objectives: The purpose of this descriptive survey design was to assess current knowledge and attitudes among CRNAs regarding the use of acupressure as an adjunct to PONV treatment. A secondary objective was to develop an educational handout designed to increase the use of acupressure as an adjunct to postoperative nausea and vomiting prevention using the findings from this current study.

Methods: A descriptive, cross-sectional survey design was utilized to assess the current knowledge and attitudes among CRNAs regarding the use of acupressure for PONV treatment. Survey questions were developed using concept analysis. Participants were recruited using convenience sampling from the Illinois Association of Nurse Anesthetists (IANA) and the Student Registered Nurse Anesthetists (SRNAs). The questionnaire was designed to test knowledge and attitudes toward the use of acupressure for PONV prevention. Participants were asked to complete the survey and provide demographic information. A total of 58 participants completed the survey, with 43% being male, 54% female, and 3% other. The mean age was 49.6 years, ranging from 30 to 77 years. The majority (59.6%) of participants were employed in a hospital setting, with 20.7% working in an ambulatory setting, and 19.7% in a doctor’s office or clinic setting. The majority of participants (87.9%) had 2-5 years of experience as CRNAs.

Results

The knowledge and attitude scores across all items were found to be positive with an average mean score of 3.16 (SD = 0.93), and the items with lowest mean scores indicated deficits noted above. There was a statistically significant difference in scores between males and females (p < 0.01), with females having higher mean scores than males.

Descriptive Statistics for Knowledge and Attitudes Regarding Acupressure for PONV Scale (N=58)

<table>
<thead>
<tr>
<th>Scale Items</th>
<th>Mean</th>
<th>SD</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I recommend acupressure for PONV to my family and friends</td>
<td>3.19</td>
<td>0.81</td>
<td>96.6</td>
</tr>
<tr>
<td>I would like more educational handouts for distribution to survey participants</td>
<td>3.11</td>
<td>0.85</td>
<td>91.4</td>
</tr>
<tr>
<td>I do not recommend acupressure for PONV to my family and friends</td>
<td>2.89</td>
<td>0.73</td>
<td>76.9</td>
</tr>
<tr>
<td>Acupressure is thought to reduce nausea and vomiting by releasing endogenous beta-endorphins</td>
<td>3.21</td>
<td>0.77</td>
<td>93.1</td>
</tr>
<tr>
<td>Acupressure is an effective treatment for PONV</td>
<td>3.33</td>
<td>0.87</td>
<td>96.6</td>
</tr>
<tr>
<td>Acupressure is an effective treatment for PONV to patients postoperatively</td>
<td>3.11</td>
<td>0.85</td>
<td>91.4</td>
</tr>
<tr>
<td>Acupuncture is thought to reduce nausea and vomiting by releasing endogenous beta-endorphins</td>
<td>3.27</td>
<td>0.71</td>
<td>96.6</td>
</tr>
<tr>
<td>Acupuncture is an effective treatment for PONV</td>
<td>3.18</td>
<td>0.82</td>
<td>93.1</td>
</tr>
<tr>
<td>Acupuncture is an effective treatment for PONV to patients postoperatively</td>
<td>3.14</td>
<td>0.84</td>
<td>93.1</td>
</tr>
<tr>
<td>I do not recommend acupressure for PONV to my family and friends</td>
<td>2.88</td>
<td>0.74</td>
<td>89.7</td>
</tr>
</tbody>
</table>

Discussion

The knowledge and attitude scores across all items were found to be positive with an average mean score of 3.22 (SD = 0.47). There were no other studies on this topic found in the literature to which we can compare our results. The results of our survey indicated that women have a higher knowledge level and positive attitudes toward the use of acupressure for PONV when compared to men (mean score of 3.65 vs. 3.12). Gender was the only sociodemographic variable of statistical significance. Future research should focus on the use of acupressure for PONV treatment in males and females separately to determine if gender differences in knowledge and attitudes exist.

Conclusions

This study found that all study participants including IANA CRNAs and SRNAs have an overall adequate knowledge and positive attitudes on acupressure for PONV management. However, they need more information about the effectiveness of acupressure in order to improve patient comfort and surgical outcomes. Distribution of our educational handout has the potential to increase knowledge among anesthesia providers about the effectiveness and cost-deficit areas identified in the present study and is the first step towards bringing this therapy into mainstream use. Additionally, this study provides preliminary evidence for female gender as a factor of higher overall knowledge and attitudes on acupuncture among CRNAs and SRNAs.

Limitations

One limitation of our study is that it may not accurately represent all CRNAs in Illinois, therefore, our results may not apply to other geographic locations. Also, we did not survey other anesthesia providers such as anesthesiologists or anesthesiologist assistants. A major limitation of our study was that 83.2% of respondents identified their ethnic origin as white, so we were not able to assess the effect of ethnicity on knowledge and attitudes. However, we found gender to be a significant variable in predicting knowledge and attitudes on acupuncture for PONV. Our initial data analysis showed moderate reliability when all items in the survey tool were included. We had to eliminate one item from the survey to increase the adequacy of survey’s reliability. The item removed pertains to confidence of knowledge base for acupuncture among CRNAs and SRNAs.

Acknowledgements

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Contact Information
Kim Home: kahoma@outlook.com
Jackie Kuhn: jackiekuhn@kuhn.com

CRNAs’ KNOWLEDGE AND ATTITUDES REGARDING ACUPRESSURE AS AN ADJUNCT TO PONV PREVENTION

Kim Homa, RN, DNP, CRNA & Jackie Kuhn, RN, DNP, CRNA
DePaul University & NorthShore University HealthSystem School of Nurse Anesthesia