Exploring key factors that contribute to the development of nursing competence

Takiko Imai, RN, PhD, Miyuki Takase, RN, PhD, Mituko Kawamoto, RN, MD, Kumiko Yamamoto, RN, MD
Yasuda Women’s University  Faculty of Nursing, School of Nursing

Purpose

Having an adequate level of competence is important for nurses to provide safe and high quality care to patients. While there is a large body of studies investigating the levels of nurses’ competence, a limited number of studies have examined factors contributing to its development. Moreover, there is a paucity of studies that have explored how these factors differ for nurses with different lengths of clinical experience. Therefore, the purpose of the present study was to clarify the factors that contribute to the development of nursing competence among nurses with different lengths of clinical experience.

Method

Questionnaires were sent to 522 Japanese nurses in October, 2016. The questionnaires contained demographic questions and an open-ended question asking nurses to identify the factors contributing to their competence development. The responses to the open-ended question were analyzed by text mining using SPSS’s PASW Modeler13, Text Mining for Clementine2 (TMC), and IBM SPSS Statistics 24 for Windows. In this analysis, nurses were classified into two groups: a less experienced group (nurses with clinical experience of < five years) and an experienced group (those with the experience of ≥ five years) to explore experience-based factors related to competence development. This study was approved by the Ethics Committee at Yasuda Women’s University.

Results

Of the 522 questionnaires sent, 253 were returned (a return rate 48.5%), with 240 effective responses. There were 73 less experienced nurses and 167 experienced nurses. The results showed that the words most frequently cited as the factors contributing to competence development by the less experienced group were “workplace environment,” followed by “ambition,” “knowledge” “patient” “communication” “eagerness” “experience” “act” “senior nurses.” Using cluster analysis, these words were classified into the following clusters: “action force,” “knowledge and skill” “learning from senior nurses” “educational system that brings out motivation for self-study” and “enhancement of the workplace environment centered on human relations.” Similarly, the results showed that words most frequently cited by the experienced group were “workplace environment” followed by “learning/learn” “oneself” “motivation” “ambition” “action/act” “experience” “patient” “knowledge” “human” “colleague,” and “attitude.” Using cluster analysis, these words were classified into the following clusters: “medical team collaboration” “educational system that brings out motivational learning attitude” “enhancement of the workplace environment centered on human relations” and “reflection on oneself through dialogue with leaders/senior nurses.”

Discussion

There are some similarities and differences in the factors contributing to competence development between less experienced and experienced nurses. A point they had in common was that both groups considered “workplace environment” to be the main factor contributing to the development of their competence. This result suggests that “enhancement of the workplace environment centered on human relations” facilitates nurses’ ambition to “learn” and acquire “knowledge”, regardless of the length of their experience. In other words, such an environment serves as a foundation for an “educational system that brings out motivation for self-study or learning attitudes”. Whereas both groups of nurses saw the work environment as the chief factor contributing to their competence development, the methods of workplace learning, which facilitates competence development, were different between them. The less experienced group considered learning from their own “experience,” “act,” and “senior nurses” as the main resources for their competence development. On the other hand, the experienced group considered learning through “medical team collaboration” and “reflection on oneself through dialogue with leaders/senior nurses” as important factors enhancing their competence. Specific methods of workplace learning may be encouraged for nurses with different lengths of clinical experience to develop their competence.

Conclusion

The workplace environment, which facilitates workplace learning, was identified as the main factor that contributes to the development of competence for all nurses. However, the methods of workplace learning differed according to their length of clinical experience.

Table: The words most frequently cited as the factors contributing to competence development

<table>
<thead>
<tr>
<th></th>
<th>Workplace Environment</th>
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<tr>
<td></td>
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<td>n=167</td>
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<td>Workplace environment</td>
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<td>15</td>
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<td>effort</td>
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</table>

Figure: Conceptualization of key factors that contribute to the development of nursing competence:
Nurses with clinical experience of ≤ five years (n=73)

Analysis by principal component analysis and hierarchical cluster analysis (word method and euclidean distance):
Cluster1: “educational system that brings out motivation for self-study”
Cluster2: “knowledge and skill”
Cluster3: “enhancement of the workplace environment centered on human relations”
Cluster4: “learning from senior nurses”
Cluster5: “attain fear”

Figure: Conceptualization of key factors that contribute to the development of nursing competence:
Nurses with clinical experience of ≥ five years (n=167)

Analysis by principal component analysis and hierarchical cluster analysis (word method and euclidean distance):
Cluster1: “medical team collaboration”
Cluster2: “attitude”
Cluster3: “positive educational system bases”
Cluster4: “leaders”
Cluster5: “senior nurses”

Figure: Conceptualization of key factors that contribute to the development of nursing competence:
Nurses with clinical experience of ≥ five years (n=167)

Analysis by principal component analysis and hierarchical cluster analysis (word method and euclidean distance):
Cluster1: “educational system that brings out motivation for self-study”
Cluster2: “knowledge and skill”
Cluster3: “enhancement of the workplace environment centered on human relations”
Cluster4: “reflection on oneself through dialogue with leaders/senior nurses”

Figure: Conceptualization of key factors that contribute to the development of nursing competence:
Nurses with clinical experience of ≤ five years (n=73)