Classification of nurse’s innovation ability: application of latent profile analysis

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Abstract
This study is an application of latent profile analysis to provides interesting finding in the heterogeneous profiles of innovation ability of nurses in China. Different profiles help us to target the suitable population for training to be informatics nurses in the future.

Background
Taiwan TIGER model aims to train the information skills of nursing staff, so as to cultivate a group of informatics nurses. However, any training takes a lot of manpower and time costs. It’s better to focus on the target population to improve training results. Thus, innovation ability as one of the core abilities of informatics nurses, we can screening nurses with higher innovation ability and then training them basic information skills.

Objectives
To understand the current status of nursing staff's innovation ability, to identify the classification of nursing staff's innovation ability characteristics.

Methods
A cross-sectional survey of 496 nursing staff in a tertiary hospital was conducted using Creativity and Innovation Effectiveness Assessment, and latent profile analysis was used to classify the characteristics.

Results
The total innovation ability of nursing staff was 2.82±0.701, which was at a low level. According to the model fitting results, three potential groups were finally determined, which were the higher level of innovation ability (89 cases, 17.94%), which average score was 3.96±0.54; the middle level of innovation ability (214 cases, 43.15%), which average score was 2.95±0.37; the lower level of innovation ability (193 cases, 38.91%), which average score was 2.14±0.37.

Conclusions
The innovation ability of nursing staff is generally at a low level, and there is group heterogeneity, which can be divided into three sub-types. Based on the identified target population, those who have a higher level of innovation ability could participate in Taiwan TIGER training to develop their information skills.