Original Article

The use of Career Growth Scale in Chinese nurses: Validity and reliability

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ABSTRACT

Purpose: To test the validity and reliability of a modified Career Growth Scale (CGS) to assess nurse career growth.
Method: A cross-sectional design was used to analyze the use of the CGS to survey 600 full-time registered nurses from Grade A hospitals in Tianjin.
Results: A modified scale we called Career Growth of Nurse Scale (CGNS) is acceptable, valid, and reliable for the evaluation of nurse career growth in Chinese hospitals. This scale measured three main factors (career goal, career capacity, and career opportunity) and showed that nurse career growth differed across age, work seniority, and professional title.
Conclusions: A three-dimensional scale of nurse career growth was presented. The results revealed CGNS has good validity and reliability.

1. Introduction

Nurses, comprising the largest group of health providers in most hospital settings [1], have a particularly important effect in the quality of care in the healthcare system. They play a significant role in ensuring patient safety and recovery, while providing timely, effective, and efficient medical care, therefore affecting the overall quality of healthcare organizations [2,3]. The shortage of registered nurses is a serious global problem that has also presented in China [4] and is predicted to negatively affect the healthcare system. Previous studies have reported that numerous nurses do not have career goals or a plan for their professional development and proposed that that could be why they abandon their career before they become eligible for retirement [5]. Lack of career growth, to some extent, may preclude the development of a nursing team [6], threatening nurses' health and leading to high turnover. Therefore, it is extremely important to solve the shortage of registered nurses by attracting potential candidates to join this career and by increasing nurse job satisfaction.

Numerous studies have focused on the role that career growth plays on nurse retention in the healthcare system [7].

Career growth measures the speed of the employee career development [8]. Many researchers have measured both objective and subjective career growth within the employee's current organization [9,10]. Weng and McElroy [11] focused on individual career growth in their current organization by measuring four factors: career goal, career ability, promotion speed, and salary increase.

The terms "career growth", "career development", and "career success" have been used interchangeably [12,13]; however, important differences exist among them. Career growth can be used to assess how fast employees progress in their current organization. Career growth is a consequence of career success, which combines employee's positive feelings towards their job and career accomplishment [14]. Career development takes into account organizational perspectives, which include personal career growth and career success by promoting individual development as a means to increase organizational achievement [15].

Increasingly, turnover is considered more normal than before [16]. Career growth has been proven to have a positive effect on career outcome and intent to remain in the current organization [17,18]. Previous studies have investigated the relationship between career growth and occupational commitment [19]. Furthermore, researchers have noted that career growth plays a role on turnover intentions and individual attitudes [20,21]. These studies suggest that nurse job stability could be increased by improving their career growth. Therefore, appropriate measures should be taken to accelerate nurse career growth. To promote the quality of nurse teams and decrease turnover, healthcare services are required to implement a process for evaluating clinical nurse career growth within their organization.

Unfortunately, whereas many studies have explored the process of employee career growth itself, relatively insufficient research has been devoted to the study of the methods used for measuring career development and advancement [22–24]. Therefore, the development and validation of a method for measuring nurse career growth is necessary.

Weng and Xi [8] developed the original Career Growth Scale (CGS), which measures career goal, career ability, promotion opportunity, and salary increase to assess career growth. The CGS has been broadly applied to evaluate employee career development; however, it has never been used to study Chinese nurses. In the present study, we assessed the psychometric properties of the Chinese version of the CGS and developed a new scale for assessing nurse career growth, which we named Career Growth of Nurses Scale (CGNS). The CGNS fills a gap and provides policy makers, administrators, nurse leaders, and educators with indications on how to improve nurse career growth in their current organization, promoting nurse job satisfaction and retention.

2. Methods

2.1. Aim

The aim of this study was to test the validity and reliability of the Chinese version of the CGS for assessing nurse career growth.

2.2. Design

A cross-sectional design was used in the present study.

2.3. Sample and participants

A convenience sample of 600 full-time registered nurses from Grade A hospitals in Tianjin was surveyed between October 2013 and March 2014. A total of 526 questionnaires were returned, out of which 74 were rejected due to incomplete responses (effective response rate = 87.7%). For factor analysis, an acceptable participant to item ratio is 1:10, indicating that, for our study, a minimum of 150 subjects were required. Our sample of 526 participants therefore met the sample size requirement. The total number of participants was divided in two samples. Exploratory factor analysis (EFA) was conducted on the first sample ($n = 300$) and confirmatory factor analysis (CFA) was conducted on the second sample ($n = 226$). Four weeks after the initial analyses, a convenience subsample of 30 nurses was recruited for measuring the test-retest reliability (effective response rate = 100%).

2.4. Instruments

Nurse demographic data included personal details, such as gender, age, marital status, work seniority, and professional title. These variables potentially influence career growth.

The original CGS is a questionnaire developed by Weng and Xi [8] containing 15 items, each of which is rated on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The scale includes four sub dimensions: "career goal", "career capacity", "promotion speed", and "salary increase". The total CGS score, ranging from 15 to 75, is obtained by adding the values for the four sub dimensions. A higher score on the scale denotes a higher level of career growth. For the original version of the scale, the Cronbach's α coefficients of the four sub dimensions were 0.86, 0.85, 0.80, and 0.78.

Two language experts were involved in our translation process, providing support for the Chinese version of the CGNS regarding content, semantic, and conceptual equivalence.

2.5. Ethical considerations

Before completing the questionnaire, the purpose of the study was explained to the participants. To ensure anonymity, names were omitted. The participants were included in the study voluntarily. Ethical approval was obtained from the relevant hospitals' ethics committees.

2.6. Statistical analysis

Data were analyzed using SPSS for Windows (version 15) and AMOS (Analysis of Moment Structures, version 15; Chicago, IL, USA). Descriptive statistics were used to summarize sample characteristics. One-way analysis of variance tests were used to assess the relationship between certain characteristics of nurses. Item-total score correlation and test-retest reliability were assessed using the Pearson's correlation coefficient. Content validity index (CVI) was used to describe content