Available online at www.sciencedirect.com

ScienceDirect

journal homepage: http://www.elsevier.com/journals/international-journal-of-nursing-sciences/2352-0132

Original Article

Reliability and validity of Chinese version of Cataldo Lung Cancer Stigma Scale

Qian-Qian Yang [a], Hua-Xia Liu [a,*], Chun-Ling Yang [b], Shu-Yu Ji [c], Lei Li [a]

[a] Nursing College of Taishan Medical University, Tai'an, China
[b] Nursing Department of Liaocheng Hospital, Liaocheng, China
[c] Respiratory Medicine of Liaocheng Hospital, Liaocheng, China

ARTICLE INFO

Article history:
Received 10 November 2013
Accepted 23 January 2014
Available online 20 March 2014

Keywords:
Lung cancer
Reliability
Stigma
Validity

ABSTRACT

Purpose: To translate and apply the Cataldo Lung Cancer Stigma Scale (CLCSS) for Chinese populations and test the reliability and validity of the modified scale.
Method: A total of 150 lung cancer patients were recruited from three tertiary hospitals in Shandong province and were tested using the Chinese version of CLCSS to assess its reliability and validity.
Result: The Cronbach's α coefficient of the Chinese version of CLCSS and the four subscales ranged from 0.599 to 0.884, and the test–retest reliability ranged from 0.601 to 0.881. The content validity index of the scale was 0.875. Four factors were extracted by exploratory factor analysis that explained 58.6% of the total variance.
Conclusion: The Chinese version of CLCSS is a reliable and valid measure of stigma among Chinese patients with lung cancer.

1. Introduction

Stigma refers to disapproval of individuals due to undesirable features such as special appearance, behaviour, or group identity. Stigmas usually emerge under specific circumstances and situations such as drug abuse, AIDS, homosexuality, and disability [1]. Health-related stigma (HRS) is a perceived stigma that is characterized by experiences of exclusion, rejection, blame from others, or diminished self-worth [2]. Stigmatized individuals usually experience prejudice, discrimination, and isolation from others, which not only disrupts daily life and social interactions. The consequences of these stigmas also produce serious negative

* Corresponding author.
E-mail address: huaxia66@163.com (H.-X. Liu).
Peer review under responsibility of Chinese Nursing Association

Production and hosting by Elsevier

http://dx.doi.org/10.1016/j.ijnss.2014.02.011

emotions, which have been shown to influence patients' health [3–7].

Lung cancer is currently the most common form of cancer and leading cause of cancer deaths in the world. In recent years, studies have indicates there is a social stigma associated with lung cancer patients. Furthermore, compared with other forms of cancer, lung cancer patients experience a larger amount of psychological distress [8–11]. This stigma could have negative impacts on the mental and physical health of the lung cancer patients, leading to both strained social relationships and an increase in patient mortality [2]. To better understand this stigma and its effects on patients, Cataldo developed the Cataldo Lung Cancer Stigma Scale (CLCSS) [2], a reliable and valid measure of health-related stigma for lung cancer patients. However, this stigma has not been adequately studied in Chinese populations. In the present study, we developed and evaluated a Chinese version of CLCSS to identify the presence and impact of lung cancer stigma in Chinese patients.

2. Materials and methods

2.1. Patients

A total of 150 lung cancer patients were randomly recruited for this study. We collected data from departments of oncology, thoracic surgery and respiratory in three Class III, Grade I hospitals in Shandong province from June through September 2013. Participants were eligible to take part in the study if they were age 20 years or older, diagnosed with lung cancer by pathological examination, aware of their diagnosis, conscious and also able to express their own opinions, and provided informed consent.

During the stage of formal testing, a total of 150 Chinese Cataldo Lung Cancer Stigma Scales in were distributed, and 124 were returned, among which 117 were considered usable. Thus, the effective returns-ratio was 94%. The average patient age was 58 (SD = 3.2 years, range = 23–82 years old), 86 patients were male and 31 were female. Twenty-nine patients were diagnosed with stage I disease, 51 had stage II disease, 37 had stage III disease at the time of the survey.

2.2. Instruments

2.2.1. Chinese version of Cataldo Lung Cancer Stigma Scale (CLCSS)

The CLCSS, developed in 2011, includes 31 items and 4 subscales: stigma and shame, social isolation, discrimination, and smoking status. Each stigma item was measured through a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree) [2]. Higher scores indicate a stronger feeling of stigma felt by the patient. Coefficient alphas ranged from 0.75 to 0.97 for the subscales (0.97 for stigma and shame, 0.96 for social isolation, 0.92 for discrimination, and 0.75 for smoking) and 0.96 for the CLCSS as a whole.

After obtaining approval from the original authors, the CLCSS was translated independently by two English and Chinese linguistic experts to produce a preliminary draft. The translated draft was then translated back in to Chinese by an English major and evaluated by a psychology expert, two oncology clinical medical specialists, two oncology clinical nurse specialists, and two nursing education experts to determine whether the Chinese version of CLCSS could accurately reflect the psychological status of Chinese lung cancer patients. Based on their feedback, six items were deleted from the scale. To stress on the locally special feature, we gave open-end questionnaires to 30 lung cancer patients to provide examples of experiencing a stigma. Six patients were recruited for an in-depth interview, and after analysing and concluding questionnaire and interview results, 13 new items were added to the scale, bringing to total to 38 items. Twenty patients with lung cancer were tested using the scale for a preliminary experiment to assess the accuracy of each entry is accurate. Further revisions were made based on the feedback of the 20 patients to generate the final scale. Each stigma item was measured using a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). And 27 items were scored inversely. Higher scores indicate a stronger stigma feeling perceived by patients.

2.2.2. Criterion measuring tool

Criteria were measured based on the methods of Cataldo et al [2]. Briefly, Rosenberg Self-esteem Scale (RSES) and Self-Rating Depression Scale (SDS) were used as criterion measuring tools. The RSES, the most commonly used self-esteem measuring tool in modern psychology [12], has a coefficient alpha of 0.84, indicating it is a reliable and valid measure. The SDS includes 20 items and four subscales: spirituality – emotional symptoms, physical disorder, spiritual movement disorder, and distress.

2.3. Data collection

After obtaining the permission of hospitals and departments, the researcher and assistants administered the questionnaires to lung cancer patients who met the inclusion criteria, and assisted patients having difficulty reading or complete the scale. After obtaining permission of the patients and their relatives, the in-depth interviews were carried out with the patients.

2.4. Statistical analysis

The scale was assessed using Cronbach's alphas for internal consistency, test–retest reliability measurements, content validity analysis, factor analysis, parallel analysis, and criterion validity. SPSS19.0 (SPSS INC, Chicago, IL, USA) statistical software package was used in data processing including the reliability measurement, exploratory factor analysis, and Criterion-Related Validity. R statistical software (R Foundation for Statistical Computing, Vienna, Austria) was used for parallel analysis data processing.

3. Result

3.1. Project analysis

For each stigma-related item on the scale, patients were asked to recall "since getting lung cancer, have I experienced the