The educational value of CBT: undergraduate nursing students' experiences of CBT in practice in psychiatric and mental health

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Summary

This study aimed to identify the educational value of cognitive behavioral therapy (CBT) experienced by undergraduate nursing students in practice in psychiatric and mental health under the guidance of a faculty member leading the practice, using students' post-practice reports. This study aimed to link this information to the psychiatric nursing curriculum. Analysis of free-text data from 45 fourth-year undergraduate nursing students revealed associations between "patient," "intervention" and "nursing," and between "patient," "together" and "creating," and between "intervention," "activity," and "respectively." For the analysis, simple tabulation was performed using KHcoder. After ascertaining the total number of extracted words in the descriptive data, forced extraction words were set and a co-occurrence network was constructed. The undergraduate nursing students were able to understand the relationship between nurses and patients by experiencing CBT in psychiatric nursing practice. They also recognized the importance of "working with the patient" and could capture the effects of interventions such as "increasing the patient's pleasant activity" as learning. In nursing education, where improvement of nursing skills is required, CBT in psychiatric nursing is a useful experience. To make CBT in clinical practice more effective for undergraduate nursing students, a curriculum should be developed that ensures learning time within lectures and exercises. Furthermore, a structured learning environment must be created for this practice.

Keywords: undergraduate nursing students, practice in psychiatric and mental health, cognitive behavioral therapy

Introduction

There has been a recent demand for improved nursing practice skills among undergraduate nursing students, as well as a revision of related curricula (1). Many nursing colleges consider this as

contributing to the improvement of students' nursing practice skills. However, university students' eagerness to learn is weakening and their motivation to learn is declining. Similar reports have been published in basic nursing curricula (2). Unless students can recognize the improvement in their practical skills from their own interests and independent learning, their motivation to learn will likely not improve. To address this problem, lectures that utilize human resources and learning equipment have been developed, such as the introduction of simulated patients (3) and lectures using Information and Communication Technology (ICT) (4). While these formats have increased student satisfaction, it is unclear how much of the information learned in these lectures and exercises can be generalized to practical training and skills. If students are unable to apply educational content to their clinical practice, they may have lower satisfaction. Thus, their eagerness to learn may be diluted, further reducing their learning motivation.

Nursing colleges, like other nursing specialty areas, consider curricula to improve practical skills in practice in psychiatric and mental health; in some cases, cognitive behavioral therapy (CBT) has been utilized (5). CBT is psychotherapy that leads to self-management; patients look at their obstacles and independently find solutions. This is contrary to the paternalistic relationship between healthcare professionals and patients, in which other types of therapy are cultivated. CBT aims to improve symptoms by systematically changing the behavior and thought patterns that cause patients to maintain problems in their lives. Through the practice of CBT,

undergraduate nursing students have reported that they have developed a collaborative perspective with patients and are able to objectively perceive patients' reactions and changes (5). The development of a background in psychotherapy, such as CBT, by undergraduate nursing students in practice in psychiatric and mental health was the vision of mental health and welfare reform enacted in 2004 (6). Previous studies focusing on traditional practice in psychiatric and mental health have primarily assessed the communication skills of undergraduate nursing students themselves (7), reporting a focus on "acceptance, listening, and empathy." Previous curricula also did not prioritize the collaborative capture of patient reactions and exchanges between undergraduate nursing students and patients.

However, this reform has shifted the focus of care for people with mental disorder towards sustaining community life. To continue living in the community, people with mental disorder need to improve their self-management skills to face challenges. As such, nurses, along with medical professionals, must enable independence in people with mental disabilities. In undergraduate nursing education, where improvements in practical nursing skills are required, it is important to evaluate not only the subjective evaluation of undergraduate nursing students themselves, such as the degree of improvement in communication, but also to objectively evaluate their own experiences based on changes in patients, which may promote reflection by undergraduate nursing students and improve their practical skills (5).

Purpose of the study

This study clarified undergraduate

nursing students' learning from changes in patients through practice in psychiatric and mental health using CBT at University A. Here, when undergraduate nursing students experience practice in psychiatric and mental health using CBT, the approach to the cognitive and behavioral aspects of patients is not only verbal but also visual, to help patients organize and recognize their own issues. This was done under the guidance of a faculty member leading the practice, from the objective perspective of the students. It aimed to obtain suggestions for future psychiatric nursing curriculum content that could improve practical skills. All students studied the basics and applications of CBT in the psychiatric nursing seminar held in the third year of the program. Following this, as preliminary preparation for the on-site practice of CBT, they developed intervention plans for cases of depression and schizophrenia. In addition, faculty members who led the practical training were stationed at the training facility to provide guidance and advice to undergraduate nursing students on planning, implementing, and revising their intervention plans during on-site training. These faculty members specialized in CBT, had practical experience, and were active in research activities.

Materials and Methods

Participants

94 fourth-year students of the Faculty of Nursing in University A were recruited for the study, which ran from 1st September 2018 to 31st March 2019.

Materials

The study used post-practice reports submitted by participants at the end of their third-year practice in psychiatric and mental health. These reports were self-reported, open-ended descriptions of the students' learnings through CBT in practical training. Practice skills of CBT were selected following a collaborative assessment of each patient's condition by undergraduate nursing students and nursing faculty with the permission of the clinical supervisor.

Methods

We used KHcoder, a free text-mining software package. KHcoder has proposed a quantitative content analysis approach that comprises the following two steps (7). It statistically analyzes text-type data in two steps: a step in which text-type data are quantitatively organized and summarized without arbitrary work, such as selecting words to be used for analysis individually or treating similar words as the same, and a second step in which the data are focused and analyzed in depth according to criteria created from the analyst's viewpoint and awareness of the problem. In the analysis process, the method checks how words are used in text-type data.

KHcoder was used in this study because it can improve the reliability and validity of qualitative research by eliminating manual summarizing, and by presenting data through multivariate analysis, converting qualitative data into quantitative data, and dividing the recording units into word units for analysis (7)(8)(9)(10). With KHcoder, we could objectively analyze the large volume of post-practicum reports from undergraduate nursing students.

Extraction of Learning from Psychiatric Nursing Practicum

Submitted post-practicum reports were free responses to the question, "What did you learn from the psychiatric nursing practicum using cognitive-behavioral therapy?" Results were

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tabulated using KHcoder.

Co-occurrence Network Analysis

The co-occurrence network is a set of words with similar patterns of occurrence or co-occurrence that can be measured by the Jaccard coefficient (11)(12). The analytical procedures leading to the co-occurrence network analysis are "A" through "C" below.

A. Morphological analysis

The morphological analyzer, ChaSen in KHcoder, was selected, and the forced extraction words were selected by "force pick up" on the displayed screen, and then morphological analysis was performed. A morphological analyzer is a tool that divides input sentences into word units and assigns parts of speech (13). In order to extract learnings from field practices of using CBT, the following were extracted from the total extracted words: <intervention> of CBT, whether <activity> of the <patient> who practiced CBT changed, and whether <thinking> from CBT practiced by undergraduate nursing students, <intervention> <patient>. The intervention was expected to elicit behavior-change among patients, thus the forced sampling terms were set to allow us to extract the impact of the intervention and the learnings of nursing students.

B. Co-occurrence network creation

From "Words" submenu in "Tools" menu of KHcorder, "Co-occurrence Networks" was selected and used. In the displayed screen, perform the following "a" and "b" to obtain the results shown in Figure 1.

a. Select the unit & words

In the "Select the unit & words" field, the minimum number of occurrences was set to 10 for the selection of words by the number of occurrences.

b. Co-occurrence Network Options

In the " Co-occurrence Network Options" field, the coefficient was set to 0.38 for the narrowing of co-occurrence relationships to be drawn.

C. Interpret the words extracted from the co-occurrence network

From "Words" submenu in "Tools" menu of KHcorder, "KWIC Concordance " was selected and used. The words extracted on the co-occurrence network were entered in the "Words" field of the displayed screen. To interpret the words extracted from the co-occurrence network, the KWIC Concordance function was used to repeatedly read elementary data among researchers. This checked information about the context and location before and after the word in question, and confirmed what kind of context was being used.

The intervention was expected to elicit behavior-change among patients, thus the forced sampling terms were set to allow us to extract the impact of the intervention and the learnings of nursing students.

Ethical considerations

Undergraduate nursing students were informed orally and in writing of the research theme, objectives, and content of the study. The participants were also informed of their privacy protection and told that they could withdraw their consent during the research. Their data was anonymized. Furthermore, as they had already submitted their practice in psychiatric and mental health course results, they would not be disadvantaged if they did not participate in or chose to discontinue their participation in the research. The participants were also told that they would be informed of the contents of the published research results. This study was approved by the Ethical Review Committee of the International University of Health and
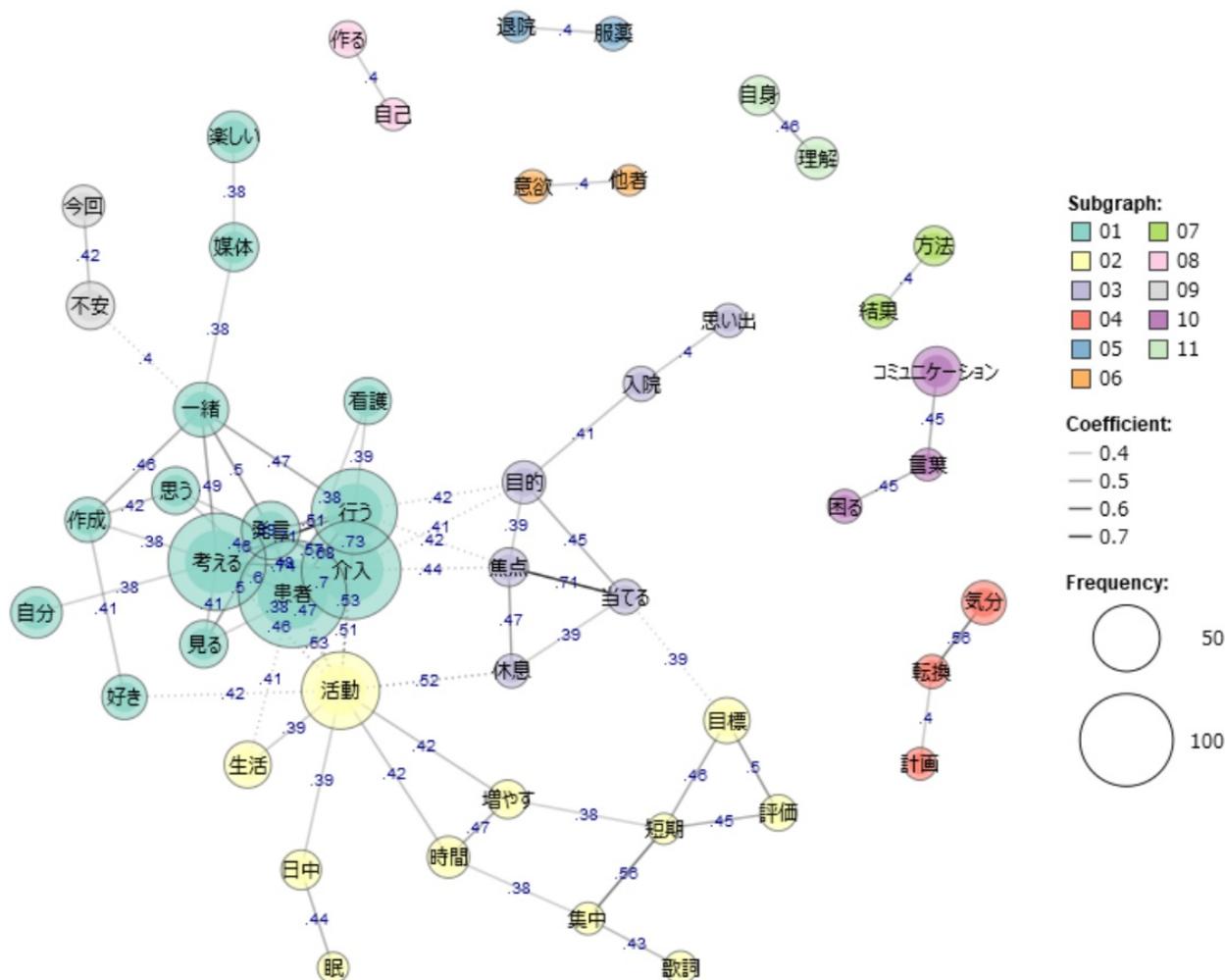
Figure 1: Undergraduate nursing students' learning through practice — co-occurrence networks.

Welfare (approval number 14-In-03). The patients were informed orally and in writing about the protection of their personal information, and their approval was obtained for sharing their learnings among the students through the post-practicum report. This study focused only on students' learning through practice and did not include information that identifies individual patients, such as their perceptions of change.

Results

Of the 94 fourth-year students, 45 (47.9%) consented to participate in this study. Of these, seven (15.6%) were male and 38 (84.4%) were female.
<u>Learning from cognitive-behavioral therapy experience</u>

The analysis included 45 free-text data points obtained from the students. A simple tabulation of the sentences identified 43 paragraphs and 295 sentences, with a total of 12,130 extracted words and 1,391 different words. After creating a co-occurrence network with the forced extracted words as <intervention> <patient> <activity> <thinking>, associations were found between "patient", "intervention" and "nursing", and between "patient", "together" and "creating", and between "intervention", "activity", and "respectively". The results showed that undergraduate nursing students were able to relate the "intervention" (.70) to "nursing" (.39), which is performed on the "patient". Additionally, students

were able to experience the content of the CBT by "think" (.60) with the "patient" (.49) and "creating" (.38). Lastly, subjects reported that the content of the "intervention" was associated with "activity" (.51) and learning to "increase" the subject's interest (pleasant activity) and the "time" to "concentrate" (Figure 1).

Discussion

The results of the co-occurrence network demonstrate a link between "patient," "intervention," and "nursing," suggesting that undergraduate nursing students viewed CBT as integral to the act of "nursing." As the report states (5), the link between "patient," "together (jointly)," and "creating" suggests that the practice of CBT teaches students to value collaborative relationships with patients, both for themselves as healthcare professionals and for patients confronting challenges.

Undergraduate education recognizes the importance of students establishing collaborative relationships before working as nurses through field practice. Therefore, CBT is a useful practice for its development. We believe that the relationship between "intervention" and "activity" reflects a stabilization of psychiatric symptoms (14) by allowing patients to focus on or have time to perform pleasant activities. The patients learned this by practicing CBT, which promotes pleasant activities using behavior-activation skills and is aimed at improving patient spontaneity.

Although CBT in practice in psychiatric and mental health has been examined in previous studies (15) (16), our results suggest that a structured learning environment should be established to make the experience of CBT more effective for undergraduate nursing students. Furthermore, a curriculum should be developed to facilitate the teaching of CBT through lectures and exercises.

Limitations of the study

Due to the small sample size that comprised only of undergraduate nursing students at University A, the educational value assessed in this study may not reflect the full breadth of concepts that students can learn through practicing CBT. Further research should continue to accumulate the practical results of CBT performed by undergraduate nursing students in practice in psychiatric and mental health.

Conclusion

This study aimed to clarify the educational value of CBT experienced by undergraduate nursing students in practice in psychiatric and mental health by analyzing students' post-practice reports, and to link these findings to the consideration of the psychiatric nursing curriculum. Through CBT, undergraduate nursing students learned from the relationship between intervention (practice) and nursing, that it is important for patients and nurses to cooperate, and this cooperation leads to patients proactively increasing their time doing pleasant activities. In nursing education, where improvement of nursing practice skills is required, curricula should ensure that CBT is taught through lectures and exercises. Furthermore, a structured learning environment must be established for CBT.

Conflicts of interest

There are no conflicts of interest in this study.

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看護学部生が精神看護学実習で実践した認知行動療法の教育評価

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要旨

　本研究の目的は、実習引率教員の指導のもと、看護学部生が認知行動療法（CBT）を用いた精神看護学実習で体験した教育的価値を学生の実習後レポートを用いて明らかにし、精神看護学のカリキュラム内容の検討に繋げることとした。看護学部 4 年生 45 名の自由記述データを分析した結果、「患者」と「介入」と「看護」、「患者」と「協働」と「作成」、「介入」と「活動」、それぞれの間で関連が示された。分析は KHcoder を用いて単純集計を行い、記述データの抽出語を把握した上で強制抽出語を設定し、共起ネットワークを構築した。看護学部生は、精神看護学実習で CBT を体験することで、「看護師と患者の関係性」の理解に繋がっただけでなく、「患者と協働」する重要性を認識し、「患者の快活動を増加させる」などの介入効果を学習として捉えることができたと言える。看護実践能力の向上が求められる看護教育において、実習引率教員の指導のもとではあるが、精神看護学実習で CBT を用いて実践し、介入効果を学習できたことは、看護学部生にとって有用な体験であったといえる。看護学部生が臨地実習で CBT をより効果的に体験するためには、講義や演習の中で CBT の学習時間を確保したカリキュラムを検討し、実習への体系化された学習環境を構築していく必要性が示唆された。

キーワード：看護学部生、精神看護学実習、認知行動療法