

**Original****Evaluating a Group CBT Program Intervention for New Nurses Affected by COVID-19**Noriko Katayama<sup>1)</sup>, Katsuhiko Suyama<sup>2)</sup>, Rina Watanabe<sup>2)</sup> and Rieko Kawamoto<sup>1)</sup><sup>1)</sup>Health Science Curriculum, Graduate School of Health Sciences, Shonan University of Medical Sciences<sup>2)</sup>Department of Nursing, Faculty of Medical Sciences, Shonan University of Medical Sciences

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**Abstract**

**Objective:** This study aimed to implement and evaluate a group CBT program intervention for new nurses affected by the COVID-19 pandemic in Japan.

**Methods:** The selection criteria included basic nursing education in 2020 and working in a facility with <300 beds. The survey period was from June to July 2021; surveys were conducted both before and after support program implementation. The survey contents, measured using a self-administered questionnaire, included the desire to quit the job, Antonovsky's sense of coherence (SOC), a scale of coping characteristics, and an occupational stress questionnaire.

**Results:** Participants included 116 new nurses who were included in both surveys. Approximately 70% of the participants wanted to quit nursing, and approximately 80% of participants wanted to leave their hospital. The average SOC score was  $54.69 \pm 10.09$ . The t-test results for each scale revealed that the total score after support program implementation was lower than that before the program; however, the difference was not significant. For the occupational stress scale, the total score after implementation was significantly higher for factors considered to be causes of stress and mental and physical reactions caused by stress. In the active problem-solving domain of the scale of coping characteristics, the total score after implementation was significantly lower than that before program implementation.

**Conclusions:** The overall survey score after the support program implementation (4 months after employment) was low. However, few significant differences were observed. Regarding the timing of this support program, its implementation is proposed to occur earlier than four months after employment, a period during which new nurses are susceptible to accumulating physical and mental fatigue.

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**—Key words—**

COVID-19, new nurses, mental health, support program

**Introduction****1. Research Background**

Securing human resources for nursing staff has been a longstanding issue in the medical field, since nurses tend to quit even when appropriate measures are adopted<sup>1)</sup>. According to the “Hospital Nursing Survey 2018” of the Japan Nursing Association (JNA)<sup>2)</sup>, the turnover rate in 2017 was 10.9% for regular nursing staff and 7.5% for new graduate nursing staff—a flat trend relative to previous years. In 2019, due to the spread of COVID-19, the turnover rate for new graduate nursing staff rose from 7.5% to 10.3% in Japan<sup>3)</sup>. Similarly, in the United States, the turnover rate for registered nurses sharply increased to 22.5% in 2021—an 8.4% increase from the previous year. Although it decreased to 18.2% in 2022, the rate remains high<sup>4)</sup>. The International Council of Nurses reports that many nurses worldwide are experiencing exhaustion due to the challenges posed by COVID-19, and approximately 10–30% have expressed the intention to leave their jobs<sup>5)</sup>.

Epidemics of infectious diseases not only affect the general population but also have a significant negative psychological impact on healthcare workers<sup>67)</sup>. Research conducted after the 2003 SARS outbreak indicates that neglecting psychological issues during a pandemic can lead to long-term problems<sup>8)</sup>. The COVID-19 pandemic has exacerbated emotional stress among healthcare workers, with increased family responsibilities and heightened patient work pressure contributing to burnout<sup>9)</sup>. Studies on healthcare professionals who care for COVID-19 patients, primarily nurses, have reported symptoms of anxiety, depression, insomnia, and discomfort<sup>67)10)11)</sup>. Therefore, it is important to protect the mental health of nurses fighting the pandemic.

Yasukata et al.<sup>12)</sup> stated that nurses with experiential training realize the significance of discussion, acquire an understanding of patients, learn to develop strategies for independently solving problems, and are able to convert experiences into learning. In 2020, owing to the COVID-19 pandemic, clinical training in basic nursing education could not be implemented nationwide. Of the 222 four-year nursing education institutions in the country, only 1.9% could implement the compulsory clinical training subjects for fourth-year university students as scheduled in the 2020 academic year<sup>13)</sup>. Therefore, it is possible that nursing staff who completed basic nursing education in 2020 will lack abilities that can only be acquired through clinical practice. Additionally, in the context of increasing the turnover of new nurses, the ability to cope with stress has attracted significant research attention. Yamazumi et al.<sup>14)</sup> investigated the ability to cope with stress (Antonovsky's sense of coherence; SOC); they suggested, in order to prevent job turnover, it is crucial to reduce job-related psychological burden, fatigue, and interpersonal stress in the workplace and increase job and life satisfaction. SOC refers to an individual's ability to cope with life's challenges. People with high SOC are less likely to be impacted by stressors on their mental health. They are more flexible in their response to stressors, and possess the ability to perceive things positively and deal with them calmly. Early adulthood is an unstable state and is influenced, formed, and strengthened by various events. Experiences of success in overcoming stressors tend to strengthen SOC<sup>15)</sup>. Therefore, we assume that new nurses remain vulnerable during the role transition period from students to nurses and are thus unable to appropriately deal with stressors, which may adversely impact SOC formation and strengthening.

The COVID-19 pandemic has significantly impacted medical professional education globally, leading to a shift from traditional face-to-face to online education. In the realm of simulation education, a study in the United States comparing the learning effects of face-to-face and virtual methods revealed that students retained more knowledge in virtual simulations than in face-to-face ones<sup>16)</sup>. In South Korea, a survey targeting nursing students aimed to identify the factors affecting their learning flow during the pandemic. The findings indicated that students experienced a higher learning flow in lectures combining real-time and recorded videos compared to real-time lectures alone, with a positive correlation observed with self-regulated learning ability<sup>17)</sup>. However, concerns were raised about the "effectiveness of communication skills learned in virtual clinical training when applied in practice," in addition to apprehension about the ability to perform well as new nurses<sup>17)</sup>. While nursing students can effectively learn through online education even amid the challenges of COVID-19, concerns may persist regarding the application of skills in real-world scenarios, which may lead to a severe reality shock upon entering the workforce. Additionally, nursing staff who completed basic nursing education in 2020 will have less clinical training experience than usual due to the impact of COVID-19. Consequently, lack of clinical training will afford them fewer opportunities to understand patients' actual reactions and improve their interpersonal skills. Thus, there will be increased reality shock, and it will take them longer than usual to become acquainted with work.

## 2. The Purpose of This Study

One of the researchers of the present study conducted a systematic review<sup>18)</sup> to analyze the factors leading to the turnover of new nurses, classify the literature according to research questions, and analyze research trends. This revealed that modern new nurses 1) comprise a certain percentage of students who require mental health support, 2) have low stress tolerance, and 3) are susceptible to reality shocks. Additionally, cognitive behavioral therapy (CBT) was shown to be an effective mental health support measure. In particular, internet-based CBT for nurses related to the COVID-19 pandemic has been shown to be effective<sup>19)20)</sup>. The researchers developed a mental health support program (hereinafter, "support program") related to the impact of COVID-

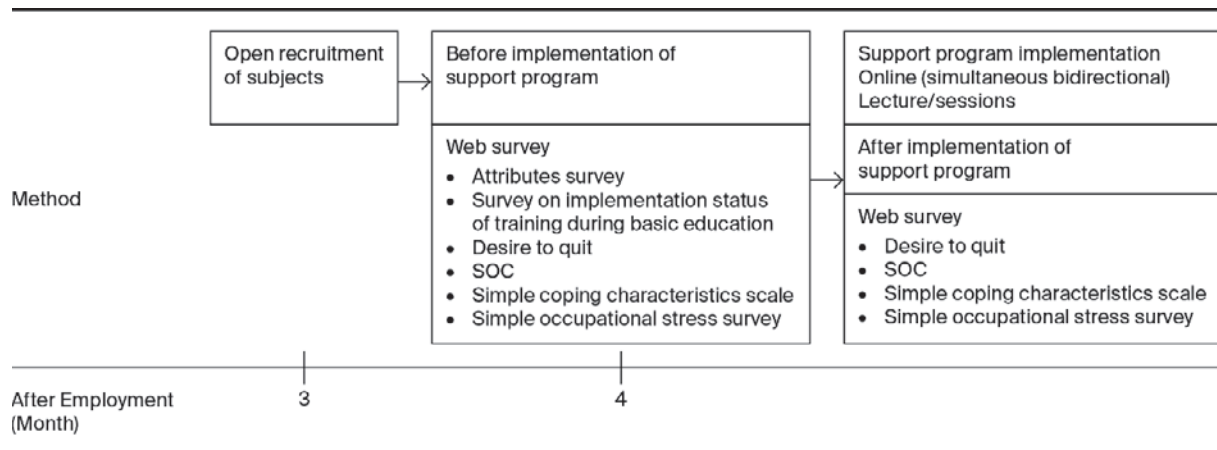


Fig. 1 Survey Protocol.

19 for new nurses based on group CBT<sup>18)</sup>.

The purpose of this research is to implement and evaluate this support program. Evaluating this support program will contribute to preventing job loss due to the impact of COVID-19. Nursing students affected by the COVID-19 pandemic graduated without sufficient clinical practice experience, making this research critically important and likely to contribute to preventing turnover among new nurses.

## Materials and Methods

### 1. Study Design

A quasi-experimental study was conducted from June to July 2021, implementing a support program. Two surveys were conducted: one before and another after the implementation of the support program. Fig. 1 illustrates the study protocol.

### 2. Participants

We targeted nurses who completed basic nursing education in 2020 (hereinafter, “new nurses”) from 248 small and medium-sized hospitals with less than 300 beds in A Prefecture<sup>21)</sup>, one of Japan’s 47 administrative divisions, which are roughly comparable to states or provinces. The exclusion criterion was that the participants were new nurses working at hospitals with 300 or more beds. We adopted the criterion of hospitals with less than 300 beds because in such hospitals, the implementation rate of new nursing staff training is low, based on the “Review Committee Report on Improving Clinical Practical Ability of New Nursing Staff”<sup>22)</sup>, and the turnover rate is high<sup>23)</sup>. The attendance requirement was to complete all program sessions, with a completion rate of 98.3%, indicating active participation by attendees.

To recruit participants, we distributed flyers and letters of request to the nursing departments of the 248 facilities that met the selection criteria and recruited new nurses who could participate in the support program. For participation, we adopted a system in which the participants themselves voluntarily registered on the portal site established for the development of the support program.

### 3. Outline and Implementation Method of Support Program Based on Group CBT

This support program is characterized by the fact that new nursing staff can rapidly acquire awareness of their mental health conditions and promote personal well-being. In developing the program, we set the theme and content based on the group CBT by referring to previous studies<sup>24)</sup>.

This support program employed cognitive restructuring, a representative technique of CBT. Its format and contents involved an online conference system (Zoom) and comprised four sessions of 4 hours each during which participants performed simple exercises (Table 1). The fourth session, a key feature of this support program, included a lecture on cognitive restructuring techniques and role-play exercises. Participants used a thought log to organize cognitive error fixation, evidence verification, rational alternative thinking, and mood changes. The lectures were conducted by one researcher who had received training that met the standards



work?" Desire was measured on a five-point scale of "often," "sometimes," "neutral," "rarely," and "never." A score of 1 to 5 was assigned, respectively, such that a higher score indicates a higher desire to quit.

(2) An Abridged Japanese Version of the SOC Rating Scale Translated by Yamazaki<sup>25)</sup>

SOC—a measure of stress coping capacity created by Antonovsky<sup>28)</sup>—comprises 13 items (rated on a seven-point scale) and three sub-scales: "meaningfulness (four items)," "comprehensibility (four items)," and "processability (five items)." A higher score indicates a higher ability to cope with stress. The reliability, factor validity, and predictive validity of this scale were verified.

(3) Simple Scale of Coping Characteristics

This is an 18-item (4-choice) scale for evaluating coping characteristics developed by Kageyama<sup>26)</sup>. It comprises the following six subscales: "proactive problem solving," "consultation for problem solving," "change of mind," "emotional release involving others," "change of perspective," and "avoidance and suppression." The internal consistency (Cronbach's reliability coefficient: 0.66–0.75), reliability, and validity of this scale were confirmed. The items are rated on a scale of 1 to 4, with higher scores indicating better coping characteristics.

(4) Occupational Stress Simplified Questionnaire

The Simple Occupational Stress Questionnaire developed by the former Ministry of Labor<sup>27)</sup> includes nine stressors (17 items, 4 items), six stress responses (29 items, 4 items), and four stress buffer factors (11 items, 4 items) subscales. The assessment of this questionnaire was based on the assessment criteria of the latest online edition<sup>29)</sup>. The higher the score, the higher the stress, per subscale category.

The survey periods were as follows: The survey was conducted immediately before the support program intervention in June 2021 (3 months after employment) and after the support program implementation in July 2021 (4 months after employment).

Survey content comprised the following: a self-administered questionnaire survey consisting of (1) to (4), as shown above in the protocol (Fig. 1). Additionally, in the post-support program implementation survey, we asked the participants to select two items from the four sessions: content that was helpful after receiving the support program and content that the participants would like to use in the future. Respondents were asked to freely write about their learning during the support program.

## 5. Analysis Method

Descriptive statistics were used to analyze participants' attributes. For the analysis of the SOC, scale of coping characteristics (by item), and Occupational Stress Questionnaire, a paired t-test was performed on the total scores (both before and after the support program) and on the total SOC scores by educational program (unpaired t-test). IBM SPSS Statistics Version 24.0 was used for analysis. For open-ended responses in the descriptive survey, based on Berelson's<sup>30)</sup> content analysis, linguistically described content was treated as data, and two researchers coded the data. Subsequently, individual record units were classified and named based on the similarity of code meanings. The frequency of each category was calculated as the number of record units (%) to determine its proportion<sup>31)</sup>. During the categorization process, two researchers repeatedly cross-checked the analysis results against the data to ensure content consistency. The reliability of the categories was verified by cross-checking the categorization among researchers with extensive experience in content analysis methodologies.

## 6. Ethical Considerations

The research purpose, their voluntary participation, anonymity, the data management method, and there being no disadvantage in refusing to participate were explained to the participants online. The data were managed online by a contracted management company, ensuring that personal information could not be linked to the data; consent for participation was also received online. This study was approved by the ethics review committee of the Shonan Medical University (Medical University Research Ethics Case No. 21-009). There were no conflicts of interest in this study.

## Results

Of the 117 participants in the support program, data from 116 participants who completed the post-program survey were analyzed in this study. The response rate was 99.1%, and the valid response rate was

**Table 2** Participant Characteristics (N = 116).

		n (%)	SOC Score Mean ± SD
Age			
Overall		116 (100)	54.68 ± 8.30
21–25 years old		102 (87.9)	54.58 ± 8.03
26–30 years old		5 (4.3)	49.20 ± 6.83
31 +		9 (7.8)	58.89 ± 11.15
Curriculum			
Vocational school	3-year course	86 (74.1)	55.87 ± 10.41
	2-year course	1 (0.9)	47.00 ± 0.00
University	4-year course	29 (25.0)	51.07 ± 8.41
Size of affiliated facility			
99 beds or less		26 (22.4)	57.65 ± 8.89
100–199 beds		28 (24.1)	54.04 ± 6.11
200–299 beds		62 (53.4)	53.73 ± 8.80
Implementation status of clinical training			
All hospitals and facilities		67 (57.8)	53.96 ± 7.67
A few hospitals and facilities		49 (42.2)	55.67 ± 9.17
Conducted outside hospitals/facilities		0 (0)	
None		0 (0)	

SD: Standard Deviation.

**Table 3** SOC Score and Desire to Quit (N = 116).

	n (%)	SOC Score Mean ± SD
Desire to quit nursing job		
Often	28 (24.1)	48.96 ± 6.76
Sometimes	27 (23.3)	52.11 ± 6.34
Cannot say	23 (19.8)	57.30 ± 7.91
Rarely	15 (12.9)	58.47 ± 7.71
Never	23 (19.8)	59.57 ± 8.25
Desire to quit hospital		
Often	18 (15.5)	47.17 ± 9.93
Sometimes	39 (33.6)	53.18 ± 6.93
Cannot say	18 (15.5)	54.67 ± 6.58
Rarely	16 (13.8)	57.38 ± 7.11
Never	25 (21.6)	60.72 ± 8.50

SD: Standard Deviation.

100%.

### 1. Participant Characteristics

Table 2 shows the characteristics of the participants (Table 2). Regarding the implementation status of clinical training by curriculum, 18 people (62.1%) answered that the university “conducted part of the training at a hospital” —this was the largest number. At vocational schools (three years), 58 people (66.3%) answered that “everything was done at a hospital,” accounting for the majority of the answers.

### 2. SOC Score and Desire to Quit Prior to Implementation of Support Program

Regarding nurses’ desire to quit, 28 (24.1%) were new nurses who often felt like quitting, and 27 (23.3%) sometimes felt like quitting, making up about half of respondents. Approximately half of respondents also expressed a desire to leave the hospital. Additionally, approximately 80% of the respondents wished to leave the hospital. The average SOC score in the pre-implementation survey of the support program was  $54.69 \pm 10.09$  points (Table 3).

### 3. Results of Each Scale Analysis Before and After the Support Program and by Curriculum

Table 4 shows the t-test results for each scale before and after the implementation of the support program. In this study, Cronbach’s  $\alpha$  value of the dimensions ranged from 0.718 to 0.931, indicating internal consistency. For the SOC scale, the post-implementation total score was lower ( $t(115) = 1.687, p = 0.094$ ), but not sig-

**Table 4** Mean Values, SD, and T-Test (Paired) Results for Each Scale (N = 116).

SOC Scale	AVE	SD	t-Value	p-Value	d
Total SOC score (before implementation)	54.69	10.09			
(after implementation)	53.28	8.51	1.687	0.094 ns	—
Simplified Occupational Stress Scale					
Mental and physical reactions caused by stress (before implementation)	63.20	15.15			
(after implementation)	67.03	15.16	3.231	0.002 **	0.300
Factors that may cause stress (before implementation)	44.23	5.50			
(after implementation)	45.67	5.31	3.618	0.000 ***	0.336
Coping Characteristics Scale					
Proactive problem solving (before implementation)	8.96	2.10			
(after implementation)	8.34	2.09	3.055	0.003 **	0.284

\*\* $p < 0.01$  \*\*\* $p < 0.001$ ; AVE: average; SD: Standard Deviation; d: Cohen's d, effect size.

**Table 5** Mean Values of SOC Scale by School, SD, and T-Test (Unpaired T-Test) Results (N = 115).

Total SOC Score by Final Education	n	AVE	SD	t-value	p-value	d
University (4-year course)	29	51.07	8.41			
Vocational school (3-year course)	86	55.87	10.42	2.246	0.027 *	0.482

\* $p < 0.05$ ; AVE: average; SD: Standard Deviation; d: Cohen's d, effect size.

nificantly different than the pre-implementation score. Additionally, regarding the Simple Occupational Stress Scale, factors believed to cause stress ( $t(115) = 3.618, p < .001, d = 0.336$ ) and physical and mental reactions caused by stress ( $t(115) = 3.231, p = .002, d = 0.300$ ) had significantly higher post-implementation total scores. Aggressive problem solving on the coping trait scale had significantly lower post-implementation total scores ( $t(115) = 3.055, p = .003, d = 0.284$ ) than those of pre-implementation.

The total SOC score of the educational program before the enforcement of the support program (Table 5) was considerably lower in university (course of four years) ( $t(114) = 2.246, p = .027, d = 0.482$ ) than in other curricula. Cronbach's  $\alpha$  value of the dimensions ranged from 0.732 to 0.757, indicating internal consistency.

#### 4. Results of Descriptive Statistics and Free Description After Implementation of Support Program

In the survey conducted after the implementation of the support program, we asked participants to select two items from the four sessions: content that was helpful and content that they would like to use in the future. Of the content that served as reference, 59.5% selected "movements of the mind;" 43.1%, basic knowledge of behavioral activation; 40.5%, exercises for cognitive restructuring; and 36.2%, basic knowledge of CBT. As for the content that they would like to use in the future, 50.0% chose basic knowledge of behavioral activation; 45.7%, "movements of the mind;" 40.5%, exercises for cognitive restructuring; and 37.1%, basic knowledge of the CBT.

A total of 142 codes, 18 subcategories, and 4 categories were extracted from the free descriptions of 112 participants (Table 6). In descending order of the number of instances, the category of "learning about restructuring of cognition using the cognitive restructuring method" was the most common at 60%, followed by "basic knowledge of behavioral activation (how to calm down)," "learning about the movement of the mind," and "basic knowledge of cognitive behavioral therapy (cognitive restructuring method)."

## Discussion

### 1. Characteristics of SOC by Curriculum

The average SOC score of the study participants was  $54.68 \pm 8.30$ . When compared with Yamazaki et al.'s<sup>15)</sup> survey of new nurses three months after employment ( $55.2$  points) and that of general adults ( $57 \pm 13$  points), the score was within the standard range. When compared by educational program, the lowest SOC score was

**Table 6** Results of Free-Text Category Analysis After Support Program Implementation.

Category	Counts	%	Subcategory	#	%
Learning about cognitive reconstruction using cognitive reconstruction method	86	60.56%	Cognitive restructuring method/utilization of automatic thought record table (7 columns)	21	24.42%
			Observing things objectively, changing the way of thinking	16	18.60%
			Changes in feelings due to organizing thoughts	16	18.60%
			Reflect on one's thoughts and actions	12	13.95%
			Adaptive thinking/adaptation process	7	8.14%
			Points of communication and significance of reporting, contacting, and consulting	7	8.14%
			Exchange of opinions among trainees	4	4.65%
			Changes in awareness of seniors and superiors	3	3.49%
Basic knowledge of behavioral activation (how to calm down)	21	14.79%	How to calm down	12	57.14%
			Breathing and muscle relaxation techniques	8	38.10%
			Mindfulness	1	4.76%
Learning about the movement of the mind	20	14.08%	Movement of the heart	12	60.00%
			Mind and body are connected	5	25.00%
			Keep calm and think	3	15.00%
Basic knowledge of cognitive behavioral therapy (cognitive restructuring method)	15	10.56%	Understanding the habits and tendencies of one's own way of thinking	9	60.00%
			Cognitive behavioral therapy and cognitive restructuring in general	3	20.00%
			Look to the reality of expectations	2	13.33%
			Behavior, cognition, and emotion are linked	1	6.67%

in the two-year basic nursing education program. However, as only one person was in this category, it is highly likely that individual characteristics have a significant influence. Participants with the next lowest SOC scores were university graduates (four-year course), with an average SOC score of  $51.07 \pm 8.41$  points. Compared to Yamazaki et al.'s<sup>15)</sup> survey of new nurses three months after employment (average SOC score: 55.2 points) and that of general adults (average SOC score:  $57 \pm 13$  points), the SOC score was low. This low score suggests that new nurses who graduate from university (four-year course) are less able to cope with stress compared to normal adults. A total of 30 people (25.9%) who graduated from university (four-year course) were aged between 21 and 25 years, had no work experience, and started out as professionals and working adults concurrently. Additionally, owing to the spread of COVID-19, the learning process in basic nursing education changed from full clinical practice to implementation at a few hospitals or healthcare facilities. Therefore, it was inferred that participants were more inexperienced in the clinical setting compared to conventional new nurses, and there was a high possibility of receiving reality shocks.

## 2. Evaluation of Support Programs

In this study, the support program was implemented four months after nurses had begun working, and a survey was conducted before (three months after employment) and after the support program (four months after employment). Approximately 70% of the participants answered that they often felt that they wanted to quit nursing, sometimes felt that they wanted to quit nursing, or that they could not say, and approximately 80% of the participants wished to leave the hospital. Kondo's<sup>32)</sup> longitudinal study on recently graduated nurses reported that the time to experience a reality shock is approximately three months after employment. The survey before the support program was conducted three months after employment, and it can be inferred that the desire to quit was high because it overlapped with the period when people were likely to experience a reality shock. Additionally, examining the t-test results for each scale before and after the support program implementation revealed that the total score of the post-support program survey was lower than the pre-implementation survey for the SOC scale, but there was little significant difference. According to a longitudinal survey of newly recruited nurses, a comparison of the SOC before employment and three months after em-

ployment revealed that the latter was significantly lower<sup>15)</sup>. This indicates that the SOC of new nurses tends to temporarily fluctuate due to major life changes such as being assigned to a new workplace<sup>33)</sup>. In this study, the total score in the survey after the support program—that is, four months after employment—was lower than that before the program, but there was little significant difference. Several longitudinal studies suggest that SOC may continue to decline three months, six months, and even one year after starting employment<sup>34)35)</sup>. Therefore, the absence of further decline observed in this study suggests that the support program may have prevented a decrease in SOC. This could be the effect of implementing the support program at a time when the SOC is likely to significantly decrease. However, the program start was delayed due to the impact of the COVID-19 pandemic. To further evaluate the support program, it is necessary to implement and verify the intervention at the three-month post-employment mark, when SOC typically declines.

In this study, high turnover intentions were observed in the pre-intervention survey conducted three months after employment, and increased occupational stress and stress responses were noted in the post-intervention survey at four months. These findings suggest that stress may have already been accumulating prior to the intervention's commencement. Therefore, implementing support programs at an earlier stage may be beneficial for supporting the mental health of new nurse graduates.

This support program comprises four sessions incorporating knowledge that is useful for new nurses to supplement interpersonal skills and maintain and improve their mental health, as well as exercises conducted in groups of 3–4 people, based on that knowledge. The results of the survey after the support program revealed that approximately 60% of the respondents thought the “movement of the mind” session was helpful, and approximately 50% of the respondents said that they would like to use content from the “basic knowledge of behavioral activation” session in the future. Additionally, in the post-support program survey, the category of “learning about cognitive restructuring using the cognitive restructuring method” accounted for 60% of all descriptions. Participants used the cognitive restructuring method and automatic thought record charts to learn the process of objective perception and to change their feelings by changing their mindset.

### Limitations

In this study, a support program was implemented for new nurses four months after employment, and a work-related stress survey conducted thereafter revealed factors thought to be the cause of stress and physical and mental reactions caused by stress. The total score was significantly high. Additionally, positive problem solving on the scale of coping characteristics had significantly lower total scores in the post-support program surveys. During this period—that is, over approximately three months—new nurses are expected to become independent, including activities such as night shifts and directing nursing care for patients. However, the participants lacked experience in clinical practice in basic nursing education, and they were anxious, impatient, and fatigued, both physically and mentally, which made it difficult to actively solve problems. Moreover, in Europe and the United States, substantial evidence supports the efficacy of programs rooted in cognitive behavioral therapy (CBT) as a preventive intervention for mental health issues among working adults not exhibiting signs of illness<sup>36)</sup>. Thus, it was suggested that this support program be implemented earlier than four months after employment.

In group CBT sessions, the therapist ascertains the origin of clients' problems by dividing them into four components: thoughts, moods, physical reactions, and behaviors<sup>37)</sup>. The therapists and clients also explore ways to deal with problems while working together in a session, with the aim of ultimately enabling the client to independently apply skills they have acquired in their daily lives<sup>38)</sup>. Participants learned objective analysis using the cognitive restructuring method when they were prone to reality shock from the free description results after the implementation of the support program. We believe that learning objective analysis will facilitate participants' awareness of their mental health problems and early aspirational behavior. However, in the case of the early detection and prevention of mental health problems, unlike group CBT, which deals with specific symptoms and problems, it is difficult to specify the CBT technique for the target, and only one day of participation is required. In a previous study, participants were involved in multiple CBT sessions and learned several techniques, which they could then apply according to their situation to deal with stress<sup>39)</sup>. In the future, it

will be necessary to examine the content of the support program, number of sessions, and number of interventions in the support program based on participants' characteristics and what they felt was beneficial.

This study did not impose any exclusion criteria on subjects. Consequently, new nurses with prior work experience before their nursing education may possess better stress-coping abilities than those without such experience. Furthermore, this study was conducted as a quasi-experimental study. To enhance the generalizability of future research, it is necessary to compare intervention and control groups and further validate the effectiveness of support programs.

### Conclusions

This study aimed to implement a support program for new nurses and examine its evaluation. The total survey scores after implementing the support program (4 months after employment commencement) were low. However, few significant differences were observed. Regarding the timing of this support program, it is suggested that implementation should occur earlier than 4 months after employment, a period when new nurses are prone to accumulating physical and mental fatigue. These findings indicate that the program's effectiveness was limited by delayed implementation. Therefore, earlier and repeated support may be necessary to reduce turnover among new nurses.

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**Reprint request:**

Noriko Katayama  
Health Science Curriculum, Graduate School of Health Sciences, Shonan University of Medical Sciences, 16-48, Kamishinano, Totsuka-ku, Yokohama City, Kanagawa, 244-0806, Japan.

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湘南医療大学大学院保健医療学研究科  
片山 典子

# COVID-19 の影響を受けた新人看護師を対象とした 集団 CBT プログラム介入の評価

片山 典子<sup>1)</sup>, 陶山 克洋<sup>2)</sup>, 渡部 李菜<sup>2)</sup>, 川本利恵子<sup>1)</sup>

<sup>1)</sup>湘南医療大学大学院保健医療学研究科

<sup>2)</sup>湘南医療大学保健医療学部看護学科

## —キーワード—

COVID-19, 新人看護職, メンタルヘルス, 支援プログラム

【目的】本研究の目的は、日本の COVID-19 パンデミックの影響を受けた新人看護師を対象とした集団認知行動療法 (CBT) プログラムを実施し、その評価をすることである。

【方法】対象者は、2020 年度に看護基礎教育を修了した看護職のうち 300 床未満の病院に所属する新人看護師を対象とした。調査期間は 2021 年 6 月から 7 月までとし、支援プログラム実施前後に調査を実施した。調査は、支援プログラム前後に行った。調査内容は離職願望、SOC、コーピング特性簡易尺度、職業性ストレス簡易調査票による自記式質問紙調査で測定した。

【結果】本研究の分析対象は、支援プログラム前後の調査に協力した 116 名とした。看護師離職願望は約 7 割、病院離職願望においても約 8 割を占めていた。SOC 得点の平均値は  $54.69 \pm 10.09$  点であった。各尺度の支援プログラム実施前後の t 検定結果をみると、SOC 尺度では実施後の合計得点が低かったが有意な差はなかった。また、職業性ストレス簡易尺度ではストレスの原因と考えられる因子及びストレスによっておこる心身の反応で実施後の合計得点が有意に高かった。コーピング特性尺度の積極的問題解決では実施後の合計得点が有意に低かった。

【結論】本研究結果では、入職後 4 カ月である支援プログラム後調査の合計得点は低かった。しかし、有意差が認められた項目は少なかった。本支援プログラムの実施時期は、新人看護師が心身の疲労を蓄積しやすい採用 4 カ月後よりも早期に実施する必要があることが示唆された。

【COI 開示】本論文に関して開示すべき COI 状態はない

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